DRAWING ON EXPERIENCE

Somatic representations of moving through the landscape

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Contents

Figures........................................................................p.2
Attestation of authorship.............................................p.4
Acknowledgements......................................................p.5
Abstract........................................................................p.6
Introduction....................................................................p.7
Part 1 – Nature sport and the experience of moving through the landscape.....p.9
Part 2 – Representations of landscape.................................p.22
Part 3 – Studio practice..................................................p.36
Conclusion......................................................................p.45
References.....................................................................p.49
Appendix (Images)..........................................................p.53
Figures

Figure 1. Salmon rapids, Waimakariri River, Coast to Coast, 2017, Retrieved from
https://www.marathon-photos.com p.9

Figure 2. Crossing the Bealey River, Coast to Coast, 2017, Retrieved from

Figure 3. Mt Aubrey Ridge Run, 2016, stills from action camera p.16

Figure 4. J. M. W. Turner, Petworth Park: Tillington Church in the Distance, c1828, oil on
canvas, 600 x 1475mm, Retrieved from http://www.tate.org.uk p.23

Figure 5. J. M. W. Turner, Snow Storm – Steam-Boat off a Harbour’s Mouth Making Signals in
Shallow Water, and Going by the Lead, 1842, oil on canvas, 915 x 1220 mm, Retrieved from
http://www.tate.org.uk p.23

Figure 6. Richard Long, Walking a Line in Peru, 1972, Retrieved from
http://www.richardlong.org p.25

Figure 7. Matti Tainio, Lisboa, 2009, GPS tracking image, Retrieved from
http://www.contempaesthetics.org p.27

Figure 8. Matti Tainio, A Runner’s Career 2001-2007, 2010, photograph, Retrieved from
http://www.mattitainio.net p.27

Figures 9 and 10. Carali McCall & Jane Grisewood, Work no. 2 (Line Dialogue) IV, 2011, 90-
minute performance, 500 x 220 cm, Retrieved from http://caralimccall.com p.28

Figure 11. Carali McCall, Work no. 4 (Restraint/Running), 2010, still image form performance

Figure 12. Carali McCall, Post-Run Map Drawing, 2010, notebook drawing, 40 x 30 cm, from

Figure 13. Mapmyrun Training Record: Month/Duration, 2016, Retrieved from
https://www.mapmyrun.com p.30

Figure 14. Stephanie Posavec, Literary Organism (Part 1 of ‘One the Road’ by Jack Kerouac),
Retrieved from http://www.stefanieposavec.co.uk/personal/#!/writing-without-words/ p.30
Figure 15. *Goat Pass Run*, 10/2/17, Generated by Movescount (Suunto), Retrieved from http://www.movescount.com p.31


Figure 17. Iannis Xenakis *Study for Terretektorh*, 1965-66, coloured pencil on paper, 22 x 30 cm, Retrieved from http://www.grahamfoundation.org p.33

Figure 18. Jorinde Voigt, *Ludwig van Beethoven/ Sonata No. 5 (Opus 10 No. 1)*, ink, pencil on paper, 86.5 x 140 cm, 2012-146, Retrieved from http://jorindevoigt.com p.34

Figure 19. *Suunto Ambit 2S and Heartrate Monitor* p.36


Figure 21. Geoff Harris, *Circles C2C v4*, digital image, 2016 p.38

Figure 22. Geoff Harris, *RCC v1*, 1600 x 1600 mm, graphite on paper, 2016 p.39

Figure 23. Geoff Harris, Details from *WK5 (Wild Kiwi)*, paint marker on paper, November 2017 p.40

Figure 24. Geoff Harris, *Wild Kiwi v3*, 550 x 410 mm, graphite on paper, 2016 p.41

Figure 25. Geoff Harris, *Training September*, 1600 x 1600 mm, liquid chalk on paper, 2016 p.42

Figure 26. Geoff Harris, *WK5 (Wild Kiwi)*, paint marker on paper, 1655 x 1950 mm, 2017 p.43

Figure 27. Entering Waimakariri Gorge, Kathmandu Coast to Coast, Retrieved from http://www.coasttocoast.co.nz/ p.45

Figure 28. Geoff Harris, *Study for C2C v2*, 560 x 800 mm, pen on paper, 2016 p.47
Attestation of Authorship

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Signed

Geoff Harris

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Abstract

This investigation explores the transactional experience of moving through the landscape at speed. More specifically, the use of the continuous open skills\(^1\) involved in nature-sport activities to negotiate terrain and weather in order to experience the environment as *part of* rather than *apart from*. The representation of *moving through* a landscape is differentiated from traditional representations based on the paradigms of *looking at* or *being in* the environment. Richard Shusterman’s concept of embodied ‘somaesthetic perception’ and Arnold Berleant’s notion of ‘aesthetic engagement’ are presented as alternatives to the Kantian view of ‘aesthetic disinterest’ that informs traditional European landscape art.

Studio outcomes synthesise GPS data and expressive drawing techniques to represent specific nature-sport experiences such as the 243 km alpine traverse of the *Kathmandu Coast to Coast*. The methodology draws upon the graphic precedents of Iannis Xenakis and Jorinde Voigt, and aesthetic strategies of contemporary infographics, to modify statistical data for the purpose of representing nonvisual experiences.

\(^1\) ‘Continuous open skills’ refers to the ongoing and complex groupings of actions needed to succeed in unpredictable environments such as surfing or white-water kayaking. ‘Closed skills’ are a more clearly defined sequence of skills performed in a controlled environment such as serving in tennis.
Introduction

Art flourishes where there is a sense of adventure - Alfred North Whitehead

Being upside-down in a kayak in grade two rapids is interesting. Strapped into the cockpit, rocks flashing past millimetres from your head, no air, and cold. Yet at the same time it’s oddly calm. Gone are the loud noises of rushing water, gone is the violent rollercoaster motion of the surface, and gone is the fear of capsizing. Then you rip away the spray skirt holding you in place, wet-exit, breathe, secure the boat and swim to shore. Then empty the water, relaunch, and do it all again. That’s an experience.

The word ‘experience’ is used here in the transformative sense as defined by John Dewey, as being ‘the result of interaction between a live creature and some aspect of the world in which he lives’ (Dewey, 2005, p.45). An experience is transformative in that it creates change. This is particularly true within the realm of nature sport - e.g. white-water kayaking, mountain biking, windsurfing - where the levels of risk and challenge are high.

Significantly, risk and challenge force nature-sport athletes to relinquish their sense of self in order to find it more profoundly. In a challenging situation, they must act instinctively, drawing upon hours of training to make the correct embodied responses to rapidly changing environmental factors. Optimally, one enters a state of ‘flow’ where the object/subject division between human and environment evaporates, creating a form of aesthetic engagement or ‘a dynamic interplay between viewer and landscape as we extend ourselves into the landscape, looking not at but from within the landscape’ (Berleant, 2016, p.72). Completing significant challenges, such as crossing the Southern Alps on foot, bike and kayak, changes our view of ourselves, and alters our relationship with nature.

My research question is how can we represent this somatic experience - of moving through the landscape at speed – and its inherent ‘flow’ state where athlete and environment are one?

The subject/object paradigm underpins conventional Western landscape painting. Majestic views are presented from a position of looking at rather than being in, let alone moving through. In my review of useful precedents, I have explored the sport/art synthesis of Carali McCall and Matti Tainio, and draw upon the graphic sound/vision translations of Iannis Xenakis and Jorinde Voigt. I have also looked within the field of information graphics where solutions effectively communicate nonvisual concepts.

My studio practice develops a visual language to represent a transactional experience within a specific field of play during multisport events such as the Kathmandu Coast to Coast or the
Total Sport Wild Kiwi. The outcomes are digital and freehand representations of the sensation of active modes when moving through particular landscapes. The work is informed by comprehensive infometric data gathered through GPS and heart-monitor devices, combined with the somaesthetic sensation of the races. A key aspect of this investigation is negotiating the gap between the quantitative foundation of statistical data, and the embodied qualitative experience of the event.
Part 1

Nature sport and the experience of moving through the landscape

Definition of nature sport

*If you’re not living on the edge, you’re taking up too much space* - Anonymous

A range of names have been used to describe physical activities that fall outside traditional team or competitive sporting codes. ‘Adventure’, ‘alternative’, ‘lifestyle’ and ‘extreme’ all signal subtle differences in the type of activity, its stated purpose, and the degree of risk involved. I have used the collective term ‘nature sport’ to indicate those activities that operate within an unmodified natural setting such as rivers, ocean, mountain and bush. These activities include kayaking, mountain biking, trail running, snowboarding, surfing and windsurfing.

Figure 1. Salmon Rapids, Waimakariri River, Coast to Coast, 2017

Gunnar Breivik (2010, p. 262) identifies four key properties in adventure (or nature) sports:

- Are more loosely organised than mainstream sports;
- Have elements of challenge, excitement and (in most cases) risk;
- Take place in unmodified and demanding natural environments;
• Are individualistic pursuits that tend to build groups of subcultures around the activity.

Nature sports require participants to respond directly to natural features such as river rapids, ocean waves, wind speed or rugged terrain. This involves a high degree of 'embodied capital' as defined by Tim Dant and Belinda Wheaton with reference to windsurfing - 'the ability to achieve control must become virtually intuitive: it must happen without conscious thought so that the equipment becomes like a prosthetic extension of the sailors' body' (2007, p. 10). This intuitive interaction informs the participant’s relationship with the environment: there is no time for cognitive reflection; action must be instinctive and immediate. Success is determined by an acquired skillset that supports a kinaesthetic engagement with, and embodied understanding of, environmental features.

**Nature sport versus traditional sport: individualism and environmental setting**

*Wilderness is not a luxury but a necessity of the human spirit, and as vital to our lives as water and good bread - Edward Abbey*

Two key differences between nature sport and traditional sport are the competitive context and the ‘field of play’ within which the activities occur.

With traditional sport the ultimate purpose is to triumph against other athletes, whereas in nature sport ‘one of the primary roles is played by a natural feature, so there is no need for an athlete to be compared to, or interact with, other humans’ (Krein, 2014, p. 200). While some nature sports may also be conducted within a competitive context, such as a sailing regatta, the essential relationship is between a human and the environment.

Winning and losing have little to do with the overall experience of climbing… competitors truly didn’t come here to test anyone but themselves. Terrain is the truest adversary of all, and in the end of everything it's the terrain that's still standard, unbeaten. (Climber David Dornian, cited in Krein, 2008, p. 295).

This leads to the second significant difference, which is the ‘field of play’. For example, for consistency and equity, both rugby and athletics are conducted within the strictly defined and controlled location of field, track or stadium. Even distance running occurs on paved surfaces and adheres to set distances such as marathon and half-marathon. Nature sports except in rare circumstances such as manufactured white-water runs that are designed to emulate the natural world - occur in a largely unmodified and uncontrolled natural environment. This shifts
the focus from reading other human opponents to understanding the characteristics of natural forces, which has the potential to profoundly affect our understanding of the relationship between ourselves and our environment.

To achieve excellence in such sports is to know the natural features one interacts with and adapt to their changes in a skilful way. Participating in nature sports brings people to intimate recognition of the existence of powerful forces of the natural world – ones that are awesome and far beyond the control of any human athlete. (Krein, 2008, p. 297).

There is an opportunity for discovery of both self and the world afforded by the immersion in the unknown - ‘action that takes us into nature envelops us in the unfamiliar, and so is investigative’ (Kupfer, 2003, p. 79). Not only do athletes learn the unique properties of trail, wind and wave, they also explore the limits of self.

Where traditional sport seeks to standardise an environment by eliminating variables, nature sport embraces environmental variables as an opportunity for personal growth. ‘Instead of fighting the pull of gravity, the more comfortable skier yields to it and finds ways to play with its force. Skiing then becomes a thing of beauty.’ (Skier Erik Bendix, cited in Ilundain-Agurrusa, 2014, p.384).

This reference to ‘beauty’ signals an aesthetic dimension within nature sport typically absent from conventional sport, and intuitively anticipates the concept defined by Arnold Berleant as ‘aesthetic engagement’.

**Extended duration provides opportunity for freedom and identity construction**

In addition to the individually focused and environmentally located aspects of nature sport, the duration of involvement is typically extended. Time frames of four hours to four days serve to deepen our understanding of self and connection with the natural world. A prolonged interaction provides opportunity for the attainment of freedom\(^2\) and construction of identity\(^3\).

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\(^2\) Brymer and Schweitzer (2013) identify six elements of freedom in extreme sports: freedom from constraints, freedom as movement, freedom as letting go of the need for control, freedom as the release from fear, freedom as being at one, freedom as choice and responsibility.

\(^3\) Lynch and Dibben (2015) using ‘self-determination theory’ found that factors such as challenge, accomplishment, competence, personal responsibility, self-transformation, social interaction, and the interplay between place, identity and adventure are key motivations in participation in adventure events.
Neil Lewis succinctly summarises this transactional relationship:

To engage with the world tactually is to situate oneself consciously in that world and to have a potentially unmediated relationship with it. Modernity, on the other hand, seeks to mediate our relationship with the world. (Lewis, 2000, p. 59).

Gunnar Breivik asserts that nature sports, as opposed to mainstream sports, are 'a counterbalance to modern society’s overemphasis on routine and control' (2010, p. 260). Mihály Csíkszentmihályi describes the feeling more strongly as ‘ontological anxiety’ or ‘existential dread’. He adds, ‘Basically, it is a fear of being, a feeling that there is no meaning to life and that existence is not worth going on with. Nothing seems to make sense.’ (2008, p.12).

![Figure 2. Crossing the Bealey River, Coast to Coast, 2017](image)

The safety prioritisation in contemporary culture, exemplified by OSH regulations in New Zealand that result in schoolchildren being forbidden to climb trees (as in the case of my own son at Whangarei Heads Primary School), is potentially an inhibitor to personal development.

Finding meaning within the pursuit of embodied skills and the experience of nature is succinctly summed up by New Zealand multisport legend Steve Gurney: ‘Pushing myself
beyond my boundaries of pain, fatigue and sleep deprivation gave me a curiosity and insight into who I really am as a human being’ (2008, p.65). In other words, ‘to fight nature is to fight oneself, to understand nature is to understand oneself, to be in the natural world in all its glory is to recognise that we are part of that glory’ (Brymer and Gray, 2009, p.144).

‘An experience’ as defined by John Dewey and refined by Joseph Kupfer

*We do not see nature with our eyes, but with our understandings and our hearts* -
William Hazlitt

These three key features of nature sport - embodied capital, environmental context and extended duration - create the conditions for what John Dewey refers to as ‘an experience’ where the undertaking is ‘so rounded out that its close is a consummation and not a cessation. Such an experience is a whole and carries with it its own individualising quality and self-sufficiency. It is an experience.’ (2005, p. 37).

For Dewey, the positive state of being was not an ultimate self but rather in a constant state of personal evolution.

There is no such thing as a fixed ready-made finished self... all voluntary action is a remaking of self, since it creates new desires, instigates new modes of endeavour, brings to light new conditions, which institute new ends. (Dewey, cited in Hopsicker and Hochstetler, 2014, p.167).

Dewey refers to the developmental function where an experience is being ‘transactional’ rather than merely ‘interactive’. ‘Transactional’ refers to the integrated union of parts that considers man and the environment as a whole rather than a dualistic ‘interactive’ relationship of separate parts. In other words, the complete merging of subject and object.

It is esthetic in the degree in which the organism and environment cooperate to institute an experience in which the two are so fully integrated that each disappears. (Dewey, 2005, p.259).

This approach differs significantly from the cognitive approach, which is typically static and visually prioritised, focusing on measurable properties such as form, shape and proportion. Such an approach relies on a clear separation between subject and object. An experiential approach gives primacy to the transactional properties of physical movement through space and time.
Joseph Kupfer (2003) further unpacks the distinctions between different types of human/nature aesthetic experiences and specifically those modes of interaction/transaction that move beyond the distance senses - particularly vision - and generate subject/object differentiation. Kupfer isolates four different modes of interaction: acting in nature (close contact), acting into nature (passive moving), acting against nature (goal driven), and acting with nature (active harmony).

The first and second modes include the close senses of touch, smell and taste, which leads to a more holistic experience but tends to provide a reflective space that is less conducive to the ‘flow’ state as defined by psychologist Mihály Csíkszentmihályi. ‘Action which takes us into nature envelops us in the unfamiliar, so it is investigative…how saturated an experience is with this quality of penetration or investigation is also a matter of degree’ (Kupfer, 2003, p.79).

The third and fourth modes are more dramatic and include the kinaesthetic preceptors of proprioception⁴ and the vestibular system⁵. The dynamic nature of strenuous action means that ‘the action and its consequence must be joined in perception’ (Dewey, cited in Kupfer, 2003, p.81). The nature of the interaction is often defined by attitude rather than action, with many nature-sport activities more inclined towards a harmonious collaboration rather than a confrontational challenge. For example, while mountain climbing can be treated as a summit-oriented achievement, sports such as windsurfing and surfing tend to be autotelic in a ‘more dance⁶-like partnership in which we follow nature’s lead’ (Kupfer, 2003, p.84). The heightened level of connectedness with the environment is supported by Sarah Nettleton’s interviews with long-term fell runners of the Lake District in Cumbria: ‘For fell runners it is not the running per se that is valued but running on, in and with the fells’ (2015, p. 770).

My own experience shifts between these modes depending on the intention and circumstance. When navigating the grade two Rock Garden rapids of the Waimakariri River, the initial intention is clearly ‘acting against nature’ in that my goal is to get through without capsizing. Yet invariably the experience becomes ‘acting with nature’ as I am immersed in the interaction ‘by maintaining balance and poise in swift demanding action… (and making) adjustments and

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⁴ Proprioception is feedback provided by sensors within muscles about the movement and position of body limbs.
⁵ The vestibular system is a series of fluid-filled canals located in the inner ear that provide input about spatial orientation (gravity), acceleration and movement.
⁶ The dance metaphor emerges spontaneously in numerous studies of nature sports. ‘Participants speak about the extreme-sport activity as learning to adapt to, participate with or be attuned to the natural world as in a partnership or dance’ (Brymer and Gray, 2009, p.143). ‘Alpine skiing...aims to transform the act of sliding downhill into a long slow-motion dance with gravity’ (skier Erik Bendix, cited in Ilundáin-Agurrutz, 2014, p.384).
readjustments to somatic cues received along the ride” (Kupfer, 2003, p.85). The correct embodied response determines success; if you must think about it, then it’s too late.

In this sense ‘acting with nature’ is the most complete form of engaging nature aesthetically in terms of the Greek term *aisthetikos*. A somatic experience is an aesthetic that applies hard-won embodied capital to achieve a state where the subject/object division between human and nature is dissolved.

**Mihály Csíkszentmihályi: flow or being in the zone**

_Not to sound too deep or weird, but I think that the times when you really appreciate surfing are the times you’re really sort of becoming one with nature - Kelly Slater, 11 times surfing world champion_

The holistic integration between person, environment and activity as a single experience familiar to nature-sport athletes is defined by Mihály Csíkszentmihályi as ‘flow’, and reported by nature-sport athletes as *being in the zone* or ‘being at one with the environment, the standing still of time’ (Dant & Wheaton, 2007, p. 11). The characteristics of ‘flow’ include intense focus on the present moment, action and awareness becoming one, complete absence of self-consciousness, total control over the situation, altered sense of time passing, and the experience itself being intrinsically rewarding (autotelic).

One of the most universal and distinctive features of optimal experience takes place: people become so involved in what they are doing that the activity becomes spontaneous, almost automatic; they stop being aware of themselves as separate from the actions they are performing (Csíkszentmihályi, 2008, p.53).

Csíkszentmihályi makes a clear distinction between ‘pleasure’ which restores consciousness to order or balance, and ‘enjoyment’ which provides opportunity for psychological growth. ‘Pleasurable’ activities such as sleep, eating and sex can be performed without physical or critical exertion. ‘Enjoyable’ activities, which include nature sports, result in learning experiences that ‘require investing psychic energy in goals that are new, that are relatively challenging’ (ibid, 2008, p. 47). This differentiation has an interesting parallel with Kant’s distinction between beauty and the sublime.8

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7 ‘Of or for perception by the senses’ (Online Etymology Dictionary, n.d. aesthetics).
8 In *Critique of Judgment* (1790), Immanuel Kant defines beauty as pleasurable experiences whereas the sublime typically includes the transformative experience of power and awe.
Flow can occur when the task at hand is entirely engrossing and the subject has sufficient skills and confidence to succeed in this task. Where skills are insufficient to meet the conditions then fear or excessive adrenalin can inhibit the ‘flow’ state. Activities such as mountain biking, white-water kayaking and windsurfing, which require total concentration and instinctive embodied responses, are particularly conducive to the flow state.

The flow state, in the context of nature sport, is most successfully achieved through the approach of acting with nature. This means more than simply being in control. It means using embodied skills to succeed in challenging contexts. ‘Only when a doubtful outcome is at stake, and one is able to influence that outcome, can a person really know that she is in control’ (Csikszentmihályi, 2008, p.61).

A significant dimension within the study of flow is the function of the body in movement. Csikszentmihályi describes that deceptively automatic act of trekking along a forest trail: ‘The constant adjustment of her steps to the terrain reveals a highly sophisticated process of selecting the best solution to a changing series of complex equations involving mass, velocity and friction’ (ibid, 2008, p.98). The stakes - and potential rewards - are raised when speed is added to the equation. Awareness of and connection to the environment defines the limits of performance as identified by Steve Gurney: ‘My speed is directly proportionate to how far I look ahead. Good mountain runners look about three or four metres ahead, whereas beginners tend to look at their feet and end up walking.’ (Gurney, 2008, p.285).

Figure 3. Mt Aubrey Ridge Run, stills from action camera, September, 2016
My own experience of flow is best exemplified in my regular training run over the Mt Aubrey ridge track. This route involves a prolonged ascent, technical trail\(^9\), steep descent, and then relatively straightforward return through grassland and bush. Two circuits initially took 110 minutes or longer, but after some months I now complete the course in well under 100 minutes. The perceived passage of time is shorter still, arguably due to the familiarity of the route and my increasingly proficient skills, which allow me to engage more fully and fluently with the challenging terrain.

As runners move, the ground is etched within their muscular consciousness. The way they come to know, use and see elements, the bog, stone, grass, trods is not the result of ‘education’, rather it is pragmatic somatic learning that relies on a fleshy and visceral improvisations. (Nettleton, 2015, p.771).

Richard Shusterman: Somaesthetics

*The body is our storm centre, the origin of coordinates, the constant place of stress in [our] experience-train. Everything circles around it, and is felt from its point of view* - William James

A key dimension of the nature-sport experience is the embodied/somatic or ‘somaesthetic’ perception of the environment. Somaesthetics as a branch of philosophy (integrated with other disciplines) developed by Richard Shusterman, and explores the perceptual, performative and presentation aspects of the body. One of the central tenets of somaesthetics is the use of ‘the body a locus of sensory-aesthetic appreciation’ (Shusterman, 2012, p. 302) which builds upon the phenomenological theory of Maurice Merleau-Ponty for whom ‘the physical body is not only the seat of perception, but the vehicle for being-in-the-world or being-in-situation of an embodied consciousness’ (Macey, 2000. P.248). Nature-sport activities sit squarely within the perceptual and performative aspects of somaesthetics.

Somaesthetics acts in opposition to the inactive visual consumption mode of modernity as defined by Norbert Elias - ‘the increasingly visual orientation towards the world instils the desire for passive pleasures, the desire to spectate rather than participate’ (summarised by Lewis, 2000, p. 67).

\(^9\) ‘Technical’ in a trail-running sense means having to negotiate tree trunks, roots, rocks, sudden drops, sharp bends and other natural hazards. Rain or limited light also increases the ‘technicality’ of the route.
A somaesthetic approach to perceiving and representing the world moves beyond the visual bias of looking at a landscape, to a wider sensory experience of being in the landscape (acting into nature) which engages sound, touch, smell and taste and moving through in terms of engaging vestibular and proprioceptive senses (acting with nature). Nature-sport athletes rely extensively on these latter sensory systems to successfully manage changing and challenging circumstances. For example, maintaining balance in an elite — and therefore highly unstable — surf ski in open-water conditions requires the paddler to respond bodily to sensory input before they are consciously aware of the effect of waves or swell.

The embodied awareness central to somaesthetics is also critical in the performance of continuous open skills. For example, a kayak roll can be broken down into several key ‘movements’ which can be practised separately. But it is only when one integrates them into a collective embodied action that the movement is fully understood. ‘We are not learning a series of muscle movements, but a whole flowing action’ (Margaret Steel, cited in Ilundain-Agurruzu, 2014, p.383). Therefore, to a certain extent, significant knowledge and memory resides in the body rather than the brain.

Shusterman maintains that a body/brain connection is invariably involved in performative somaesthetics. For example, the absence of self-consciousness identified by Csikszentmihályi as a key feature of flow is not a mindless, programmed action, but rather a mindful focus on the present moment without personal anxiety or second guessing. ‘Intelligent spontaneity is not merely an uneducated reflex but rather an acquired product of somatically sedimented habit, which often goes by the name of muscle memory’ (Shusterman, 2012, p.92). In nature sport, somatic competence acquired through hours of skill acquisition (consciously competent), leads to freedom in terms of performing reflexively (unconsciously competent). This means that the upcoming environment, such as river features in white-water kayaking, are mindfully acknowledged to inform future somatic responses.

Somaesthetic perception, or ‘the use of our bodily instrument in perception’ (ibid, p.41) is essential for the representation of movement through environments. A grassy field may seem regular and unchallenging from a distant visual perceptual position. However, when moving across that same field, the reality of holes, puddles, stones, prickles, gradients, and other

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10 Surf skis are typically divided into four classes: beginner, intermediate, advanced and elite. Speed is achieved largely through increased water-line length and reduced width. These factors also reduce primary stability, resulting in a very ‘tippy’ vessel.

11 Skill acquisition such as learning to walk is divided into four stages: unconsciously incompetent, consciously incompetent, consciously competent, and unconsciously competent (Adams, 2016).
‘features’\textsuperscript{12} that require response and negotiation provides a more complete knowledge of the environment. The experience is an ‘immediate, muscular and visceral engagement with wood, grass and soil – the very opposite of the distanced contemplative, panoramic optic’ (Nettleton, 2015, p.764).

**Arnold Berleant: Aesthetic engagement**

Building upon the experiential ideas of Dewey, and related to the somaesthetics of Shusterman, Arnold Berleant advocates the potential of ‘aesthetic engagement’ where kinaesthetic perception provides a level of insight unavailable within a separated subject/object paradigm. In other words, moving through deepens the more limited perception of looking at.

Engaged experience is, so to say, experience from the inside. Aesthetic engagement identifies the intense participatory process of aesthetic appreciation and is a clear alternative to the doctrine of aesthetic disinterestedness\textsuperscript{13}. (Berleant, 2016, p.148).

For Berleant, the traditional mode of the classical arts where a landscape view is presented for aesthetic appreciation creates a dualistic subject/object relationship, and is but one form of aesthetic. A more complete aesthetic appreciation includes an engagement with the experience of place rather than simply observing its appearance. ‘Environmental appreciation is not just looking approvingly at lovely scenery but it is… being acutely attentive to the sounds, the smells, the feel of wind and sun…’ (ibid, p.58).

The notion of aligning arts with senses, painting with vision, music with hearing, is viewed by Berleant as being a redundant limitation. Visual outcomes would be enriched by understanding the physicality of the content, while auditory representations would benefit from the consideration of scale, form and colour. This means that while any environmental representation may be confined to a particular medium (such as paint, words, music or video), the outcome is enriched when it draws from a wider somatic experience including kinaesthetic, visual, auditory, tactile and olfactory qualities.

\textsuperscript{12} Here the word ‘feature’ is used in the river-kayaking sense, where a nature element such as a rock or branch creates a hazardous obstacle.

\textsuperscript{13} In *Critique of Judgement*, Kant separates ‘beauty’, associated with an emotional response, from the ‘sublime’ which occupies a higher moral positon and can only occur where the subject is not personally affected (‘disinterested’). For example, the experience of desire for an attractive person, or fear of dying in a storm, would exclude that object from being sublime.
For looking at a landscape is not the complete experience and, indeed, is but one aspect of the experience. What may happen as the experience develops is rather a dynamic interplay between viewer and landscape as we extend ourselves into the landscape, looking not at but from within the landscape, feeling its physical magnetism as it works with our bodies from every direction, and a kinaesthetic sense of the landscape as something entered, engaged with and worked through, embraced physically, perhaps like swimming in the landscape’ (ibid, p.72).

Movement: A dynamic interaction versus stationary separation

My interest in nature-sport participation is the quality of the athletes’ engagement with the environment and how this transactional aesthetic engagement differs from the subject/object dualism of conventional visually centric experiences.

The difference between interacting with nature as an active presence and peoples’ general experience of the natural world is significant. Whether people see themselves as environmentalists or not, most experience the natural world at a distance. Whether protecting nature or moving to develop it, whether it is seen as fragile or resilient, people do not generally think of nature as a presence with which they interact. But this attitude comes readily in nature sports. (Krein, 2008, p.298).

The relationships with nature defined by Joseph Kupfer, although developed for a sporting context, operate as alternatives to the Kantian position of disinterested beauty. In a disinterested situation, the experience of potential danger would interfere with our appreciation of the natural object or event. Despite being widely promoted in the media, the ‘fear/adrenalin’ dimension of nature sports has been found to be a minor motivating factor (Brymer& Gray, 2009; McNamme, (ed.); 2007, Quay, 2013). Rather, as defined by Csíkszentmihályi, it is the flow state of Berleant’s ‘aesthetic engagement’ that drives and sustains participation. The challenge involves coming to grips with our fear and either overcoming it or incorporating the fear into our aesthetic experience’ (Kupfer, 2003, p.82).

The intensity of aesthetic engagement in the environment that occurs during nature sport

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14 Along with other motivating factors such as identity-building, community, embodied capital, etc.
affords an opportunity to generate landscape representations that are informed by a fuller somatic experience. This leads to the second part of this document: To what extent have artists represented an embodied interaction or somaesthetic experience of the environment?
Part 2

Representations of Landscape

Landscape imagery in Western art has until recently been visually centric. However, increasingly of late, artists have used other senses to provide richer, or alternative, insights into the surrounding environment. For this discussion I will focus on the sensory relationship between artist and environment, and how movement (such as running) informs outcomes.

Visual bias – the ‘Claude glass’

The ‘Claude glass’ or ‘lack glass’ is a small, convex, darkened mirror popular during the late eighteenth century with connoisseurs and artists for viewing picturesque landscapes. The effect was to frame a scene while simplifying colour and tonal range to create an appearance similar to the paintings of Claude Lorrain. A consequence of using the device was turning one’s back on the scene and therefore increasing the subject/object division between human and the environment.

By viewing the landscape through this visual mediation, the ‘scene of the natural world is irrelevant; its realities are edited, de-familiarised, subsumed’ (Poetzsch, 2008, p116). This reflects and reinforces the prevailing Kantian view of aesthetic disinterest which ‘elevates the cognitive ideal of contemplation over sensible experience’ (Berleant, 2016, p4). Traditional landscape can be many things - idealised, allegorical, a moral metaphor, a natural construct, and even a realistic record - but it is almost always an object separate from the viewer.

Being in: J. M. W. Turner

Claude Lorrain and John Constable are synonymous with the concepts of the classical and natural landscape. While identifiable, locations are subtly rearranged for a cognitive purpose. Both (to an extent) use landscape as metaphor for greater conceptual themes, something other than itself. With landscape as something separate from self, they are subject and it is object, they are in effect looking at.

Other artists, such as J. M. W. Turner, reconsider the separation between artist and environment with looking at replaced by being in. Although potentially apocryphal, the story of Turner being tied to the mast of a ship for hours during a storm in order to enhance his later
art illustrates that sensory experience of the environment was critical to his work.

As early as 1828 in *Petworth Park: Tillington Church in the Distance*, Turner began testing the conventions of classical perspective to break down the gap between viewer and landscape. The arched tones of sky and ground anticipate the ‘fisheye lens’ effect that draws the viewer into the scene. Modern audiences are familiar with the ‘being-there’ effect created by wide-angle home-show walkthroughs or helmet-mounted Go-Pro video clips of mountain-bike trails.

![Image](image-url)

**Figure 4.** *Petworth Park: Tillington Church in the Distance*, c1828, oil on canvas, 600 x 1475mm

It is possible the ellipsoid structure is a result of scanning the horizon, or possibly a multiplicity of viewpoints. In either case the outcome is a ‘painting in which the viewer can see himself walking around the scene with the artist, and entering into an observed and individually experienced space, rather than a constructed one’ (Ibata, 2008, p.355).

More deeply immersive experiences emerge later in Turner’s career with works such as *Snow Storm – Steam-Boat off a Harbour’s Mouth Making Signals in Shallow Water, and Going by the Lead*, 1842. In this work the perspectival requirement of a fixed viewer position and requisite distance between object and subject is radically reconsidered.

![Image](image-url)

**Figure 5.** *Snow Storm – Steam-Boat off a Harbour’s Mouth Making Signals in Shallow Water, and Going by the Lead*, 1842, oil on canvas, 915 x 1220 mm.
Structural clues and even the horizon line have been abandoned in favour of a primal vortex within which the only potential resting point - the endangered boat - is precariously insubstantial. As a viewer we experience the work from within since there is no stable terra firma platform for a safely separated observer as found in the work of Caspar David Friedrich. The formal pictorial features of tone and texture in *Snow Storm* - informed by Turner's extensive nautical experience - draw the viewer into a saturated realm of violent motion, and this creates:

A sense of flux which adds a dynamic dimension to the pictorial space, more in keeping with the viewing subject's experience of space as something within which one moves rather than as an object of fixed external contemplation (and therefore) challenges the safely remote position of the viewing subject which had been established by standard perspective. (ibid, 357).

In this sense *Snow Storm* challenges the Kantian doctrine of aesthetic disinterestedness since the image acts into the storm rather than observing its sublimity from a securely separated positon. This anticipates both the aesthetic engagement of Arnold Berleant and the somaesthetic priorities of Richard Shusterman. By focusing on the embodied environmental experience, what Turner creates is 'not a traditional object of appreciation but an entire region of attention, and we experience the environment not primarily through one sense but through the whole spectrum of perceptual awareness' (Berleant, 2016, p45).

**Moving through: Richard Long**

The reconsideration of the fixed perspectival positon achieved more widespread influence through the work of Paul Cézanne. In *Cézanne’s Doubt*, Maurice Merleau-Ponty suggests that Cézanne’s primacy of colour over line, and the perspectival distortion (multiple viewpoints) showed a desire to paint a ‘primordial world’ or a ‘lived experience’, ‘the spontaneous organisation of things we perceive [rather than] the human organisation of ideas and sciences’ (1992, p.13). Interestingly, Merleau-Ponty goes on to state:

These distinctions between touch and sight are unknown in primordial perception.... The lived object is not rediscovered or constructed on the basis of the contributions of the senses; rather, it presents itself to us from the start as the centre from which these

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16 In chapter one of *The Savage Mind*, Claude Lévi-Strauss makes a distinction between the ‘wild science’ of archaic cultures that initiatively identify holistic relationships between elements of the natural world, and the ‘domesticated science’ of modern societies that apply either structural or reductionist approaches (Lévi-Strauss, 1966).
contributions radiate...If the painter is to express the world, the arrangement of his colours must bear this indivisible whole. (ibid, p.15).

This notion of the ‘live experience’ or ‘indivisible whole’ of sensory perception encapsulates the somaesthetic representational intention of my studio practice. Amelia Jones summarises Merleau-Ponty’s body/environment relationship as being ‘not in the sense of oscillating positionalities but in terms of simultaneous subject/objectification – one is always already both at the same time’ (1998, p40). Jones’ statement relates to performative body art, which includes movement to shift beyond visual-oriented models, the founding of creative practice in the ‘lived experience’, and the rejection of subject/object dualism. While these elements are central to my investigation, performative practices often use movement as a form of expression, whereas my investigation uses movement as a form of perception. This distinction underpins my focus on drawing/digital approaches to the representation of movement rather than movement itself as an outcome.

Cézanne’s break from the constraints of perception from a fixed point of view enabled following artists to progressively dismantle the subject/object separation. For example, the walking lines of Richard Long not only explore the opportunity of a non-fixed perspective, but also the acting into nature potential of moving through the landscape where outcomes are determined not just by the action of the artist, but also by the nature of the terrain.

Long’s ‘walking’ works contain an experiential element that records the transaction between the artist’s somatic actions and a specific location. ‘Thus the work reflects his physical and mental engagement with the landscape, and it is through the radically simple gesture of the walk that he uses himself as a measure of space, scale and time’ (Wallis, 2009, p.58). As with
Turner, Long’s work clearly reflects the Deweyan primacy of ‘the experience’.

At the heart of Long’s art is the desire for direct engagement with the landscape, and the primacy of his own experience. This sense of present or immediate experience has something in common with Zen Buddhism’s concept of ‘now-ness’, of being in the moment...And in this sense it is about being a body in the world and about measuring the world against ourselves. (ibid, p.59)

Without movement, the ‘walking’ works would not exist. It is not enough to be in the landscape, the artist must be moving through the landscape. Speed, distance and duration, the ‘accumulation of footsteps’ (Long, cited in Wallis, 2009, p.145) define the form and substance of the environment. Saliently, this embodied perception links the experience of Long with that of nature-sport athletes. Terrain, climate, time, fatigue, endurance and flow are essential ingredients of both art and sport.

While the works of Richard Long share the extended duration and environmental context of nature sport, they do not (to the same degree) involve the embodied capital of continuous open skills in challenging circumstances. ‘Not the sense of being in control, but the sense of exercising control in difficult situations’ (Csíkszentmihályi, 2008, p61). A more explicit exploration of the sport experience is undertaken in the recent work of Matti Tainio and Carali McCall.

Artification of sport: Matti Tainio and Carali McCall

The relationship between sport and art has been subject to ongoing debate although David Best’s separation argument of 1980\(^1\) has yet to be convincingly refuted. The division is arguably about intention, art being communication and sport being competition, although both are entertaining, educational and inspirational.

Nevertheless, the interaction between sport and art increasingly underpins the work of artists who operate in both realms. Matti Tainio builds upon the relationship between art and life explored in the 2005 anthology of Finish scholars titled Taiteistuminem\(^1\) which supports the ‘artification’ of non-art activities such as business, science, and health care. Tainio’s doctoral

\(^1\) David Best’s 1980 article Art and Sport published in The Journal of Aesthetic Education concluded that, while there are some overlaps, sport and art are fundamentally different. Other writers counter this position, such as Tim Elcombe (2012), Andrew Edgar (2013) and J. Kosiewicz (2014). But even they argue for recognition of the aesthetic qualities of sport rather than listing sport among ‘The Arts’.

\(^1\) Taiteistuminem, 2005, Yrjana Levnato, Ossi Naukarinebne & Susann Vihma, published in Finish.
work centres on the artification of sport\textsuperscript{19} - specifically distance running, which is viewed as both creative theme and creative act.

In \textit{Lisboa}, Tainio uses GPS technology to record a planned route. The use of GPS tracking to spell out words or create pictures is not in itself new. However, the difference between this work and non-art versions lies in ‘the intentionality of the artistic aspects and institutional connections of the practice…artists have a predetermined intention for the project, and they identify themselves with a certain tradition and network within the contemporary art world’. (Tainio, 2010).

Tainio uses a range of media to explore systemic and cultural relationships between art and sport. His personal experience of distance running generates insight for outcomes that address wider social relationships. For example, the series of worn-out running shoes (Figure 9) serve as an evocative visual testament to duration and endurance. The images also, due to the pictorial conventions used to document the shoes, provide an ironic counterpoint to glossy marketing images of shiny new Nikes.

Ultimately, Tainio’s oeuvre adheres (appropriately) to the central question of his doctoral dissertation: ‘What kinds of new perspectives on art and sport can be obtained, firstly by clashing the practices together, and secondly by employing artistic methods in sport?’ (Tainio, 2015, p.12.). As such, his goals are sociocultural with the experiential dimension (central to my concerns) being a secondary consideration.

A more auto-centric investigation of the relationship between running and art is presented by Carali McCall. Key to McCall’s research is Maurice Merleau-Ponty whose ‘phenomenological

\textsuperscript{19} For further information see: \textit{Artification of sport: The case of distance running} published in \textit{Contemporary Aesthetics, vol.10}
ideas of the body’s relationship to the world, [led to] exploring the concept of embodied consciousness as a way to observe that perception and movement coincide as a complex and interconnected whole’ (McCall, 2014, p.130).

Further to this, ‘without considering individual experience, understanding the body’s objective (using it as a tool), external information can have little or irrelevant meaning’ (ibid, p.12). This later point reflects the difference between the landscape art of Constable (looking at) and that of Turner (experienced from within).

In a series of collaborative performances with Jane Grisewood, referred to as Line Dialogues, the artists move back and forth across a wall, tracing their movements. The lines trace not only the passage through space, but also the interactions each time the artists had to pass each other. McCall’s reflection on the experience is telling: ‘Perception and movement are not related to each other as causes and effects, but coexist in a complex, interconnected whole...We experience each other not as isolated objects separated from each other, but rather as cohabiting bodies’ (ibid, p.58). This experiential holism aligns with Dewey’s transactional subject/object, Shusterman’s body as instrument of perception, and Berleant’s aesthetic engagement. The Line Dialogue artwork is not about the interactive relationships (between the artists, media and wall), but rather the transactional nature of the experience. The experience is the artwork.

McCall’s exploration of the relationship between running and art ultimately led to her seminal pieces where the division between the two is conspicuously obscured. Performances such as Work no. 4 (Restraint/Running) explore ‘running as art’ in the tradition of Martin Creed’s Work No. 850, where the act of running in a gallery (presented as performative drawing) is the creative outcome.
However, it is her supporting research work, particularly in the series referred to as ‘Post-Run Map Drawing’, that most closely visualises the experience of moving through a particular landscape. The mark-making allegories - heavy for the exertion of ascent, smooth for flat terrain, light where her memory is not clear - document her perceived recollection of a topographic journey.

Instead of interrogating the ‘now’ moment of running, they provided a means to reflect the post-event and provide documentation…Through this post-map drawing process, I had to re-imagine my body as a drawing device – making lines through the landscape – marking territory and carving through space and leaving an evaporating imprint of the body with each run. These visualisations could connect to a line drawing on digital navigational mapping systems commonly used today. (McCall, 2014, p. 77).

*Post-Run Map Drawing* provides a mark-making strategy that succinctly represents the experience of moving through the landscape. McCall’s reference to ‘digital navigation mapping systems’ (GPS tracking) fails to mention that while the digital versions are geographically precise, the drawn lines communicate significantly more about the ‘embodied experience’. The drawing is informed by a transactional experience within the ‘field of play’, or the relative pace, effort, fluidity and technicality of a travelled route through a particular environment.

Both Tainio and McCall use GPS tracking data during their investigations. There is an inevitable tension between fidelity to the data, and being faithful to the embodied experience. Negotiating this tension has been fundamental to my own studio practice. If one imagines a continuum with one end being the subjective, personal experience of *Post-Run Map Drawing*, then the objective data of GPS tracking devices sits at the opposing end.
Digital infographic practices

The field of information graphics offers some alternative\(^{20}\) solutions to the problem of visualising movement. Successful information graphics adhere to DIKW Hierarchies (Data, Information, Knowledge and Wisdom) where vast\(^{21}\) amounts of non-visible information are organised ‘to make certain phenomena and portions of reality visible and understandable.’ (Joan Costa, cited in Cairo, 2013, p.18).

![Figure 13. Mapmyrun](image1)

**Training Record: Month/Duration**

![Figure 14. Stephanie Posavec, Literary Organism,](image2)

*(Part 1 of ‘On the Road’ by Jack Kerouac)*

The communicative requirement of information graphics often results in a degree of visual utilitarianism (Figure 13). Other infographics incorporate a pictorial aesthetic (Figure 14), although fidelity to data means that subjective embodied experiences are often omitted. For example, the five-and-a-half-hour run over Goat Pass (Figure 15) includes numerous river crossings and regular bouts of debilitating cramp. Neither of these significant somatic experiences are clearly signalled in the raw data. This means that Berleant’s notion of ‘aesthetic engagement and Shusterman’s ‘somaesthetic perception’, is omitted from the graphic.

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\(^{20}\) Alternative to painting and other visual arts fields.

\(^{21}\) Erich Schmidt, former CEO of Google, estimates that from the beginning of time till 2003, the human race generated five exabytes of data. The same volume is now produced every two days. (Cairo, 2013, p.13).
Seth Long argues for a break from mechanical or literal representations of data: ‘Moving from *visualisation-as-representation* to *visualisation-as-invention* allows us to enact a constructivist critique of data visualisation’ (2016, p.16). In relation to moving through the landscape, the ready supplies of quantitative data from mobile GPS devices are often enriched with heartrate and barometric information. But how can this data be formatted to express the qualitative transactional sensations of flow, exertion, fatigue or accomplishment? In relation to my goal of representing the somatic experience, *visualisation-as-invention* means subjective embodied perception should be used to modify or supplement the data.

One approach to the incorporation of the physical experience involves how the data is presented. The *Paula Radcliffe, London Marathon* graphic communicates the accumulating sensations of pace and intensity long before the specific data values\(^{22}\) have been cognitively ‘decoded’.

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\(^{22}\) In relation to data accuracy it should be noted that the Movescount graph is likely to contain regular +/- errors in the speed line due to a ‘battery save’ setting, meaning the speed is measured only once every ten seconds.
By giving visualisation-as-invention primacy over visualisation-as-representation, or the explicit transcription of data to image, this graphic allows the viewer to draw on their own memory of strenuous effort to unpack the physicality of the experience, such as the rhythm of breathing and the pulse of heartbeat. ‘The purpose of visualising data is to facilitate new thinking’ (ibid, p. 29). In terms of heart rate, pace, altitude, etc., the Paula Radcliffe outcome is limited and obfuscated in comparison with the Suunto graph (Figure 15). Yet in terms of representing the somaesthetic experience of strenuous effort, endurance, accumulated fatigue and ultimate accomplishment, the infographic is strongly evocative.

The mechanical production mode of the digital approach is by its very nature one step removed from the embodied experience. For me, the goal of representing a somatic experience meant the studio outcomes would need to include an element of physicality in their creation that served to connect more directly with embodied perception.

Visualising the non-visual –Iannis Xenakis and Jorinde Voigt

The drawings of Iannis Xenakis visualise the non-visual experience of sound. Xenakis cross-pollinates a polymath expertise in mathematics, music, engineering and architecture in his ‘stochastic music’, in which he invents a notational system to represent sounds ‘that are
generated by probability-based formulas dealing with large events’ (Kanach & Lovelace, 2010, p.48). By using drawing rather than traditional solfège, Xenakis could better apply abstract concepts and manage its overall form.

![Figure 17. Iannis Xenakis, Study for Terretektorh, 1965/66](image)

The multimedia ‘diatopes’ and ‘polytopes’ require an even newer diagrammatic language. In these works, Xenakis created a sensory experience of sound, light, movement and specific landscape sites (such as the ruins of Persepolis in Iran) united through systemic ordering principles. Plotting each element visually on graph paper resulted in a unique aesthetic that crossed perception modalities. Furthermore, the ultimate intention was transformative: ‘Once the show was over, it is not the landscape that has changed, but the way the site is perceived and remembered by the audience’ (Sterken, 2001, p.269).

Interestingly, Xenakis needed to transcribe the drawings into conventional musical scores to enable the compositions to be performed. This means the creative drawings prioritise conceptual aesthetics over pragmatic functionality, which highlights a problematic relationship between literal transcriptions of data and its use in creative contexts. Xenakis also admitted that he ‘often “deviated” from the very rules he imposed on his creative and compositional process, by reason of aesthetic freedom and choice’ (Ibid, 2010, p.123).

Formulas used included Poisson’s Law of Rare Events, Bernoulli’s Law of Large Numbers, and the Maxwell-Boltzmann Kinetic Theory of Gases.
Where Xenakis developed plans for outcomes (architectural, musical, multimedia), other artists, such as Jorinde Voigt, created representations of experiences. Her Symphonic Area series provides an elegant graphical response not just to the auditory experience—structural references to melody, caesura and beat—but also the emotion spectrum embedded in the score.

![Figure 18. Jorinde Voigt, Ludwig van Beethoven/ Sonata No. 5 (Opus 10 No. 1) 2012-14](image)

Each sheet of paper is defined by an axis between two internal centres (which) indicates what is happening internally as one listens to a particular piece. Each of my spontaneously drawn lines is connected with this axis as well as with one of Beethoven’s directions 24 describing ideas, attitudes and emotional states. So what one sees as a drawing, as a structure, names the space between the unnameable, which is felt, and the nameable attitude. (Voigt, 2016, p.9).

The systematic notational systems are modified by an element of spontaneity which provides the subjective perspective. ‘I regard chance and chaos as freedom, one that is part of the algorithm and articulated on a nonverbal algorithmic level’ (ibid, p.6). It is certainly possible, in a digital world of 1s and 0s, to transcribe sound into vision. However, this would entirely exclude the experiential dimension which is the central focus of Voigt’s (and my own)

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24 Beethoven included instructions with his scores regarding intonation and dynamics so the pieces could be played properly.
investigation. ‘It is a textualisation, a description of atmospheres, of experiences, of inner worlds’ (ibid, p.10).

Both Xenakis and Voigt focus (primarily) on the visual representation of sound with the arranged auditory experience being essentially passive from the audience perspective. My work seeks to represent the dynamic experience of movement through an uncontrolled environment that incorporates complete somaesthetic perception.

My studio outcomes seek to visualise Berleant’s ‘aesthetic engagement’ in terms of moving (with speed and flow) through a natural landscape.
Part 3

Studio Practice

My studio practice is founded on the question of how to visually represent the somatic experience of moving through the landscape at speed. What would art that emulates an embodied nature-sport experience look like? How does one move beyond the modes of *looking at* and *being in*, to visualise *moving through* or *acting with* nature?

A logical starting point was the data plentifully available through GPS tracking technologies.

**Data collection**

All data has been gathered using a Suunto Ambit 2S GPS watch. The data uploaded to Suunto’s tracking application Movescount includes heart rate, distance, speed, altitude and duration. Movescount then provides algorithms to extrapolate recovery time, calorie consumption, peak training effect, and the levels of blood oxygenation (VO$_2$ and EPOC). Exporting the data to Tracker and Strava provides access to additional analytical tools. All three web tools present the data in mapping, table and graph formats. The ‘lap’ function in Tracker offers a range of distance options for relative performance in terms of speed and heart rate.
The data-based nature-sport approach resulted in two parallel inquiries. One explored the aesthetic potential of the digital infographic practices, while a second was based on expressive drawing interpretations of information. I evaluated each approach in terms of how well it represented the transactional experience of moving through a specific location.

Ultimately, a balance needs to be found between infographic fidelity and sensational veracity. In other words, the data should be augmented to better represent both the embodied perception and the environmental specifics of a particular experience.

Digital outcomes

The digital graphics adhere faithfully to the GPS data recording during training and multisport events. In Circles C2C (Figure 21) the diameter of each circle is determined by duration while the number of rings designate speed. Each mode (run, bike, kayak) is colour coded and positioned longitudinally from Kumara Beach on the west coast, to Brighton Beach on the east coast. The outcome accurately transcribes GPS data, but omits the transactional aesthetic engagement - or somaesthetic experience - of the journey.
While the ‘what happened’ is accurately transcribed, *Circles C2C v4* fails to communicate ‘how’ the experience felt. For me, this seemed to indicate a difference between electronic and manual mediums. In one study, Christiana Haas discovers ‘that writers using pen and paper more easily develop a sense of their texts compared to writers using a computer’ (Long, 2016, p. 33). I would suggest a similar dynamic is in play in my studio practice, where the physicality of hand to page action is more directly connected to sensory embodied memory than digitally mediated transcriptions.

The digital outcomes record ‘information’ with precision but omit the embodied ‘perception’. Their clinical precision evokes a passionless quality that ironically aligns with the Kantian view of ‘aesthetic disinterest’. The problem is that fidelity to the data does not necessarily result in an accurate representation of the subjective experience. As Margaret McKenna and Frank Schmidt have demonstrated, accuracy is not the same as truth\(^\text{25}\).

Resultantly, the digital outcomes struggle to fulfil the proposed intention of visualising the ‘experience of moving through the landscape at speed’ in a somaesthetic or Deweyan sense of the term. They lack what Dewey defines as a ‘quality of significant motive’. (2005, p.40).

\(^{25}\)For further information see McKenna, M. (2014) *Beautiful maps, and the lies they tell: An op-ed from Runkeeper*, and Schmidt, F. (2010). *Detecting and correcting the lies that data tell.*
The action and its consequence must be joined in perception. This relationship is what gives meaning…The scope and content of the relations measure the significant content of an experience. (ibid. P.46).

I am aware of the significant potential of the digital inquiry. Graphic appeal is a significant concern of sport app providers, with creative and commercial opportunities being available for innovative visual algorithms. I am also aware that such a project would require programming knowledge well above my current capacity. At best it presents an opportunity for a future research direction in collaboration with the faculty of Computer Sciences.

Conversely, relying exclusively on the experiential memory of an event leads to a form of expressive mark-making that prioritises the sensory perspective at the expense of the geographic specificity. This effect was particularly pronounced where the data was peripheral to the process, as in the case of RCC v1. The optimum representation of an environmental interaction cannot be drawn from internal responses alone since the total experience is ‘never purely physical sensation and never discrete and timeless. It is always contextual, mediated by the variety of conditions and influences that shape all experience.’ (Berleant, 2012, p.57).

Figure 22. RCC v1, 1200 mm diameter, graphite on paper, 2016
Freehand diagramatic

My solution has been to augment the GPS data with experiential memory that includes subjective factors such as fatigue, hunger and thirst, and the pain caused by cuts, sprains, insect bites, cramp, and lactate build-up. Further to this are the mental states that fluctuate throughout endurance events, including the distortion of time during the ‘flow’ state, or the fear-and-focus response to acting with environmental factors like steep descents or violent rapids. Inseparable from the experience is also the overall emotional state, with the inevitable ‘dark moments’ where a crisis of confidence or motivation must be worked through.

Freehand drawing facilitates integration of the qualitative experience where mark-making can synthesise GPS data (length, spacing, frequency, placement) and sensory experience (weight, curve rhythm, elasticity). The freehand images can negotiate a balance, or dialogue, between the formal descriptive and embodied expressive dimensions of the experience. They add sweat to the numbers. ‘To find my way to a very personal communication about my particular experience’ (Voigt, 2016, p.4).

Figure 23. Details from WK5 (Wild Kiwi), paint marker on paper, November 2017
Three levels of procedural practice build upon each other to transcribe a totality of experience. Firstly, the specific mark-making or drawing strategies that most evocatively translate the unique ‘continuous open skill’ of the different movement modes (kayak, bike, run). Secondly, the repeated application of each mark-making strategy, which builds a collective form that renders the relationship between movement mode and internal/external environmental factors. Thirdly, the configuration of modal forms in relation to each other, which expresses the totality of the particular experience. However, this process is not linear because each level influences the others.

Figure 24. Wild Kiwi v3, 550 x 410 mm, graphite on paper, 2016

Although the nature of the terrain and distance vary greatly, most multisport events are confined to three main activities: run, bike and kayak. For each mode, I employ a specific mark-making procedure - short stabbing marks for the run, continuous waving lines for the cycle, and helix-like forms for the kayak derived from the sweep-and-twist motion of an efficient paddle stroke. Variation in each line’s weighting, length and curvature align with speed and effort. At the level of form, the collective directional changes signal the technicality of the terrain, such as a massing of frequent (speed) short (stride) heavy (effort) strokes where the pace is slowed by a steep gradient.

In music, pupils are generally taught that they should start from the cell (a theme or
basic row) and create out of it the ‘building’ of composition. However, the form is missing! For it has to be considered unto itself – not only the form that comes about as a result of development but also the one that affects the details of the work – its cells. (Iannis Xenakis, cited in Kanach & Lovelace, 2010, P.96).

The configuration of modal forms in relation to each other, plus the picture frame surrounding them, all combine to communicate information about the overall experience. For example, while the linear geographic profile of *Wild Kiwi v3* indicates a specific point-to-point event, the ring structure of *Training* reflects the ongoing repeated nature of those activities. The circle itself relates to both compass (direction) and clock (duration) which define speed and mileage over geographic space.

![Figure 25. Training September, 1200 mm diameter, liquid chalk on paper, 2016](image)

Each level – line, form, configuration - is modified by the aesthetic and communicative requirements of the others. The GPS data is used to inform rather than prescribe the eventual outcome. The result is a negotiation between the quantitative foundation of the data and the embodied qualitative memory of the experience.
Scale is another significant consideration. As for Gretchen Albrecht,\textsuperscript{26} I needed to work at a scale that allowed a full-body engagement in the process. The physicality, fluidity and fatigue of endurance sport cannot be sensed when working from the wrist or even just arms. By involving legs and body core, the works become (to an extent) not just facsimiles of an experience but physical expressions of that experience.

Finally, there are the environmental factors themselves, which are not revealed by the raw data of gradient, altitude and distance. These include light, temperature, humidity, precipitation, terrain, and other environmental ‘features’\textsuperscript{27}.

\begin{figure}[ht]
\centering
\includegraphics[width=\textwidth]{figure26.png}
\caption{\textit{WK5 (Wild Kiwi),} paint marker on paper, November 2017}
\end{figure}

Outcomes become a dialogue between the somatic experience and statistical information. Integrating text data with expressive marks implies a relationship between the objective/external and subjective/internal perspectives, ‘the result of interaction between a live creature and some aspect of the world in which he lives’ (Dewey, 2005, p.45). Data reminds the viewer that the lines and patterns are not fanciful decoration, but are

\begin{flushleft}
\textsuperscript{26} I refer to the proportions of Albrecht’s Hemisphere paintings being based on her own arm span. \\
\textsuperscript{27} ‘Features’ is a euphemistic term used by white-water kayakers to describe rocks, holes, boils and strainers. Many of these present significant dangers and all should be avoided during a race.
\end{flushleft}
informed visualisations of specific movements in time and space. The lack of digital exactitude removes the (sometimes unjustified) authority created by the appearance of mathematical precision, and reminds the viewer that they are looking at a ‘personal experience’ rather than a mechanical recording. Both Iannis Xenakis and Jorinde Voigt used aesthetic intuition to deviate from the mathematical or systemic rules they set up for themselves. It is worth noting that for Xenakis the aim was not to ‘find or create (literal) correspondences or similarities between different ways of expression (but rather to) play with the diversity of senses’ (Sterken, 2001, P.271).

Therefore, while the data will inform the production process, a balance must be found between infographic fidelity and sensational veracity. In other words, for a more complete somatic representation, the data must be modified and/or augmented with the subjective sensation - and the environmental specifics - of a particular experience.

In a successful outcome, the data provides a structural foundation while the somatic memories supply texture and flavour.
Conclusion

Our world, mediated through magazines, television and the internet, gives primacy to visual perception. Even when accompanied by audio, it is one step removed, and presents no immediate threat. We all know what Mt Everest looks like, but how many of us truly feel its power? This twenty-first century mediated experience echoes the ‘aesthetic disinterest’ of Immanuel Kant where we appreciate the power of a ‘perfect storm’ on a cerebral, rather than physical, level.

It is only with deliberate intent that one finds oneself in harm’s way. It takes effort and will to step over the safety barriers erected by DoC and OSH in order to experience nature in its uncontrolled state. It takes perseverance and commitment to acquire the knowledge and skills needed to succeed in challenging contexts: ‘Only when a doubtful outcome is at stake, and one is able to influence that outcome, can a person really know that she is in control’ (Csíkszentmihályi, 2008, p.61).

The challenges offered by endurance multisport events such as the Kathmandu Coast to Coast provide unique opportunities for the transformative Deweyan experience of an extended, immersive transactional relationship between athlete and environment. The ‘field of play’ is unmodified and in a constant state of change through erosion and weather. The very

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28 This is past the ‘take-out’ point at Gooseberry Stream. Paddlers are now committed to 25km of river, including numerous grade two rapids.
real possibility of injury or death\textsuperscript{29} heightens one’s perception. One responds in real time intuitively to the forces of nature. If you must think about which way to lean in rapids, it’s already too late. The outcome of this moving through mode of perception is a kinaesthetic understanding of landscape and self where the athlete acts with the environment. This is what I believe Arnold Berleant means by ‘aesthetic engagement’.

Landscape art, in the traditional sense, is bound by a constraint of visual primacy. We are presented with light, reflection, scale and grandeur, but we cannot feel altitude or temperature. Traditional landscape painting does not include the physical experience of extended effort and discomfort to inform our understanding of the environment. Visual perception is limited to looking at, with even the other close senses at best moving us to being in. An embodied ‘aesthetic engagement’ of the haptic senses allows us to deeply experience nature. If we return to the rapids of my introduction, simply floating downstream as a passenger on a guided raft tour is different from actively working with the flow so that person, boat and water ‘are so fully integrated that each disappears’ (Dewey, 2005, p.259).

My studio outcomes are founded on this somatic transactional experience. Their intent is not to show what the landscape looks like, or even what it feels like, but to evoke the sensation of moving in and acting with nature. While GPS and heartrate data provide a comprehensive resource of speed, distance, altitude and effort, they omit the embodied sensations of the experience. Numerous physical and emotional factors must be integrated with the data to fully represent the somatic perception of the experience.

Extended duration and immersive focus create the conditions of flow, where the sense of self is lost, and only the ‘lived experience’ remains. In this sense, the site-specific and unpredictable nature of the environment itself becomes a co-contributor to the form of each drawing. The Waimakiaiari is a different river during high or low volumes of water; slippery rocks or an inconvenient root can define the nature of an experience, and, head winds affect not only our speed but test our commitment and motivation. The memory of these experiences inform the outcomes significantly through the spacing, direction, length and weight of each line.

The images are not of athlete, artist or landscape, but rather the embodied perception of moving through the landscape. Amelia Jones referred to this as a ‘simultaneous subject/objectification – one is always already both at the same time’ (1998, p40).

An artwork’s measure of success, in terms of representing the somatic experience of moving

\textsuperscript{29} No one has died in the 31 years of the Coast to Coast but helicopter rescues are a regular part of the event.
through a particular landscape, is whether the embodied transactional qualities are recognisable. This is where the Kathmandu Coast to Coast is useful since the experience has been shared by thousands of athletes. Both Richie Crawshaw (five times Coast to Coast competitor) and Steve Gurney (nine times Coast to Coast winner) quickly recognised and fluently decoded the ebbs and flows of the C2C artworks. Both generously affirmed the images' somatic veracity.

Both generously affirmed the images' somatic veracity.

It is important to bear in mind that the studio outcomes themselves are images, and as such are perceived visually. Embodied experiences of kayaking, cycling and running will enhance an audience’s ability to decode the marks, but they do not include the site-specific nature of the experience. Therefore, can a viewer, without the somatic knowledge possessed by Coast to Coast competitors, truly appreciate the experience by simply looking at the images?

Early in my investigation I explored materials explicitly connected to the physical experience: audio recordings, point-of-view videos (Go-Pro), and sports equipment that bore the marks and residue of passage through the environment. Such an approach has the potential to evoke a first-person experience of moving through the landscape. Yet even with these

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30 When viewing cell phone images of the works during a meal at The Fat Camel in Whangarei on 18/10/16.
outcomes, the audience was safely separated from the risks and challenges necessary for a nature-sport aesthetic engagement. The audience is still *apart from* rather than *part of* the environment.

The drawing outcomes (supported by real-time data) represent in both form and production the somatic experience of moving through specific landscapes. The scale, duration, form and physicality of their production is a direct response to the embodied memory of the experience.

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An essential character of this investigation has been the merging of art and life - a form of *Taiteistuminem*. This transformative relationship, advocated by John Dewey, is summarised in the words of Iannis Xenakis: ‘An artist is a theoretician, a manipulator and creator of forms in movement. Seen from the point of view of art, all our knowledge and our actions are but aesthetic expressions of forms and their transformation’ (cited in Kanach & Lovelace, 2010, p.95). In this regard, perhaps art doesn’t exist in the drawings constructed out of data and memory, or digital recordings, or physical objects - but rather in the *experience* itself, of moving through and acting with nature.
References


Andrew Edgar (2013) mentioned in footnote P28


Appendix (Images)

Images to support this exegesis are available at: https://geoffharrispainting.wordpress.com/

Exhibition, St Paul St Gallery 3, June 20-22, 2017

Exhibition, St Paul St Gallery 3, June 20-22, 2017
Coast to Coast - C2C v4, Graphite on paper, 1500 x 1500mm, June 2016.

Rodney Coast Challenge - RCC v1, Graphite on paper, 1500 x 1500mm, July 2016
Rodney Coast Challenge - RCC v3, Artline paint marker on paper, 1700 x 1700mm, November 2016

Wild Kiwi – WK v6, Artline paint marker on paper, 600 x 1600mm, April 2017
*Wild Kiwi* - WK v5, Artline paint marker on paper, 1700 x 2300mm, December 2016

*Coast to Coast – C2C v7*, Artline paint marker on paper, 1900 x 2800mm, May 2017
Wild Kiwi - WK v8, Graphite and pen on paper, 900 x 1500mm, April 2017

Rodney Coast Challenge - RCC v4, Graphite and pen on paper, 1500 x 2100mm, June 2017
Coast to Coast – C2C v8, Artline paint marker on paper, 2700 x 4500mm, July 2017

Journal drawing for WK v3, pencil and pen, 210 x 290mm, June 2016
Tracker data for kayak section of Coast to Coast, Feb 2017, http://www.sports-tracker.com/workout/geoffharris/58a26cc4205b9b26285413e4

Journal annotations of kayak section of Coast to Coast, pen on printout, 210 x 290, March 2017
Transition - bike to kayak, Mt White Bridge, 11 February 2017

Journal plan for C2C v7, pen and highlighter on paper, 210 x 290mm, April 2017