

The Materiality of Waves and the Liminality of Things

Patrick Laviolette

Surfers have recently been identified as perpetrators of a certain hypocrisy. The modern surfboard, made up of a toxic cocktail of plastics, resins, glues and fiberglass, has been held up as a model demon of un-sustainability in a world of growing ecological awareness. Hence, a niche for an eco-friendly design has opened up. Internationally, a handful of people have accepted the challenge of trying to produce a prototype for a green substitute which is as light, durable and high performing as the synthetic brands that dominate the market. But a benign counterpart, made up of biodegradable materials faces many challenges of public perception. Primarily through ethnographic comparisons between Cornwall and New Zealand, this article examines environmental pressure groups, charity campaigners and corporate surf companies who have made it their mission to search for a sustainable eco-surfboard design. Theoretically, the paper speculates that the debate about surfboards allows us to consider how they can stand as liminal objects in terms of their multi-faceted character in shaping identities. This is particularly revealed through the relationship that holistic innovation has with our attention to consumption, our awareness for the environment and our perceptions of materiality.

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KAURI TREE [...] (*Agathis australis*), a species of pine which is unique in that its habitat is confined solely to the Auckland Province in the North Island of New Zealand. The tree is remarkable for the fine quality of its timber which has been considered the first softwood in the world. The trunk rises frequently to a height of upwards of 100 feet, a straight smooth barrel imperceptibly decreasing in girth, until the first limbs are reached. (Prof. Sir Raymond Firth 1922: 7)

Surfing's image as a pastime of nature lovers harbours an internal contradiction when it comes to the sporting equipment involved. Surfers generally abide by an ethos that pronounces the glorification of alternative lifestyles and a loving respect for nature, yet eschew acknowledging certain fundamental contradictions – most significantly that the one essential piece of equipment in the contemporary pursuit of riding waves is amongst the worst culprits of environmental disregard of all sporting equipment. The modern surfboard, made up of a toxic cocktail of plastics, resins, glues and fibreglass, has been held up as a model demon of un-sustainability in a world of growing ecological awareness. Hence, a niche for an eco-friendly design has opened up.

On the world scene, a handful of people have accepted the challenge of trying to produce a prototype for a green substitute which is as light, durable and high performing as the synthetic brands that dominate the market. Yet the early designs of benign counterparts face many challenges of public perception. Despite surfing's historical origins, when boards were made of natural materials and few were in global circulation, the last fifty years have seen the development of standardised mass production techniques. Led by the international market forces resulting from an exponentially increasing demand, this period has witnessed the establishment of formulaic manufacturing procedures by a select number of multinational corporations. With their considerable vested interests in marketing expertise, financial backing and access to research and development funds, these companies have set a precedent for low production costs. This has perpetuated itself into a highly regulated market which is kept in stasis by the relatively high start-up costs for entering the industry, at least at the level of national or international commerce (Kampion and Brown 2003). And as Warren and Gibson conclude:

Hand-made surfboards are always likely to retain a subcultural *cachet* – and this in turn is likely to rely on reputations associated with particular workshops and iconic surfing places. Surfboard-making is both linked to, and defined by, coastal specificity (Warren and Gibson 2013: 48).

This article outlines the development of certain task-networks amongst environmental pressure groups, charity campaigners and corporate surf companies who search to overcome the contradiction of using a toxic piece of sporting equipment by devising an ecologically sensitive alternative. The unit of analysis is therefore those who have made it their mission to search for a

sustainable surfboard design. My findings are primarily based on comparative ethnographic examples drawn from research on the distinct surf cultures of New Zealand and Cornwall, where I have mostly been examining the social impact of such environmentally conscious organisations as Surfers Against Sewage, the Eden Project, Surfbreak Protection Society and KASM (Kiwi's Against Seabed Mining) (Laviolette 2006).

In the vast literature on surf culture, which as a rule defines wave riding as an art-form – a poetic expression of bodily movement through a powerfully shifting environment – it is interesting to note that surfboards themselves have largely been the source of attention in popular and promotional texts, not academic ones (Stranger 1999). Four notable exceptions emerge in the last half century: a study from a Master's thesis at the University of Hawaii which was published in the mid-1960s (Finney and Houston 1966); Tim Dant's (1998) consideration of the windsurfer's kit; an independent online study that assesses the creation, production and marketing of sustainable surfboards based on a survey with Australian surfers, surfboard shapers and stakeholders involved in the industry (Sullivan 2007); and finally, Andrew Warren's (2012) recent work tracing surfboard production from local craft traditions through to the place it now holds in a competitive global multi-billion dollar commercial industry.

In this sense, within the frameworks of anthropology and material culture studies, such objects are subcultural items that fit the quintessential mould of being completely taken for granted, intellectually back-grounded, discursively ignored. One thing we've learnt is that the objects which are the most noticeable and are of highest value are not always those that are glaringly life shifting or socially significant. In fact, because they structure our cultures in ways we do not immediately notice, because they remain unquestioned, the matter in the background of our everyday lives should not only remain in the equation, it should be paramount within the calculations. Indeed, studies on such pop items as scooters or Walkman personal stereos have taught us that it is often the overlooked things of everyday life that harbour the most interesting bits of cultural information (Barthes 1968). With this in mind, I want to place surfboards alongside the many ludic artefacts of international significance which have nonetheless remained invisible to scholastic enquiry.

I would equally like to suggest that surfboards possess many particular features that define them not just as forgotten items but as liminal ones, an analytical category which itself has received scant attention in either anthropology or material culture studies. Given their many distinct characteristics, thriving in a transitory zone of breaking waves, tidal water and shifting sands, as well as their affiliation with both corporate branding and yet epitomising many counter-cultural western values and principles, surfboards have persistently been in-between things. As liminal objects, they are transcendental inducers, experientially facilitating altered states of cognitive and corporeal perception.

Moreover, they are also quite possibly at a significant crossroads in terms of their manufacturing.

The lack in anthropology and material culture studies for considering objects as liminal entities in their own right is an intellectual conundrum that is all the more perplexing given the significant development of Alfred Gell's theories concerning the agency of artworks and technologies (1992, 1998). Indeed, perhaps it is the fascination for, appeal in and even the agency embodied within Gell's own framework of agency that has overshadowed our ability to imagine that the type of agency an object possesses might be a liminal one. We would also have to assume that Victor Turner (1969, 1983) defined liminality so exhaustively that our capacity to think of it as anything other than a concept applicable to threshold spaces, groups in *communitas* or individuals undergoing a rite of passage has been severely limited.

Yet in art history and fine art, the term seems to have more currency. As it does in science and technology studies, where numerous projects have openly examined the ways in which material innovations in the realm of health care often act as intermediaries during the liminal moments that separate life and death. Or how new intelligent technologies exist between the world of human desires and that of the things designed to animatedly respond to those desires. Yet, even if it is mostly in these areas that the idea of liminal artefacts has existed, it has still not been conceptualised in any comprehensive way. Consequently, through the prosaic issues surrounding the design of surfboards, I hope to demonstrate that there is no reason why anthropologists should not begin to consider the conceptual implications of thinking about objects in terms of the liminal characteristics that they might have or the liminal states which they might help induce.

Anthropologists may find themselves thinking of Roy Wagner at this point and his major contribution to symbolic thinking *The Invention of Culture* (1975). Wagner writes about the invention of culture as if there were a culture, so the theorisation of the surfboard as a liminal object needs to maintain that the board is not so much invested with liminal agency as it is a mediating object that enables the invention of culture such that it can be deciphered by the observer. The object can only be liminal in the sense that difference is continuous rather than overlapping. Hence, in re-framing the idea of objectification, a material mediation which enables tacit knowledge of the human-object world, theorists such as Chris Tilley (2006) provide useful conceptualisations for us here.

Genealogical Trees

Famous for his prolific ethnographic accounts concerning the Pacific island of Tikopia, many people may have forgotten (or have never been aware) that Professor Sir Raymond Firth, cited above, began his academic career as an economist interested in his own country of birth. The quotation that starts off this

paper is from his MA thesis on the socio-economic facets of the Kauri Gum Industry in New Zealand which he submitted in 1922. The Kauri, the second largest growing tree in the world, was massively over exploited in the nineteenth century so that only small pocketfuls remain in a once large range covering the Northland area from Auckland onwards.

The species features prominently in Maori lore and culture. An ancestral guardian of the forest, it is a living manifestation of cosmological origins, standing quite literally as a force that helps separate the land from the sky. To colonial settlers and European explorers, however, it was mainly seen as an abundantly available resource of considerable value which helped fuel the industrial revolution. More than a century since its large-scale deforestation, the Kauri tree has become a complex and contested element of bi-cultural national identity. It features prominently in contemporary discourses about education, heritage and tourism through site tours, museum and conservation practices as well as the sale of a wide range of products made from both its wood and the bright orange resinous gum that fossilises in the soil after oozing from the trunk onto the ground below. From furniture, sculptures and paper weights to bowls and necklace tikis, the distinctly coloured items made from the Kauri's high-quality timber or its crystallised gum are highly visible in all sorts of shops around the country.

Now one of my own surfboards, a seven-foot, ten-inch mini-mall, is made out of Kauri veneer (Fig. 1). I happened to find out about this board while browsing the online auction site Trade-Me, the New Zealand equivalent to e-Bay, an internet service for bartering and bargain hunters. In addition to a couple of images, the relevant details were that the board was shaped by Paul Shanks and the seller was located in the Auckland region. This was useful because I would be travelling through the North Island and could pick it up if need be. As luck would have it, I failed to win the auction because the closing deadline was in the middle of this travel period when I was camping and did not have regular access to the internet. The unmet reserve for this item was \$650.00 NZD and the highest bid a week before closing was \$340. Before leaving Wellington for an escapade of just under two weeks, I had put in a bid for 10 dollars more with an auto-bid for up to \$450, then left for a few days and forgot about the precise closing date. Checking from Auckland a couple of days after the auction had finished, I noticed that a few other people had proposed some small incremental bids but had stopped at \$390. The auto-bid system had thus put me in the lead but with a sum that was nowhere near the reserve.

As a result, the board had been removed from auction. But in my email inbox there was message sent on behalf of the seller. It said that he was prepared to drop his reserve to \$600 and give me first refusal as the highest bidder. There was a three day period within which to accept before the offer would be withdrawn. Over two days had passed already by the time I had checked my messages. My first thought was indignation. 'What a cheeky so and so, his auction had barely

reached \$450 and here he was trying it on for \$600'. So I figured he might re-list the item after the three day window had elapsed. Leaving the city for a further short excursion into the Northland area, I decided to regularly keep my eye on the surfboard trades from various internet cafés.



Fig.1: Kauri surfboard shaped by Paul Shanks, Whangamata, New Zealand (photo by K.Kary).

A few days passed and no new re-listing appeared. I had gambled wrongly and was regretting not having accepted his offer of \$600. Then it dawned on me that it might be possible to work out who he was from the details on his seller's profile. Knowing a first name and a place of residence within the North Auckland region left me hopeful that a surname could be deciphered from the 'trader name'. So back in the city for the last evening before returning to Wellington, I tried the phonebook trick and rang a few numbers under the assumption that I had worked out the puzzle of the seller's second name, asking whoever answered if they had recently been advertising the sale of a wood surfboard on Trade-Me? After making six or seven calls I gave up, embarrassed about disturbing people with

such a strange request. Oddly enough, it seemed that I had got close at one point when a woman answered saying that this sounded a lot like her son-in-law. She gave me a forwarding number. I rang and the bloke she mentioned answered. He did not seem as perplexed about the whole story as the others, but was more concerned about how I had reached him. He became curiously vague after I explained and then evaded revealing much at all about any of the surfing equipment he had previously sold. From his responses and queries back, I ended up thinking that it was him but that he was either no longer interested in selling the board, or annoyed that I had subverted the trading protocol of not contacting people directly.

A week or so later, from the seller's specifications about the auction item, I chased up some information online about the board designer. I wanted to see if ordering another Kauri board might be possible. I found out that he had been a national surfing champion who ran a little custom made board business out of Whangamata. He was also a prominent environmental activist, the president of an organisation called Surfbreak Protection Society (SPS). It was therefore easy to find contact details for him. After a series of email exchanges, he rang me and left an answer-phone message with his phone number. I rang back, mostly to speak about SPS but also to enquire about the costs for shaping a similar board.

Around the same time though, about three weeks after the auction had closed, I discovered that the original seller of the Kauri board had another completely different item for sale on the Trade-Me site. This allowed the possibility of posing to him a question about whether he still wanted to sell the surfboard he had listed a few weeks earlier. He replied making the same offer he had made in the reduced reserve email. Since this was about half the cost of a new one, and because I had not committed to ordering a customised one, I accepted mentioning some forthcoming travel plans when we could arrange a cash on delivery pick up.

We met in Albany Village, a part of Auckland's outskirts that neither of us knew but which was convenient for both. In showing me the board quickly in a busy car park, he gave me a brief background on its history. He had bought it for his girlfriend who only used it a few times and was hardly likely to use it much in the future. Nor would he. "Shame to see it go but we've just no time for the beach these days, now that we've moved from the coast to the big city [...] it's better off in the hands of someone who'll use it". He continued by explaining that the move had been the result of a sudden work related opportunity, only months after she had decided she needed some decent surf gear as a motivator to learn properly. I told him about being especially interested because the board was made from Kauri veneer. He mentioned that they got it from a custom surf place and it was from Paul Shanks' Special Forces series. As a way of soliciting some response about their purchasing motives, I explained that I had contacted Shanks once the board had been removed from auction, commenting upon his affiliations with

environmental lobbying. This did not stir any further reaction however. That is, he did not volunteer any information about whether he or his partner had been attracted to the eco-principles behind the design, adding simply that she had been taken by its aesthetic appeal. He added that it was quite easy to ride for a 'novice' because it had considerable buoyancy and width. He then repeated that they had paid double what he had put as the reserve. Since it was "still in perfect nick", they had agreed before listing it that they weren't prepared to let it go for less than \$600, although he admitted to thinking there would be considerably more interest than there had been.

I would venture that this object was fairly easy to let go of, most probably because the owners did not identify especially strongly with the surfer lifestyle. In the short time in which it was in their possession, it did not facilitate the self-realisation of learning the skill of wave riding sufficiently for them to envisage its continued relevance in their lives, once their circumstances of living by the sea had changed. It had been an easy purchase and a relatively easy sale, especially since its value had been aesthetic rather than based on ideological tenets. But for the maker of this unusual piece of surfing equipment, Paul Shanks, the item's value reflects his values. It is a model example of objectification, whereby his crafting of it is essential to the fabrication of his social self (Tilley 2006).

Shanks has been involved with the surfboard industry since the late 1960s. Initially working for the board shaper Brian Weaver in Waitakere, Auckland, he set up his own company a few years later in the same suburb of Glen Eden, a good location for surfers since it is in proximity of the famous Piha break on the west coast. By the mid-1970s he moved his business to Whangamata, another renowned surf area near Auckland, this time to the south east. This was also the coastal town where his parents had the family batch so it is where Shanks spent a lot time on holidays as a child developing certain skills in and on the water.

As a board shaper, one of his favourite materials for working with is the wood veneer derived from the scrap remnants of deforested Kauri tree stumps cut in the nineteenth century. There are many reasons for this: the wood's unique colour, texture and provenance from a majestic tree of course. Additionally, one of its physical properties is that it is a material which does not change shape when it comes into contact with water. This has made it ideal for seafaring uses and the choice of this resource for making boat hulks has been one of the reasons for mass depletion. Using the wood waste of this period of exploitation has therefore become a powerful socio-political comment about the lack of foresight regarding environmental issues in the past. And this visual statement is one that is made visibly noticeable to those in the surfing community. Those who might not have questioned the elements and processes which go into making their 'sticks'; who might have become complacent about, or have taken for granted, the manufacturing chain that allows wave riding to exist in the first place (Warren and Gibson 2014).

Local surfing histories vary considerably and reveal their own peculiarities. In the case of Aotearoa/New Zealand for instance, shorter carved planks about 5 foot long known as kopapa were commonly used on the east coast of the North Island before European contact. Waka canoes were also used extensively across New Zealand and the South Pacific for certain forms of wave racing. Historical reports also indicate that some Maori iwi groups in the Canterbury region rode large devices that could support up to three people. In the lowest parts of the South Island, the Murihiku used kelp bags (pohas) or roughly shaped logs (paparewa) to ride waves which they referred to as kaukau (Jackson 2006). In an extended and comparatively late period of colonisation, New Zealand witnessed a prolonged lull in leisurely seaside pursuits. But at the turn of the twentieth century, a boom in surfing, sea bathing and life-saving practices took place. One significant repercussion was the co-evolving significance of the seaside family batch, a small holiday retreat minimally furnished and often without running water or electricity. Batches sprang up around the country and surfing became a common practice for many children from the 1920s to the 50s.

A pivotal figure in the transition from the modern era of New Zealand surfing history, dating from the 1950s to the late 80s, and the current post-modern period, is Paul Shanks, a former national champion who lives in Whangamata, south of Auckland on the east coast. He has been the president of the Surfbreak Protection Society since he co-founded it in 2006, in protest to the development of a marina which requires the alteration of the Whangamata Bay sand bar, hence possibly affecting the local surf break. He was officially drawn into the affairs of political and legal legislation a decade before forming SBS “over the issues of water quality and the territorial rights of established surfbreaks”. It was around this time in 1998 that these ideological interests in the environment became formally manifested in his business as a surfboard shaper when he turned his attention to using alternative materials.

Regarding social anthropology's legacy in being fascinated with kinship and genealogy, it is interesting to note how some people describe their identity as a surfer in terms of whakapapa; lines of extended family relationships and descent. In a document submitted on behalf of his SPS organisation in 2008 to the Board of Inquiry of the Department of Conservation regarding the Proposed New Zealand Coastal Policy Statement (Policy 20), Shanks introduces himself as an expert witness in the following way:

I am a Surfer. A surfer must have a reasonable grounding in geography, geology, meteorology, hydrology, micro-biology, chemistry, aero-dynamics, environmental law and adherence to the principles of kaitiakitanga to/of a Surf break. A Surfer must know the history of surfing, in his hometown, in NZ and also the rest of the world, because these disciplines have had a major impact on surf breaks and Surfing over the last century. Hawaiian Duke Kahanamoku,

Olympic swimming Gold medalist introduced modern Surfing to NZ at Lyall Bay, Wellington in 1912.

I am a Surfer, there is no formal qualification to be a Surfer [...] Who am I to claim to be a Surfer?

-I represented NZ Surfing 3 times in International events 1972-1977;

-NZ Senior champion 1990;

-Assistant coach twice NZ junior teams to world titles 1993 & 1995;

-Husband of Jan Shanks life member of Surf NZ;

-Brother of Mark, 2 times NZ finalist national Surfing champs and coaching coordinator for Surfing NZ;

-Father of NZ junior women's reps Amber and Heidi;

-Father of Heidi twice NZ junior champ, 1994 Open women's champ;

-Father of Samara, Surf-shop manager;

-Brother of Jeanne, 10 times NZ open women's champ.

-I have been in the Surfing business/industry since 1971, owning and operating a business in Auckland and Whangamata, retailing, manufacturing, wholesaling and exporting.

Similarly, the artist and carver from Raglan Aaron Kereopa comments that he was fortunate enough to be adopted into a Hawaiian family. From this he has been able to appreciate and comprehend the similar thematic patterns of Pacific cultures, especially in terms of mythology and the narratives of navigational travel:

When you combine that with our common approach to our tupuna (ancestors), whakapapa (genealogy) you have a rich tapestry that I end up translating onto the surface of the boards I work with. When I first started this journey I would use broken boards, take them out for their last surf then strip them out. From there it is a matter of working out what will fit in that space, what will work in with the thickness, the curvature, length and rails of the board. To me it is like they are a living piece, a waka (canoe). (cited in Panaho 2008).

Tree Planks and Toxic Blanks

Thought to have developed most fully in ancient Hawai'i, surfing also existed in several island cultures of the Pacific prior to European contact. The art of riding waves was not only recreational, it was also a training exercise for Hawaiian chiefs, a means of conflict resolution as well as a spiritual and symbolic affair, whereby different ritualistic prayers for good surf or surrounding the building of surfboards have been recorded by ethno-historians (Finney and Houston 1966;

Helmreich 2015). Surfing therefore began as a complex Janus-faced activity, with both leisurely and ceremonial facets. Indicative of this in-betweenness, of this liminal character, the boards themselves were hierarchically separated in these early days: the 'Olo', rode by the chiefs or their 'Alii' entourage of the noble classes and the 'Alaia', rode by the commoners. The wooden boards were made using three main tree species, the Wili Wili, the Ula and the Koa. Their length ranged depending on social class: 10-12 feet long for commoners and 14-18 feet for the nobles and chiefs. These class distinctions were also manifested in gender divisions, even though surfing was commonly practiced by women. The creation of masculine power dynamics through the demonstration of endurance, strength and skill pivoted to a great degree around heavy longboards in pre-contact Polynesian cultures (Ford and Brown 2006).

The effects of the puritanical ethos that went along with global colonialism saw the activity dwindle. This even occurred in a country like Australia, which we highly associate with the early advancements of surf culture (Pearson 1979). It wasn't until the inter-war years that an international revival would take place, resulting in several big changes in board design. These dealt with the materials used as well as size, weight, fin types and the variation in shape to accommodate different wave conditions. During this era of rapid innovation a number of people, all men and mostly Americans or Australians, have been identified as the main pioneers in the developments. These include: Hobie Alter, Simon Anderson, Tom Blake, Dick Brewer, George Downing, George Freeth, Wally Froiseth, George Greenough, John Kelly, Jack O'Neill, Bob McTavish, Joe Quigg, Bob Simmons and Dale Velzy. From the early 1930s until the late 1950s, surfboards were generally made of balsa wood, with redwood pine as a favoured alternative. The Malibu longboard was still the preferred style which ranged in length from 10 to 16 feet, the non-hollowed pine ones weighing up to 100 lbs. The major commercial innovation of developing foam blanks that were then coated in fibreglass is accredited to the Californian Hobie Alter who began searching for a substitute to South American balsa once it got harder and more expensive to obtain because of the growing demand and production competition. The short board revolution of the mid-1960s amplified the use of foam blanks as the industry's norm (Kampion and Brown 2003).

Many surfers, particularly those who are actively involved with environmental organisations, are increasingly feeling compromised by having to use boards that are ecologically damaging in what should be a 'natural' environment. The surfboard's three base materials are extremely toxic and there is an annual global production of nearly 750,000. Internationally, one can find several examples of local board shapers such as Shanks who have specialised in the niche market of environmentally conscious surf equipment. Indeed, this is not a new phenomenon but has been going on over the last forty years or so. The main problem has not been with the vision since the social memory of surfing is not so

old as to have forgotten the roots of the activity as one reliant on wood as the initial material of board production. Rather, the issues have been three fold: lightness and performance; affordability in relations to mass production and consumer demand; and the international popularisation of the activity which has turned it into a fairly minimalist and low cost leisure hobby as well as an increasingly competitive professional sport.

One of the main proponents for developing new eco-board prototypes that can satisfy the needs of a huge global market has been Chris Hines. He has made several public statements about the search for ways to clean up surfing's image such as: "This board is a challenge to surfers and to the industry [...]". Over the years, while Director of Sustainability at the Eden Project, he and his team have been involved with exploring several design options. They have worked in partnership with a range of Cornish-based companies on the prototypes for making boards in an environmentally-friendly way on all the levels concerned, from the sourcing of base materials and colouration pigments through to each manufacturing procedure.

A Cornish company called OceanGreen began producing custom boards that were one hundred percent 'bio-derived' – that is, made entirely from renewable materials. The idea was to replace the traditional board production process with a sustainable alternative which had equal or better qualities, thus giving surfers an ethical consumption choice that would be consistent with the overall respect for the environment shared by many. Initially they started by experimenting with hemp cloth, balsa wood and potato peelings instead of fibreglass and polyurethane foam blanks. Combined with natural resins, rather than polystyrene epoxy, the hemp cloth laminated coating produced boards that were undoubtedly more environmentally sensitive, while remaining fairly light and strong. Another of the advantages being that balsa trees grow rapidly.

Pat Hudson, who works as the sustainability research officer at the Eden Project, has pointed out that one of the main drawbacks with the balsa-hemp design was in the expensive production cost. Not being within a reasonable range of the cost of normal boards removed their commercial viability, meaning that they remained an exclusive product for a limited consumer base. Also, the balsa-hemp trial boards were especially susceptible to fungal attack and damp rot. So after some comprehensive research into the ecological footprint of the materials involved in 2005/6, a new approach has been taken by the Eden team. One alternative which seems hopeful is not to strive towards producing the utopian ideal of sustainability but to aim instead for a realistic compromise which might leave a positive global impact. The result has been the design of Biofoam surf blanks. These were launched by HomeBlown in 2007, a company that have manufacturing facilities in the UK, US and South Africa. They estimate that the shipping of raw materials for local production is eighteen times more efficient than shipping pre-made blanks. The result has been that it is now possible to order eco-

boards at prices competitive with those of the normal market products. These blanks have close to 50% of their foam sourced from plant-based agriculture products and the production results in 36% less carbon emissions and a 61% reduction in non-renewable energy use than the standard board made with polyol resins (Sullivan 2007).

We can see that this new approach also includes the proviso of being more 'scientific', thus being able to produce more convincing evidence for persuading both manufacturers and the public of the need for change. In this respect, it has been calculated that professional surfers, for instance, go through more than a board a fortnight as they snap in two, develop pressure dings or simply lose flexibility. Some minimally damaged boards get repaired and re-enter the market as second-hands but many are disposed into landfills where they take centuries to decompose. Conversely, the eco-version can simply be composted. Pat Hudson has commented about the green alternatives that in theory they: "can be thrown onto the compost heap to decompose naturally and quickly".

This raises the question about the death of the object and what seems to constitute the need for generating a discursive attitude of alienability around surfboards. There is an important point to drive home here about the relationship with modernity and disposability in terms of responsibility for an object until it turns into something else (Eco 2007). Whereas the modern position is that once the use value has expired, one's responsibility for it shifts to someone else so that we can forget about it and are no longer connected to it. Without wanting to be too cynical, we do need to acknowledge that often boards go through several lives. They get gifted, repaired, sold at car boot sales or on internet auction sites. Older ones get collected or transformed into furniture and artworks. Many simply get tucked aside as a voluntary or unwitting display of the laid back lifestyle associated with beach culture. In other words, surfboards are actually objects which are difficult to separate from the identity of the practice.

This dilemma has been identified by many scholars working on the redeemable features of refuse and rubbish. For example, the compilation *Culture e³ Waste* by Hawkins and Muecke (2003) addresses the production of value for things taken out of the formal economy thus raising such questions as: why would we want to encourage a throwaway society component to that which has long term value even after its originally intended use has waned (Hylland Eriksen and Schober 2017). As a keen surfer, Hudson is of course aware of the rhetoric, especially since he recognises that professionals are only a tiny fraction of the market. They are therefore not the targeted users for the green prototypes, nor at this stage in the developments would they even be seen as the standard norm for the more expert surfer. So even though they go through a lot of boards, the impact of the professionals is minor in comparison with the huge number of beginners to moderate surfers for whom optimal performance boards are not especially necessary.

Regardless, the problem of performance perception of the eco-board is highest amongst the most competent practitioners, many of whom are themselves old-school shapers or the ones who run the businesses which order materials or products from suppliers. In general, this group is either complacent or opinionatedly antagonistic to the need for developing sustainable surf gear. Granted it was during the early phase of the developments for the eco-board solution but one time in 2005 I dedicated a full day in Newquay and St Ives to tracking down a shop that would stock or order an eco-board. Most often I was given a blank stare. On a couple of occasions, I was laughed out the shop by a bunch of lads who followed with comments such as ‘what was that all about’ or ‘bloody hippy’. Only at one shop in over a dozen did the salesperson pay attention to my interest and said he would pass on the request to his manager, adding: “the more we hear such requests, the more our suppliers will realise that there’s a market for such things”.

And of course, why stop at boards? The Billboard Surfboard Bag is a new venture in providing an eco-alternative to manufactured vinyl board bags. Its waterproof vinyl is made of reused, colourful motorway billboards. The dual benefit of saving an otherwise discarded material and limiting the production of new vinyl-based plastics not only makes the board bag an environmentally friendly option but gives it a much more distinct and individual aesthetic.

There is of course another reason to gain the support of the professionals with regard to such alternatives – they are often idolised by many young beginners. This is where it becomes essential for the promoters of the eco-boards to get the sponsorship and endorsement of corporate multi-national surf companies. Since these organisations are increasingly sensitive to market demands for green products, they are beginning to respond by changing suppliers or associating with certain environmental campaigns. Many environmental pressure groups have themselves become sensitive to this bandwagon phenomenon and have responded in a variety of ways to make sure their corporate affiliations do not become smokescreens.

Surfboards as Canvases

It is not just designers who have been involved with promoting the use alternative materials in surfing. Artists are prominent amongst the groups that have been recruited to help lead the way in changing the public’s mindset. Especially with reference to a couple of high profile examples in the UK, there is a fairly long history of surfboards being used as the canvas for contemporary and street art. For instance, the Californian board shaper Jeff Ho, made famous through his central position in the Venice beach surfing and skateboarding scene of the 1970s, became internationally renowned for his extravagantly coloured artistic designs (Peralta 2004). There is no direct way in which one could argue that the Ho &

Zephyr Productions surfing and skating products can be associated with the onset of environmental awareness in the realm of board sports. Nevertheless, it is the maintenance of the excessively counter-cultural façade in the rapidly developing corporate appropriation of extreme practices which is the point worth emphasising here.

Another example of the growing attempts to promote green awareness in surfing includes the *Full Circle – Surfboard Evolution* exhibition which ran at the Eden Project over the summer of 2008. Displaying rare and historic surfboards dating from the late 1800s to the present day, it was the first exhibition in the UK to look at both the environmental impact of surfboards and the change in their design over a hundred year period. By highlighting significant historical developments, the exhibition was put together with the intent of showcasing new ideas in material selection for the future of the industry and the practice. This idea of a cyclical return connects well with the theme of liminality in that undergoing the phase of anti-structural ‘in-betweenness’ allows for a return to the structured social setting, albeit in an enlightened way which might serve to challenge or change the status quo.

An artist who has deliberately played on this connection between the return and ecological concern is Ben Cook. Again in 2008 at the Eden Project, Cook set up an homage to Joseph Beuys’ *The Pack*. Inspired by Beuys’ 1969 installation, the piece was meant to highlight the need to consider change in mainstream as well as alternative communities. Beuys’ installation consisted of a Volkswagen camper van with twenty four sleds emerging from the rear doors. Each had strapped to them a roll of felt for warmth, a lump of animal fat for energy and a torch for direction. Beuys had described the piece as an ‘emergency object’, representing the need to resort to immediate and reliable means of survival during instances of modern technological breakdown. Beuys had drawn on an incident of crisis when his dive-bomber was shot down in Crimea during the Second World War. He subsequently alleged to have survived the crash as a result of being rescued by nomadic Tatars who wrapped him in fat and felt to nurse his wounds and keep him warm.

As well as the sleds and felt being swapped for surfboards and wetsuits, *The Pack* 2008 sees the animal fat replaced with tablets of surf wax and the flashlights with tide tables to symbolise survival and direction (Fig. 2). Behind Beuys’ initial installation and Cook’s re-enactment is the idea of exploring the human capacity to adapt in the face of technological failure, a concept that blends well with the Eden Project’s overall vision as well as their search for sustainable surfboard prototypes. Both the sledges and the boards are depicted as being in a liminal state of waiting, of readiness. They are about to undertake a potentially perilous journey – a phase of transit through the wild between one place and another – between one time and another.

Cook is explicit in the rationale he gives for the environmental agenda behind many of his artworks:

I want to question the current consumer-led fashion for an insistence on a pure white surfboard blank. Surfers are close to nature. They're dependant on it and immersed in it, and they ought to be the first people to question prevailing technology. They should also be the first people to adopt new sustainable materials. (Pers. Comm. 2008)

The reasons behind the artistic use of surfboards are rarely so clear cut or overt in terms of environmental concern. This is not to say, however, that other types of surf art address less equally poignant issues. Dealing with the relationship between identity and local materials is certainly crucial with regards to influencing the public's perception. For instance, Brian O'Connor, an artist from Southland had one of his two paua shell laminated boards bought by the National Museum of New Zealand, Te Papa Tongarewa, in 2001. In 1987 O'Connor established Southern Paua, a little business in Riverton which specialised in making and selling paua shell souvenirs. In 1998 he moved his business to Kaikoura, an area just north of Christchurch which was becoming increasingly popular with tourists because of whale watching, decent weather and consistently good surf. His four sons and wife are all dedicated surfers and keen on snowboarding as well. One of his future projects is to make a paua snowboard. He is one of a number of New Zealand artists and craftspeople passionate about using the nationally iconic paua shells. O'Connor surfboard is just one of the many pieces made from paua shells which are held in the Te Papa collection.

The paua shell surfboard is a standard shortboard size of six foot, two inches (1.89 metres). O'Connor has been a surfer since the mid-1970s and in 1990 started making his own boards. Creating a board with paua shell seemed be a natural thing to do for an artist interested in surfing and he was surprised that no contemporary artist had thought of it until the twenty-first century. He has emphasised its functionality as a board, saying that it is:

Definitely rideable. It's an uncomfortable feeling knowing you're sitting on a big fishing lure, but it's an amazing experience to see the sun reflecting off the paua in the water [...] I knew it was possible, and I thought it would be out of it, and nobody had done it before.

To make the paua board, he applied all the normal procedures for shaping surfboards. That is, he took a standard foam blank. In the middle of the blank is a thin piece of wood that runs the length of the surfboard. This is known as a stringer, and it provides strength and weight. O'Connor shaped the blank to his own specifications by shaving layers off it with a tool called a planer. After applying resin to the board, he fixed stripes of paua laminate, which were simply held in place with double-sided tape. After coating the entire board in fibreglass, the usual process of sanding and polishing is required.



Fig. 2 Ben Cook's *The Pack* 2008. Eden Project, St Austell Cornwall UK (photo by the author).

The board features in the *Made in New Zealand* exhibition which has been on permanent display since 2001. It is a piece that considers sustainability in the sense of cultural and heritage issues rather than direct ecological foot-printing. If, however, one of the main hurdles to overcome in the environmental debates surrounding surfing is public perception, then O'Connor piece is a highly visible contribution of major significance.

Conclusion

Simmel's (1997 [1911]) musings about the adventurer are relevant for our purposes on many levels but I want to use them here because of the explicit connection that he makes between the adventurer and the artist. Not only is the adventure like a work of art, but in speaking to the meaning of life in a way that is torn out of everyday experience, the adventure captures a privileged microcosmic reflection on humanity's place in the world. As he says:

A part of existence, interwoven with the uninterruptedness of that existence, yet nevertheless felt as a whole, as an integrated unit – this is the form common to both the work of art and the adventure. Indeed, it is an attribute of this form that makes us feel that in both the work of art and the adventure the whole of life is somehow comprehended and consummated – and this irrespective of the particular theme either of them may have. (1997: 223)

In illustrating a classic paradox between nearness and remoteness, both adventure and art share transcendental qualities that can be captured in concrete ways. It is the tension between its closeness to life and its distance from the everyday that provides a logical coherence to the adventure which is distinct and potentially memorable.

This therefore allows us to consider the ambiguity of both the functions of surfboards and their current transition, when a large scale design shift might be about to occur. Water sports are an increasingly prominent factor in the formulation of identity, and in several ways such leisure activities are tying into ecological discourses since the surfboard becomes a quintessential liminal object in being in that moment of history when they might be changing towards a new ethos of sustainability.

Surfboards are also liminal objects because they are literally and figuratively about the flattening of experience, although not in the derogatory sense. Only minutes of any session are actually spent standing, the rest of the time is for sitting, lying down or duck-diving. They are devices that allow their owner to float on the water taking in endless hours of contemplation and meditation, staring at the horizon, observing the swell. Even when standing, the surfer's gaze is not predominantly directed at the water below but instead probes the beach or rocks in the distance. In facilitating transcendental experiences surfboards are thus classic liminal objects made more so by the in-between area which they move through, beach and sea, domestic and public, concealed and revealed. For the apt surfer, they equally allow for the irregular possibility of mediating the entry into a space created by the curvature of the wave crest before it breaks, the 'green room', a unique environment of sensorial distortion. Moreover, they are a piece of equipment that transgresses modernity into post-modernity, allowing their owners that subversive identity of being outside normative society.

To return briefly to Raymond Firth for a moment then, it is important to emphasise the economic significance of the struggle to make equipment prototypes into a social reality. The material above illustrates an interesting contrast: the nature of independent versus commercial adventure. It shows that these two facets are intimately linked and yet simultaneously on opposite ends of the spectrum. The latter seeks to reduce real risk to minimal levels, in order to create an enduring enterprise with a clean public image. In this sense, adventurous activities are far from being dangerous or 'close to death' (Buckley, Cater, and Godwin 2007). Thus the business end of the alternative sports industry reminds us of the need to

consider both the form and the function of the equipment used. Without worrying about the debates over functionalist determinations, we can – by seeing the complex networks outlined above and considering their intricate entangled relationships – certainly appreciate the need for micro and macro level analyses. Indeed, in thinking about the bigger picture, we need to bring together many variables concerning the complexity of understanding the socio-political (including financial dimensions) alongside perceptive or psychological discourses, as well as debates about the symbolic and considerations over the material cultures of the activities involved in thrill seeking.

Surfboards are thus an interface between the participant and their chosen peak experience activity in a way that other equipment such as shoes or snowboards simply are not. They are more akin to the fundamental importance of rope in bungee jumping, rock climbing and the acrobatic traverse of tight-wire walking for instance (Abramson and Fletcher 2007). The Heideggerian (1988) point about becoming, as the board enables the production of knowledge which allows this new identification with skill and social position, applies well at this point. We can further speculate theoretically that the debate about eco-surfboards stands as a metaphor for a paradox that most people and cultural groups deal with in terms of the multi-faceted structures within which identities exist and change. This is particularly revealed through the relationship that holistic innovation has with our attention to consumption in an increasingly global capitalist economy. The base assumption, perhaps worth investigating further, is that an increasing world-wide awareness of, and concern for, environmental issues is currently taking place. If such is the case, does this mean that human perceptions of materiality are likely to evolve as a result?

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