

Natural disaster arrhythmia and action sports: The case of the Christchurch earthquake

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Abstract

Taking inspiration from French sociologist and philosopher Henri Lefebvre's theory of 'rhythmanalysis', the author advocates new ways of thinking about the impact of natural disaster on the bodies and everyday mobilities of those who continue to live in disrupted spaces. Drawing upon interviews conducted with residents living in Christchurch, New Zealand, before, during and after the devastating February 2011 earthquake, she explains how this 'arrhythmic' experience forced many to rethink the importance of sport and physical activity in their everyday lives, and for their affective connections to space, place, family and community. She describes how some committed action sport participants adopted highly creative practices in order to continue their participation in sports such as surfing, skateboarding, mountain biking and climbing. In so doing, the familiar rhythms of recreational sport helped some cope with the many stresses of daily life during the long process of recovery, and contributed to the rebuilding of personal and collective identities, affective relationships with place, and a sense of belonging in post-disaster geographies.

Keywords

action sports, earthquake, Lefebvre, natural disaster, rhythmanalysis

A spate of recent natural disasters has prompted many scholars working in the social sciences and humanities to examine the economic, social and psychological impact of natural disasters, such as hurricanes, floods, earthquakes, tsunamis, fires and volcanoes. To date, very little research has examined the role of recreational sport and physical activity in the recovery and resilience of individuals and communities struck by natural disaster. Of course, sporting activities will seem trivial pursuits during the immediate emergency response phase. However, in the weeks and months following a natural disaster, as communities begin the long, slow process of rebuilding their lives, recreational sport can play a valuable role in facilitating individual resilience and coping, re-establishing

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networks, and making new social connections. A select few studies have attempted to measure the effectiveness of sport programs implemented by aid organizations following natural disaster (Kunz, 2009; Valenti et al., 2012). However, this project is among the first to create space for the voices of residents who use recreational, grassroots sporting participation to help make meaning of their lives in post-disaster geographies.

Adopting an interdisciplinary, qualitative approach, I consider how individuals' recreational sport and physical cultural experiences are influenced by natural disasters that damage or destroy the spaces and places used for participation. Drawing inspiration from scholars working within and across mobilities and disaster studies, and cultural and emotional geography (see, for example, Birtchnell and Büscher, 2011; Chamlee-Wright and Storr, 2009; Farrar, 2009; Miller and Rivera, 2009; Morrice, 2012; Raid and Norris, 1996; Rung et al., 2011; Whittle et al., 2012), I set out to ask a new set of research questions: How do natural disasters influence the everyday mobilities and embodied experiences of residents for whom regular sporting participation was an integral part of their lives prior to the event? How do participants sporting practices contribute to the (re) construction of disaster spaces, and affective (re)connections to 'places of attachment'? Engaging Henri Lefebvre's theory of *rhythmanalysis*, I explore these questions via an examination of the lived experiences of residents of Christchurch, New Zealand.

The Christchurch earthquake

At 12.51 p.m. on February 22, 2011, a violent 6.3 magnitude earthquake struck the city of Christchurch—New Zealand's second most populous city, and the largest city in the South Island. Centered two kilometers (1.2 miles) west of the town of Lyttleton and ten kilometers (6 miles) south east of the center of Christchurch, the earthquake followed nearly six months after a 7.1 magnitude earthquake that caused significant damage across the Canterbury region, but no direct fatalities. Striking closer to the city center at midday, the February 2011 earthquake killed 185 people and injured another 2164. Although lower on the Moment Magnitude scale than the September 2010 earthquake, the intensity and violence of the ground shaking during the February 2011 quake was measured on the Modified Mercalli Scale to be MM IX—among the strongest ever recorded globally in an urban area (Davidson, 2011). The February 2011 earthquake flattened the downtown district, and damaged or destroyed over 180,000 homes. The earthquakes severely damaged 80 percent of the water and sewerage systems, with repairs continuing for many months. Moreover, extensive liquefaction (the conversion of soil into a fluid-like mass during an earthquake or other seismic event) caused ongoing ground movement leading to the undermining of many more foundations and the destruction of further infrastructure. For weeks following the September 2010 and February 2011 earthquakes, communities rallied together to remove over 535,000 tons of silt from roads, footpaths, houses and parks. With the rebuild estimated to cost the nation NZ\$15 billion, the event is New Zealand's costliest disaster. Since September 2010, the region experienced over 11,000 earthquakes and associated aftershocks, which further exacerbated the high levels of post-traumatic stress being reported across the city. Statistics New Zealand recently revealed that more than 13,500 people have migrated from Christchurch since the earthquake, with predictions suggesting slow population growth over the next decade (*Radio New Zealand*, 2012).

As well as destroying vital infrastructure, such as roads, water and power, the February 2011 earthquake also destroyed built sporting facilities (e.g., gyms, playing fields, swimming pools, club rooms, stadiums). Understandably, the rebuilding of these facilities was not of immediate concern to the Christchurch City Council (CCC) and residents during the state of emergency. In the weeks and months following the event, however, the damage to such facilities was keenly felt by residents as they sought to re-establish post-earthquake lifestyles. Damage to such facilities seriously impacted participation in organized recreational and competitive team and individual sports, and exercise practices, as well as the hosting of major sporting events.¹ While the post-earthquake experiences of athletes in organized and competitive sports are important, in this paper I build upon my previous research to examine the experiences of participants in non-traditional, alternative or action sports (Thorpe, 2011). More specifically, I focus on the experiences of recreational, non-competitive or 'lifestyle sports' (Wheaton, 2009, 2010) enthusiasts for whom regular participation is an integral part of their everyday lives and sense of identity and community. In so doing, I illustrate how the disruption and destruction of natural and built spaces used for action sport participation—beaches, trails, rock walls and streets—evoked highly affective and emotional responses among lifestyle sport enthusiasts (i.e., committed recreational surfers, mountain bikers, climbers, skateboarders).² In the following section I briefly outline the theoretical and methodological approach employed in this project to examine how the vigorous and unpredictable movements of the Earth's crust influenced sporting (im)mobilities and rhythms of everyday life.

Rhythmanalysis and mobile methods

Seeking to understand movements within and across spaces and places, scholars in the social sciences and humanities are increasingly drawing upon French sociologist and philosopher Henri Lefebvre's (1991, 1996) spatial theory. In particular, geographers have engaged his urban theory and ideas about spatial justice presented in *The Right to the City* (1996), *The Production of Space* (1991) and his three-volume *Critique of Everyday Life* (2002, 2005, 2008) to examine the power and politics involved in the production and use of contemporary urban geographies. In the field of sport sociology, Michael Friedman and David Andrews (2011) and Cathy Van Ingen (2003, 2004) have advocated the value of Lefebvre's spatial theory for examining the connections between social space, power, identity and the body in sport and physical culture (also see Friedman and Van Ingen, 2011). Applying Lefebvorean spatial theory to the leisure practices of running groups, Van Ingen (2003: 207) claims his work offers valuable theoretical tools to 'explore the production of space, place the body at the centre of inquiry and explore the ways in which socially constructed differences are materialized in social space'. Others have applied a Lefebvorean approach to examine the politics involved in the production of sporting spaces, such as the Washington National Park (Friedman and Andrews, 2011), and the spatial experiences of skateboarders (Borden, 2003), parkour practitioners (Atkinson, 2009; Kidder, 2012) and bike messengers (Kidder, 2009, 2011). In this paper, however, I draw inspiration from Lefebvre's (2004) lesser-known investigation of the distinct rhythms permeating everyday life.

Published posthumously in 1992, *Rhythmanalysis: Space, Time and Everyday Life* is a collection of essays about the temporal and cyclical rhythms of social life and nature.

It begins with a seemingly straightforward question: ‘what is rhythm? What do we understand by it, be it in everyday life, or in the established sectors of knowledge and creation?’ (Lefebvre, 2004: 3). As with many of our favorite French theorists, Lefebvre refused to give a clear definition, instead starting with the premise that ‘everywhere where there is interaction between a place, a time, and an expenditure of energy, there is rhythm’ (Lefebvre, 2004: 26). Broadly conceived as ‘repetition of movements and action’ (Edensor, 2012: 3), Lefebvre’s analysis of rhythms ranges from biological and internal bodily processes, to the flows within an urban metropolis, to the ocean tides. In his own words:

Everyday life remains shot through and traversed by great cosmic and vital rhythms: day and night, the months and the seasons, and still more precisely biological rhythms. In the everyday, this results in the perpetual interaction of these rhythms with repetitive processes linked to... time. (Lefebvre, 2004: 73)

Focusing on the intersection of time and space in rhythm, it is here, in his final work, that Lefebvre’s lifelong interest in time is most apparent:

Concrete times have rhythms, or rather are rhythms—and all rhythms imply the relation of a time to a space, a localized time, or, if one prefers, a temporalized space. Rhythm is always linked to such and such a place, to its place, be that the heart, the fluttering of the eyelids, the movement of a street or the tempo of a waltz. (Lefebvre, 2004: 89)

Insisting on the importance of ‘thinking space and time together’, *Rhythmanalysis* makes clear that Lefebvre was indeed a theorist of time as much of space (Horton, 2005: 157).

For Lefebvre, the relationships between time and place can be ‘depicted, performed and sensed through its ensemble of normative and counter rhythms’ (Edensor, 2010a: 4). Places are far from static in Lefebvre’s work (Mels, 2004). Although he conceives of places as ‘always in a process of becoming, seething with emergent properties’, Lefebvre recognizes they are ‘usually stabilized’ by rhythms of varying qualities ‘steady, intermittent, volatile or surging’ (Edensor, 2010a: 3). For Lefebvre (2004), ‘rhythms imply repetition’ (p.90) that lead to various forms of ‘eurhythmia, arrhythmia, and polyrhythmia’ (p.26). Again avoiding clear definitions, Lefebvre refers to polyrhythmia as being the composition of diverse and multiple rhythms, eurhythmia as the ‘harmony of rhythms’ (p.20) and arrhythmia as ‘the discordance of rhythms’ (p.16).

According to Lefebvre (2004: 77), ‘rhythm enters into the lived; though that does not mean it enters into the known’. Everyday habits, schedules and routines become ‘sedimented’ in our bodies through ‘familiar bodily routines in local space’ (Edensor, 2010a: 8). The repetitive rhythms of everyday life become ‘part of the way things are’, which can lend to an ‘ontological predictability and security’ (Edensor, 2010a: 8). For Lefebvre (2004: 77), we are ‘only conscious of most of our rhythms when we begin to suffer from some irregularity’. He uses the term arrhythmia to describe disruptions of everyday rhythms and routines, which can in some cases lead to discomfort, distress and suffering. In their attempts to minimize the discomfort caused by such arrhythmic disruptions, many people attempt to restore familiar spaces, routines and timings (Edensor, 2010a: 5).

However, as Lefebvre (2004) suggests, such arrhythmic experiences can, in some cases, lead to heightened awareness and reflexivity of previously unquestioned dimensions of social space, the body and everyday life. Put simply, 'rhythms become clearer with their breakdown, the onset of arrhythmia' (Horton, 2005: 158). Lefebvre's notion of arrhythmia has interesting parallels with other key social theorists such as Karl Marx, who theorized different crises as potential transitions from one mode of production to another, and Pierre Bourdieu's discussion of field-crossing, which he believed could provoke tensions, and in some cases heightened reflexivity, when moving across social fields with different social rules and norms.

At just 100 pages, *Rhythmanalysis* is a brief yet wide-reaching project. Some are cautious of adopting Lefebvre's underdeveloped theory of rhythms, while others increasingly recognize the virtue in the open-ended and multifarious nature of this work. A strong voice among the latter, Edensor (2012) argues that, 'while a generalized science of the study of rhythms has not eventuated (though this was Lefebvre's dream),' (p.92), *rhythmanalysis* 'introduces richly suggestive ways for thinking about rhythms', about the conjugation of spaces and time, and 'allows scope for wide interpretation and provides basis for further exploration' (Edensor, 2012: 56). Scholars from varied disciplines are increasingly employing, and extending upon, Lefebvre's *rhythmanalysis* to examine how social and/or natural rhythms permeate an array of social spaces and spatial practices, including city life (Amin and Thrift, 2002; Highmore, 2005), tourist travel (Edensor, 2012; Edensor and Holloway, 2008), urban train travel (Wilken, 2011), dance (McCormack, 2008), walking (Edensor, 2010b), street performance (Simpson, 2008) and the urban experiences of youth enrolled in recreation music programs (Lashua and Kelly, 2008). Despite growing interest in the rhythms operating within and through various spaces, the notion of arrhythmia has gained little scholarly attention to date. Much of the research adopting a Lefebvrian approach has involved researchers describing the repetitive rhythms of bodies or objects observed within and across particular times and spaces. However, rhythms are always relational, thus analyses should look to 'discern and compare' the familiar, embodied, often unconscious rhythms, with unsettling arrhythmic experiences (Lefebvre, 2004: 77). Moreover, I see a need to give participants more agency and voice in contemporary *rhythmanalyses*. Individuals are not all oblivious to the rhythms of their everyday lives, and some recognize that operations of power can produce particular rhythms while limiting others.

Lefebvre's analysis of rhythms has political underpinnings. 'The Marxist roots of his analysis are rarely far from the surface', explains Horton (2005: 159). Indeed, Lefebvre never loses sight of how everyday rhythms are produced 'by the structuring rhythms of the state and capital' (Horton, 2005: 159). In contrast to Lefebvre's earlier work, however, *Rhythmanalysis* does not offer a detailed examination of the spatial and rhythmic operations of power. Rather, examinations of power appear secondary to observations of the diverse rhythms operating within and across time-geography. Thus, many of the scholars cited above combine Lefebvre's concepts of *rhythmanalysis* with his earlier work on the social production of social space to go beyond descriptions of 'social' and 'natural' rhythms. Whether this was Lefebvre's intention or not, such syntheses have enabled an array of insightful critical analyses of the rhythms of social life in a variety of contemporary contexts. *Rhythmanalysis* may fail to offer a coherent conceptual

schema, yet Lefebvre's work provides a 'richly suggestive' impetus for exploring the disruption to everyday sporting rhythms caused by earthquakes, as well as how alternative sporting mobilities contribute to the (re)imagining of earthquake-damaged spaces and places.

Acknowledging that the search for the 'exact theoretical fit' is futile (Slack, 1996: 112), I approach social theorizing as 'an adventure' in which I 'set out to see things differently' (Thorpe, 2011: 269). Rather than trying to neatly 'fit' my data into a theoretical framework, I prefer to 'work with our always inadequate theories' with the aim of moving understanding 'a little further down the road' (Slack, 1996: 112). Arguably, 'pushing, pulling and stretching theories and concepts in relation to our empirical evidence' can help us 'identify their strengths and limitations for explaining particular aspects of contemporary society and/or the physically active body' (Thorpe, 2011: 269). Thus, in this paper, I do not strictly pursue the kind of rhythmanalysis suggested by Lefebvre. Rather, I draw inspiration from his thinking because it encourages a particular sensitivity to the 'diverse, multiple rhythms of everyday life' (Horton, 2005: 158). In particular, I see value in this approach for encouraging new questions about the rhythmic and arrhythmic experiences of sporting bodies in spaces of movement. Recognizing the limits of Lefebvre's work, however, I engage the notion of arrhythmia in conversation with literature from mobilities studies and cultural and emotional geography. In so doing, I hope to point to the potential of theoretical synthesis for each of these strands of thought. Adopting an interdisciplinary approach and rhythmanalysis sensitivity, this paper reveals some of the social and psychological effects of earthquakes on the bodies of lifestyle sport participants.

Interested to understand how committed 'lifestyle sport' participants adapted their action sport participation in the changing socio-cultural-economic-physical geography and make meaning of new sportscares, I conducted semi-structured interviews with 14 (11 male and 3 female) surfers, skateboarders, climbers and mountain bikers living in Christchurch before, during and after the February 2011 earthquake. Interviewees included eight surfers (24–49 years old), four climbers (19–35 years old) and two skateboarders (18 and 22 years old).³ Six of the participants were also active mountain bikers (30–44 years old). Prior to the earthquake, the surfers, climbers, mountain bikers and skateboarders interviewed for this project enjoyed regular participation, often organizing their daily routines around their sporting activities. As one highly committed surfer proudly proclaimed: 'I surfed everyday; regardless of conditions, or if I was well or not, just go straight down and jump in'. A Japanese climber who moved to Christchurch for the climbing also explained, 'I'm just working for climbing, living for climbing. Everything in my life is for climbing' (Yukimi). Few of these individuals participate in competitions or consider themselves 'athletes', yet their sporting participation is an integral part of their everyday lives.

The aim of this project was not to offer findings representative of all Christchurch residents, but rather to reveal rich insights into the lived experiences of an array of lifestyle sport participants. Participants varied considerably in socio-economic status; at the time of interviews, participants' occupations included unemployed, skateboard shop employee, surf shop manager, builder, undergraduate and post-graduate students, professional photographer, environmental manager and university lecturer. Participants' experiences during and after the earthquake also varied considerably, with some involved

in life-threatening scenarios, dramatic rescues or trapped a long way from family, while others were in relatively safe environments. Despite varying earthquake experiences and socio-economic status, all participants described daily and chronic stresses and frustrations associated with living in a severely damaged city with continuous aftershocks. Concerns regarding roads, employment insecurity, family health and wellbeing, housing and insurance featured strongly in all interviews; one participant lost a close friend, another lost his family home during the earthquake, another was forced to relocate due to damage to his rental property, and others had to make costly repairs to their houses. As with most Christchurch residents at this time, all interviewees were actively involved in their local community's recovery response, and three were members of the much-praised Student Volunteer Army (SVA).⁴ Some also belonged to sport-related clubs that 'got together to lend a practical hand whenever we could to members in need of help' (Peter Mannix, President of Sumner Longboarders Surf Club, 2013, personal communication).⁵

While the focus in this paper is the influence of the earthquake on individuals' sporting rhythms and mobilities, it is important to note that such experiences are intimately connected to all other aspects of their post-disaster lives (e.g., family, work, accommodation, community). Of the 14 participants, three continued to live at home with their parents, four had children of their own and seven were either married or living with their partner. Ten were New Zealand residents—seven of whom were 'born and bred' in Christchurch—and four had migrated to Christchurch from America, England, Germany and Japan, for work, post-graduate studies and in pursuit of new sporting opportunities. The personal information offered here is relevant to this project because the sporting experiences of interviewees before, during and after the earthquake cannot be separated from the life stresses experienced by participants and their families.

As I have explained elsewhere, ethnographic visits with a short timeframe can benefit from flexible and mobile methods (Thorpe, 2012). With just four days to conduct interviews, my sampling for this project was reflexively opportunistic: I actively pursued all leads for potential interviews prior to and during my visit to Christchurch in March 2012. Participants were accessed via existing social networks, as well as visits to local surf, skateboard and climbing shops, and snowball sampling.⁶ Interviews ranged from 45 minutes to two hours, and took place in an array of locations selected by the participants (i.e., participant's house, surf shop, university offices, cafeteria, at the airport). As disaster studies researchers are well aware, conducting interviews and fieldwork in disaster spaces requires a heightened sensitivity to the psychological trauma experienced by some participants (Collogan et al., 2004). To further enhance my understanding of the everyday stresses within the households of Christchurch residents, I stayed with family in their home of more than 30 years that had recently been 'red zoned' (declared no longer inhabitable). Driving to and from interviews, I came to understand the daily frustrations of driving in a city ravaged by potholes and construction. I also experienced two small aftershocks during my visit, including one during an interview. Adopting a methodological approach sensitive to the (im)mobilities of the post-disaster environment helped me gain a greater understanding of the ongoing psychological, emotional and logistical stresses of Christchurch residents more than a year after the devastating February earthquake; this embodied knowledge facilitated my rapport with participants and analysis of interview transcripts.

Disrupted sporting mobilities: responses to earthquake arrhythmia

Every place used for action sport participation is a unique 'polyrhythmic ensemble' (Crang, 2000). Through regular practice, committed action sport participants often develop an implicit and embodied understanding of the multiple social and natural rhythms operating within and across these places. For lifestyle sport participants, everyday routines and rituals are then organized around such movements and mobilities (e.g., tides, wind, flows of people) (Wheaton, 2003). The February 2011 earthquake seriously damaged and destroyed many of the spaces used for recreational sports, such as skateboarding, surfing, climbing and mountain biking, and in so doing, disrupted the familiar rhythms and routines of thousands of action sport enthusiasts.

The downtown district of Christchurch experienced the most extreme damage from the February 2011 earthquake, such that the central city was cordoned off from the public for more than a year. Inside the chain-linked fences of the 'red zone', more than 130 buildings have been, or are in the process of being, demolished: many of these are high-rise and heritage buildings (Lynch, 2011). The closure of the city center impacted all Christchurch residents in various ways. However, for local skateboarders, this meant the loss of one of their favorite urban playgrounds. As one local skateboarder laments:

It's hard for anyone who's not in Christchurch to imagine 'no city'... whole blocks are just written off. There used to be so much to do in that area—you could skate down High Street to go and meet some people, and you could just carve up the roads and ollie the little gutters. ... It was just such a big part of the city to be shut off, there's no way you couldn't lose a bunch of cool [skateboarding] stuff in it, no matter what. (Trent)

Extensive damage to major sewer pressure mains also forced the CCC to release untreated wastewater into the rivers. On March 1 the council released the following statement:

Please stay away from beaches. The public are urgently being asked to stay away from all Christchurch beaches, as seawater is currently contaminated with sewage. Contaminated water poses a serious health threat, with risk of disease.

It took over nine months to replace 12 kilometers of major sewer pressure mains, during which time more than 7.8 billion liters of untreated wastewater had flowed into the waterways. To the relief of local residents, the beaches officially reopened for recreational use in November, just in time for summer. As the following comment suggests, the redistribution of earthquake waste also influenced the use of other recreational areas: 'they dumped a lot of rubble up there by the New Brighton mountain bike trails... I also heard, informally, that there was a lot of asbestos in the rubble up there' (Nathan).

The Port Hills—a range of hills between Christchurch city and the port at Lyttelton—suffered considerable damage from the February earthquake. Prior to the earthquake, the area was a popular recreational site offering more than 46 maintained walking and mountain bike tracks, many with spectacular coastal views (see Figure 2). The Port Hills were also a world-renowned climbing destination, offering approximately 1400 known climbing

lines within a short 20–25 minute drive of the city. The February 2011 earthquake destroyed an estimated 80 percent of these climbing routes. Although most of the climbs were unrecoverable, the council went to great lengths to reopen some of the walking and biking trails. Ongoing rock fall hazards, however, continue to cause delays. In October 2012, only 18 of the 46 walking and biking tracks (less than 40 percent) had reopened for public use. The closure of trails and routes in the Port Hills, the ‘red zoning’ of the city center and the prolonged closure of the beaches seriously impacted the everyday sporting participation of mountain bikers, climbers, skateboarders and surfers.⁷

To play in disaster zones: cultural debates across temporal contexts

Despite extensive damage and destruction across the city, the February earthquake did not cease all lifestyle sport participation. Rather, for some committed individuals, participation intensified in the *immediate* post-disaster period:

...when February happened there was a three day period where the surf was pumping and you couldn't get out of the area, so we just surfed heaps. Then about 3 days afterwards, Bob Parker (Christchurch Major) jumped on the box and said we're going to start discharging into the ocean, so we looked at that, and I looked at the times and dates of when they were starting to release everything, and grabbed my surfboard went down and surfed for the full day, and until the moment they turned on the drains. (Ruben)

Some skateboarders had a similar sense of urgency in their use of the post-disaster space:

...the period straight after the quake, it was quite good, all these new spots appeared and the cops had other things to be worrying about than getting us. So everyone was out skating all these new, crazy spots. But they [the council] got pretty onto just blocking sections or started ripping up concrete... So as quickly as it came, it began disappearing, so you had to make the most of those first few weeks. (Trent)

Another skateboarder, however, held back from skateboarding immediately after the earthquake because he ‘felt guilty that people had probably died in these spots’ (Brad).

Despite some desperate bids to surf or skateboard amid the ruins of an earthquake-ravaged city, most lifestyle sport participants were otherwise preoccupied for the first few weeks following the event. The majority of participants in this project described their sporting activities being sidelined in the wake of the earthquake by the health and wellbeing of family and friends. For example, Will was preoccupied with ‘trying to find somewhere to live’ and then ‘getting the kids into new schools’ such that ‘surfing was gone from my mind’, and James found himself ‘taking care of others’ and in so doing ‘realized surfing was no longer the priority in life’. Similarly, a female surfer recalls, immediately ‘after the February quake we all had shit to deal with anyway, we had no power, no water, then we were busy at work, so life was kind of busy anyway’ (Emma).

During the weeks and months after the earthquake, however, as participants sought to re-establish some familiar everyday practices and routines, many realized that their sporting activities were no longer accessible. As Emma explains, ‘once we got most of

the chores done, we started to realize that something huge was missing from our lives and it was going to be gone for a long, long time'. The closure of the beaches, climbing routes and mountain-bike tracks took on much greater significance for these individuals following the emergency period and as residents attempted to negotiate new post-disaster lifestyles and work and leisure routines.

All of the action sport participants interviewed for this study described experiencing strong emotional and psychological responses to their disrupted sporting routines. A committed female surfer observed high anxiety among her surfing friends and admits to tensions within her relationship with another passionate surfer: 'we were both a bit more grumpy... going through surfing withdrawals. [Tim] was definitely grumpy... I probably would have been more grumpy if I didn't have to calm him down all the time'. James made similar observations: 'I don't know what surfing does for me, but if I don't do it, the wife will soon tell you that I'm not a very nice person to be around. Without surfing, I got pretty stressed'. As well as increased anxiety and tension, James also described experiencing a loss of motivation in a weekly routine sans surfing:

[Not being able to surf] really took some of the passion out of my life. Sure, there were a lot of other things to get on and do, recovery sort of stuff, but there wasn't a lot of reward. It feels like, surfing is always the 'cherry' you're looking for in life; get your jobs done and go surfing, it's your reward. Then it became, get your jobs done and get a beer. Some days you were just 'oh, I'm so over this', and we found ourselves drinking a lot more. (James)

Others also admitted to 'partying way too hard because we couldn't go surfing' (Mark).

In *Rhythmanalysis*, Lefebvre (2004: 20) explores the intersections of bodies, rhythms, space and time, evocatively describing bodies as 'bundles of rhythms'. Continuing, he argues that it is necessary to listen to these 'bundles' or 'braiding of rhythms' in order to 'grasp the natural or produced ensembles' (p.20) that result from them (also see Edensor and Holloway, 2008; Simonsen, 2005). For many Christchurch residents, the earthquake prompted them to reflect upon the importance of social and bodily sporting rhythms in their everyday lives. The earthquake arrhythmia was certainly felt by the bodies of lifestyle sport participants. Nathan was alarmed to notice that he 'put on about 4 kg' following the earthquake, and Will attributed his weight gain to an 80 percent reduction in his surfing combined with stress and increased alcohol consumption. Importantly, at the time of the interviews, most participants had recommenced their physically active lifestyles and thus mostly regained their pre-earthquake physiques. As suggested in Emma's good-humored comments below, she recognized her weight gain as a short-term response to lifestyle changes following the earthquake:

...we substituted surfing for drinking shitloads of wine. I put on five kilos at least, six if I'm honest. Life was just quite depressing, so you'd get home from work and have a wine. ... When we went surfing again, I actually noticed that my mal [surfboard] was sitting lower in the water. I swear to god, I was paddling out and my board was sinking, I was so fat! (laughing).

This quote highlights the temporality of bodily and socio-psychological responses to the earthquake; bodies, spaces and mobilities were in a constant state of flux for more than a year following the earthquake.

During the long months following the earthquake, as bodies changed and frustration set in, surfers and climbers debated amongst themselves as to whether to accept or reject council warnings and closures. The majority of surfers interviewed for this project made highly calculated decisions not to surf at the closed beaches: 'I don't want to bring any illness into the house. I'm also a plasma donor and I take that really seriously' (Will); 'I can't afford to have a week off work sick because I went surfing for an hour' (James); 'the thought of catching hepatitis from poo water was enough to put me off' (Emma). Official warnings, combined with personal observations, and the circulation of rumors within the surfing community, kept most from entering the water. Similarly, Caitlin, a highly committed and proficient climber, adopted a cautious approach:

I just didn't really feel like you should do climbing when there is a potential of rock fall coming down on you. They say it's dangerous, and I know a lot of people that really pushed it and went anyway even when it wasn't recommended. I didn't feel like I wanted to do that. For me, I don't think it's really worth the risk.

Another passionate climber, Yukimi puts it simply, 'I feel scared to go to the dangerous places. I don't want to go there'. For many participants, the closure of local beaches and Port Hills meant they were no longer a place of play and pleasure, instead evoking feelings of fear and anxiety.

Yet, action sport cultures have long celebrated hedonistic, risk-taking, irreverent and anti-authoritarian behavior (Booth, 1995; Ford and Brown, 2006; Thorpe, 2011). Thus, it is perhaps not surprising that a few Christchurch surfers and climbers refused to heed official warnings. For example, after giving in to the temptation to go for a surf in front of his house, one surfer describes drinking 'lots of whiskey at 10.30 in the morning just in case there were any bugs' (James). While the surfing community was divided as to whether it was socially acceptable to surf during this period, 'most people outside of surfing just thought they were complete idiots' (Shaun). Not dissimilar to the debates among surfers, the climbing community was divided as to whether to accept the closure of the Port Hills or to continue climbing despite the risks. Sam was the only climber in this study who continued to climb in the Port Hills following the earthquakes:

...technically I think [all the climbs are] closed, and so for the vast majority of people, no-one's going coz there are big blunt signs up at Godley Head and Redcliffs saying you will be fined \$2,000 or \$5,000. But a few of us are like, 'well it's a bit of a dodgy place anyway and the bits that are left, they stood up so far, so they'll probably be alright'. It all depends on how you look at risk.

With frequent rock falls, the Port Hills continue to be in a constant state of movement. For a few participants, such as Sam, this offered a new sense of adventure and added risk, thrill and excitement.

Creative appropriation of disaster damaged spaces

In *Skateboarding, Space and the City: Architecture and the Body*, Borden (2003) describes skateboarders as 'dismissive of authority and convention' suggesting that the 'city is not just a place for working and shopping but a true pleasure-ground, a place

where the body, emotions and energy can be expressed to the full' (back cover). This was certainly true for many Christchurch skateboarders for whom the earthquake-damaged streets and buildings offered exciting new obstacles and spaces for play. As one committed skateboarder writes, 'All our historic town spots are gone, there's dust everywhere... still its kinda cool that every street can be reexplored' (*The New Zealand Herald*, 2011). Less than a month after the earthquake, a video produced by local skateboarders titled 'Quaked: Skateboarding in Christchurch after Earthquake' was posted on YouTube.⁸ The short video shows a group of young male skateboarders creatively adapting to earthquake-damaged streets and sidewalks. With over 360,000 views, the YouTube video not only appealed to skateboarders around the world, but also to residents in Christchurch and across New Zealand who celebrated the playful, youthful, creative use of space. Online responses were almost entirely positive: 'Wow guys, this really blew my mind, and I am a 34-year-old mum, really made me smile'; 'This is one of the most creative things I've seen to come out of the quake'; 'At first I thought, 'bloody disrespectful vandals', then I thought, 'nah, just young kids making the best of a bad situation', a well put together vid' (*The New Zealand Herald*, 2011: para. 9).

Despite the public celebration of the video, skateboarders in Christchurch continued to struggle to find places to practice due to heightened security and the highly regulative uses of public space. Skateboarders had to draw upon their intimate understandings of the social dynamics of this urban geography to access new spaces of play and performance:

[After the quake] there are a few awesome skate spots that are desolate, but they are behind fences. We usually try to sneak into them when we know the workers and security guards aren't around. The first time you get busted, you're usually asked to leave, but if it happens again you'll get a trespass notice, or worse. (Trent)

As in pre-earthquake Christchurch, skateboarders had few opportunities to define the use of urban space. The local skateboard parks not damaged by the earthquake, however, became key locations for youth to 'catch up with friends and hang out' (Brad). With few spaces remaining for youths' communal physical leisure, Trent proclaimed the value of being able to 'head down to the skatepark on a Friday afternoon' knowing that 'everyone will be there'. Put simply, skateparks became important social spaces for the rebuilding of networks and a sense of community for Christchurch youth.

Another example of skateboarders' creative exploration and appropriation of the possibilities of the earthquake-damaged cityscape was the development of indoor skate parks. Embracing the do-it-yourself, anti-authoritarian attitude at the core of the culture, skateboarders appropriated earthquake-damaged architecture:

We started exploring all those abandoned buildings. There's this abandoned warehouse where the door's been shimmed open... now it's full of ramps, rails and boxes. There's also a really cool theatre warehouse on the cusp of the city border. Basically someone reached around and unlocked the door and jimmied the door open. Skateboarders just started building all sorts of fun stuff in there—boxes, manual pads, ramps. There was a massive stage that people had built ramps all down the centre of so you could skate off the stage. (Trent)



Figure 1. A skateboarder creatively appropriating earthquake-damaged streets in Christchurch. Image used with permission of The Press.

According to Borden (2003: 29), ‘skaters create [sic] spatial enclaves... adopting and exploiting a given physical terrain in order to present skaters with new and distinctive uses other than the original function of that terrain’. Expressing a similar sentiment, Trent proclaimed the appropriation of damaged buildings as a ‘salute to all the people that look down their noses at us and think we’re just nuisance, good-for-nothing skaters’; rather than ‘sitting around and moaning about all the damage’, skateboarding was a way of saying, ‘look what we can do with all the broken stuff’. Brad expresses the pleasures offered by skateboarding after the earthquake: ‘other people in my family don’t really do much at all anymore [due to job losses and an overall sense of despair], they just kind of hang around, waiting for the city to be rebuilt, whereas I’ll just go skating, and I’ll be happy’. As seen in Figure 1, through the creative use of earthquake-damaged spaces, skateboarders’ constructed different spatial re-imaginings of a post-earthquake city. Skateboarders’ creative use of ‘found’ and ‘built’ spaces in Christchurch enabled

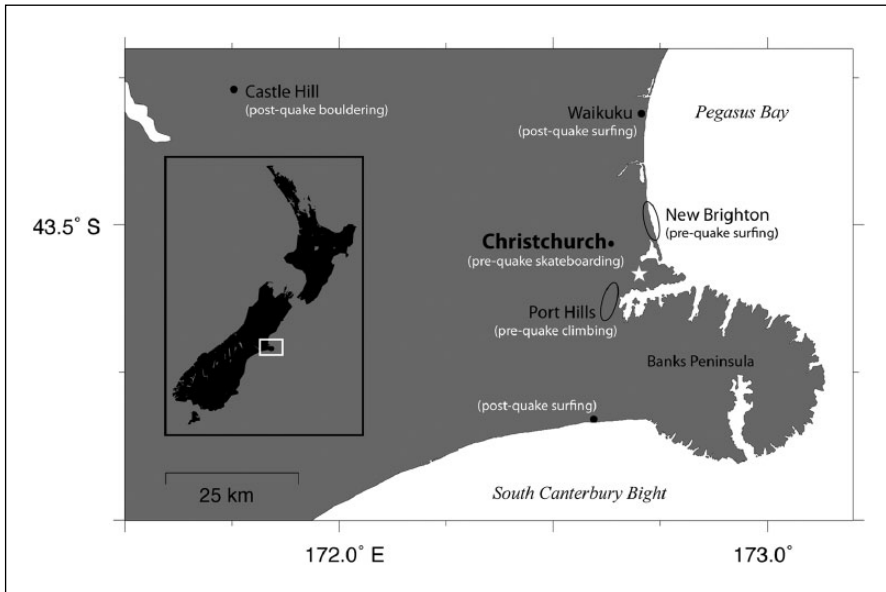


Figure 2. Map of Christchurch and action sport-related areas disrupted or destroyed by the February 22, 2011, earthquake, and alternative spaces used by committed participants during the weeks and months after the earthquake. The epicenter of the February 2011 earthquake is marked with a star.

participants to reconstruct new meanings of the cityscape. In so doing, their practices worked to subtly disrupt dominant readings of earthquake spaces as dead, damaged and only fit for demolition.

Alternative sporting rhythms and (re)imagining disaster spaces

Extending the work of Lefebvre, Edensor (2010a: 5) explains that it is common for individuals to attempt to minimize the disruption of an arrhythmic experience by trying to 'restore familiar spaces, routines and timings'. This was certainly true for many action sport participants living in Christchurch after the February earthquake. In the weeks and months following the earthquake, passionate skateboarders, surfers and climbers attempted to regain some sense of familiarity in the rhythms of everyday life, by adopting creative practices and alternative sporting mobilities. In so doing, they contributed to redefining 'traumascape' (Tumarkin, 2005) into 'therapeutic spaces' (Williams, 1999) of physical play and performance.

For committed climbers not willing to return to the dangerous Port Hills, the next best alternative was to drive 100 kilometers north west of the city to Castle Hill—an area offering over 250 climbs and 1000 boulder problems (see Figure 2). As a world-class bouldering site, many Christchurch climbers redirected their energies toward bouldering post earthquake. Similarly, for passionate lifestyle surfers unwilling to risk their health by

surfing the local beaches, the best alternative was travelling to unpolluted beaches north (Waikuku) and south (Banks Peninsula) of Christchurch. Travelling to unpolluted beaches was an expensive and time-consuming activity requiring considerable resources and organization, which caused problems for even the most committed surfers: 'If you want to continue surfing every day, we're looking at \$20 a day, \$100 a week, which puts a massive drain on your resources... especially with house repairs and other extra costs of living'. (Ruben). According to travelling surfers, the additional effort and resources required to surf post-earthquakes 'sorted out people that are really committed to surfing as a way of life' (Ruben), distinguishing 'hard core surfers' from 'weekend warriors' (James). Interpreted by some as a test of dedication to the sport, the earthquake seems to have further reinforced hierarchies within action sport 'cultures of commitment' (Wheaton, 2003).

New social dynamics also developed as a result of alternative post-earthquake action sport mobilities. Previously quiet surfing spots became crowded and, with highly stressed surfers competing for limited resources, altercations were not uncommon. Ruben recalled arriving at Waikuku to find 'more than three hundred people in the water'. With limited resources and some people 'so stressed.... just right on the edge', he observed 'one guy who just wouldn't stop swearing at people', and another get 'into fisticuffs with another dude in the water' (Ruben). Similarly, Brad also observed conflicts between skateboarders and those riding scooters in the increasingly crowded skateboard parks: 'there's a huge conflict between the skaters and scooters nowadays. Occasionally a skater will grab a scooterer's scooter and throw it or something like that and they'll go at him'. Despite overcrowding and the additional resources required to access new locations, those that were able to pursue action sports in the months following the February earthquake strongly advocated the socio-psychological value of their experiences.

Alternative spaces and new sporting pleasures

Those surfers and climbers with the opportunity and motivation to travel, embraced the escapism and excitement offered by these new sporting spaces and mobilities. Aaron, for example, enjoyed the new sense of 'adventure and exploration...finding new waves, testing out different boards, different waves'. Continuing, Aaron described the importance of surf trips for social interaction and fun with his peers, which had a lingering affect:

There is such a strong presence of community and fulfillment in relationships within surfing... If you went away for a days surf, you'd come back and be in a calm place for at least a few days. But, because it was so continuous, earthquakes and more shit happening, as soon as you get immersed back into Christchurch, you slowly go downhill again and you're just waiting for another day to get away.

Similarly, Will appreciated the short-term escapism and 'endorphin rush' that helped 'take my mind off everything for a while'. He also enjoyed the opportunities to 'connect with my friends and surfing colleagues from Christchurch': 'If you saw someone you knew in the water, suddenly it's "how are you doing, how's your house, what's happening?" It was great to catch up with mates that you hadn't seen for a while because everyone was so busy with recovery stuff and looking after their families'.

Each of the climbing participants in this study also proclaimed the psycho-social and physical benefits of participation after the earthquake:

A lot of people go to climb to seek to de-stress from their family quite often, and it's a good way to vent some anger actually. I'm very much an active relaxer, so for me, climbing was especially important after the earthquake. (Sam)

When we go to Castle Hill, it's an escape. It's like in this really nice protected space. When you're there, you don't even consider, what if there's an earthquake? (Caitlin)

Caitlin also describes the importance of her relationships within the climbing community: 'some of us talked about what happened' and then we agreed that going climbing together was a good way to 'move on from it [the earthquake]'. For Caitlin, the climbing community and the re-establishment of familiar sport and work rhythms aided her recovery from the arrhythmic experience of the February earthquake: 'Once I got back into it, I found climbing is a way just to carry on, move forward. ... For me, it was really good just to be back doing something I enjoy, it also felt really good to just be getting back into work and uni', concluding 'it finally feels like everything is how it should be'. For Caitlin and many other action sport enthusiasts, re-engaging in their activities and re-connecting with social groups associated with their sport were invaluable for helping them return to a perceived state of eurythmia.

Re-imagining post-earthquake sporting spaces: fears, anxieties and resistance

Tuan (1974, 1979) and other cultural, urban and sport geographers (Bale, 1996; González, 2005) have used the terms 'topophilia' and 'topophobia' to describe the positive and negative affective relations people develop with places. Following the earthquakes, previously topophilic sporting places became topophobic sites, evoking new fears and anxieties from some participants (Tuan, 1979). Many interviewees admitted to looking at the urban architecture differently after the earthquakes, and constantly planning 'escape' routes in case of another earthquake. Nathan, for example, revealed that he finds himself constantly assessing his environment: 'when I'm between the shadows of a number of buildings, I'll look and see where, if *it* happens, where do I run?' He admits to new spatial anxieties:

We probably didn't think of consequences so much before, now I do look around me and think, what could happen here? It's a weird thing... whatever I do, it's different, because I have this new caution. I'll ask myself questions now that I never used to ask. (Nathan)

Some surfers also found themselves asking new questions following the Christchurch earthquake. For example, out surfing during a few aftershocks, Ruben found himself worrying 'what if there's going to be a tsunami, which really does get us?' In comparison to their more carefree pre-earthquake sporting mobilities, many participants described carrying their cell phones to contact family, as well as emergency supplies (i.e., clean water, warm clothing, food) in their vehicles in the case of another event.

The earthquake also evoked new anxieties regarding the separation from families, which encouraged some to develop more sensitive approaches to their sporting participation:

Being in the water means you don't have a cell phone... you're going to be at least an hour and a half away from your family. So you're inherently worried about your family. We put plans in place in case of an event, and when I go out now, no matter how good the surf is, if I say I'm going to be forty minutes, I'm forty minutes. (Ruben)

I used to be the guy that would have a family dinner at six o'clock and I'd get there at quarter to seven because I just had to have a surf first after work. Now I can look at that surf and think, next time. ... I guess for me, it's about probably trying to be a little bit nicer, especially to my family. (James)

To minimize separation anxieties, some lifestyle sport participants took to travelling with their families:

Before the earthquakes, it typically would have been me just jetting off down to the beach for a while by myself... But since Christmas, when we go to the beach, we've tended to all go together... and we will all be in the water doing stuff together. It's so cool that we [my wife and daughters] can all be out surfing and paddling together. (Shaun)

A lot of the times I took them [my family] with me [when I went for a surf]. ... I would go for a paddle while my wife was with the kids and then she'd go for a paddle and I would be with the kids... we'd all go together... that was fun. (Will)

As these comments suggest, for some family-oriented action sport enthusiasts, post-earthquake sporting mobilities offered new social pleasures.

In contrast to the heightened spatial anxieties and new familial considerations experienced by some action sport participants, others used their sporting participation to resist dominant discourses of fear, depression and social expectation following the earthquake. For example, James explained:

Different friends, parents and stuff like that, were thinking, 'what are you thinking going surfing, leaving the missus at home, how can you be going half a day away when there could be another quake anytime?' But you kind of get to the stage where you think, I can't live my life worrying about when the next earthquake is going to be. You do have times like that, but then you actually get annoyed with the earthquakes, you get angry and think 'I'm not going to let you ruin my life'.

Mark also refused to accept others' fears, instead preferring to continue surfing as his preferred mode of stress relief:

I was out surfing when the [September] earthquake hit. The parents were ringing up going 'where are you? What are you doing?' But it was actually really nice just sitting out there on my own, surfing and relaxing. Mum was going crazy over it, you know 'get out, go somewhere high, there could be a tsunami'. But I just didn't really care; I just wanted to chill out.

Arguably, both pre- and post-earthquake surfing lifestyles might be considered 'counter rhythms' to the dominant temporal structurings and social expectations in each

context. As the comments from James and Mark suggest, they are well versed in dealing with critical responses to their alternative rhythmic conventions.

As a form of arrhythmia, the earthquakes had varying socio-psychological, bodily and embodied affects on the Christchurch residents involved in this study. For many participants, action sports were an 'in-between' space of both destruction and disruption, and recovery, resilience and the reimagining of life beyond the earthquakes. Although the alternative sporting rhythms pursued by many following the earthquakes were not the same—often in new locations, and with different people—the rhythmic practices of ollieing (jumping) a skateboard and surfing a wave, or the flow of oxygenated blood and endorphins following a challenging climb, helped some return to familiar bodily experiences, regain a sense of identity and belonging to their sporting communities, and (re) develop a physical connection to the natural or built environment.

Lost and (re)found: sporting places of attachment

Working at the intersection of the spatial and affective turns in the social sciences and humanities, emotional geographers understand 'place attachment' as an 'emotional link to a physical site given meaning through social interaction' (Milligan, 2003: 382). Relationships to place can significantly influence identity, particularly when an individual has had memorable experiences in the built or social environment. 'Repeated interactions in specific sites or types of site will typically result in place attachment, or the bonding of people to place' explains Milligan (2003: 382). Many of the participants in this study revealed a strong sense of place attachment intimately connected to their sporting experiences: 'Surfing is a big part of why we live here', explained Emma, 'we have all these amazing experiences just 100 meters from our house'. According to emotional geographers, disruption of place attachment, caused by events such as war, natural disaster and rezoning, can result in 'identity discontinuity' (Milligan, 2003: 382), and feelings of loss and mourning (Connerton, 2011; Read, 1996). Morrice (2012) makes a valuable contribution to geographic literature on trauma, disasters and the concept of 'home' in her exploration of the influence of loss and nostalgia experienced by Hurricane Katrina evacuees' decisions to return or relocate following displacement. Recognizing such decisions as 'complex, multidimensional and individual', she reveals the 'powerful emotional quality associated with how people relate to place' (Morrice, 2012: 1).

Mourning and (temporarily) forgetting sporting places

The Christchurch earthquakes caused substantial disruption to both people and places, disturbing 'not only the physical structures of localities [sic], but also the emotional attachments people feel to places' (Morrice, 2012: 2; also see Farrar, 2009). While many of the interviewees in this project expressed sadness at the loss of so many beautiful heritage buildings, as well as frequently visited places in their local communities (e.g., gyms, restaurants), they had particularly strong affective responses to the destruction of places used for their sporting participation. For example, climbers mourned the loss of so many world-class climbing routes in the Port Hills spaces. 'I feel so sad for the places we lost', proclaimed Japanese climber, Yukimi, 'my favorite climbs were there, my projects were there. I miss them'. Whereas most participants focused on the loss of physical places (e.g.,

favorite climbing or mountain biking routes, a set of stairs used for skateboarding), others mourned the loss of the social interactions offered through participation in these sporting geographies. Aaron, for example, missed seeing his 'regulars' out in the surf and on the beach: many of them 'you know only through the water, you mightn't even know their names, but you still talk to them three or four days a week... having a chat in the waves, or just getting changed back at the car. Then you just don't see them for months... it was a major loss of social interaction'. As Milligan (2003) explains, nostalgia is a common experience as individuals seek to establish new identity categories and negotiate new relationships with places and people following natural disaster.

For action sport enthusiasts such as Nathan, the routines and rituals associated with their sporting activities were integral to their sense of place attachment, and subsequent feelings of loss:

I enjoyed just jumping on my skateboard and bombing the block and a half to the beach just to have a look at the waves, just to have a little chill out, see if there was a wave, then skating back... but the earthquake stopped that.

Mark also felt dislocated by the loss of his surfing routines, and was relieved when the beaches reopened: 'it was really good to get back into the routine of going and checking the waves. It just felt like being home again. *Without the beach and the surf, it's just not home*' (emphasis added). In contrast to research on the experiences of natural disaster evacuees who experience loss through displacement, and for whom 'home' becomes defined as 'something that must be returned to; a place of both familiarity and safety' (Morrice, 2012: 3), for lifestyle sport participants, 'home' is directly connected to familiar sporting places, rhythms and routines.

According to emotional geographers, the 'most direct way to assess the degree of an individual's place attachment is to examine the perceived degree of substitutability of other sites for the one in question' (Milligan, 2003: 383). The attachment to place among participants in this study became apparent as they discussed their decisions to stay in Christchurch rather than joining the 13,500 who migrated to other New Zealand cities or to Australia. Sam, a graduate student from the UK, plans to stay: 'Earthquakes aside, I really like it here. Christchurch is brilliant. There's still some crags that are open, there's still surf at my doorstep, I can snowboard and surf in the same day. There are maybe only two places in the world where you can do that'. For Sam, the unique sporting opportunities offered by the coastal and mountain environments of Christchurch have contributed to his strong sense of place attachment. For others, the social relationships forged in these places were equally or more important in their decisions to stay:

We did have other options presented to us, but yet we've decided to stay because we live in a nice surfing community where people really care about each other and we live where we can walk down to the ocean. (Shaun)

For lifestyle sport participants, residence and migration decisions are intimately connected to the social and physical experiences offered by particular natural and built sporting spaces.

Given the significant relationships lifestyle sport participants develop with sporting places, it is not surprising that the reopening of beaches and some mountain biking trails

were momentous occasions. As Will recalls, 'when the all clear came through for the water, surfers, kayakers, windsurfers, kite boarders, surf lifesavers across Christchurch were jumping for joy'. Many participants embraced their sporting activities with new levels of vigor:

Now it's amazing. There is a full increase in appreciation for what we have right here. I've probably been surfing more now than I was before it all happened; I just thought, shit, make the most of it, get out every morning before work, try for twice a day. (Aaron)

Now we, as a family, are really making the most of the ocean as a resource. We're using the beach more so than we were prior to the earthquakes because we value it more, but also it helps us justify why we've decided to stay in a place that so many others have chosen to leave. (Shaun)

As the comments from Aaron and Shaun suggest, lifestyle sport participants became more conscious of the importance of their everyday sporting practices for their place attachment, identity and belonging, and ultimately their decisions not to migrate from Christchurch.

For Lefebvre (2004: 77), we are 'only conscious of most of our rhythms when we begin to suffer from some irregularity'. As this paper has illustrated, the earthquake arrhythmia certainly heightened action sport participants' awareness of their everyday sporting rhythms. For some, the earthquakes also prompted broader reflections:

For a lot of people who've stayed here, who've lived through the major ones... there's a different sensibility about taking things for granted. Be they natural resources or people that are around us. ... It's almost like you want to take things on a bit more because you know they're temporary, nothing is permanent. (Shaun)

Lefebvre (2004) recognized war and disease as arrhythmic experiences, with the potential to prompt reflection upon previously taken-for-granted rhythms of the daily life and the body. Here I have examined earthquakes as also arrhythmic experiences that can lead to heightened awareness and reflexivity of social places, moving bodies and everyday life.

Summary

Sport—and particularly lifestyle sports—may seem trivial pursuits in the immediate wake of a natural disaster. However, in the weeks and months following a natural disaster, as individuals and communities attempt to re-establish some sense of normalcy in their everyday lives, sport and physical activity can play an important role in (re)creating familiar rhythms and routines, (re)imagining spaces beyond disaster, and renewing affective relationships with place. This is particularly the case for those whose sporting activities were an integral part of their everyday lives, sense of identity and community, prior to the event.

In this paper I examined the February 2011 earthquake as an arrhythmic experience for lifestyle sport enthusiasts living in Christchurch. The disruption and destruction of

sporting places, as well as everyday work-life-sport routines, prompted some committed participants to adopt highly creative practices in order to access familiar rhythms of surfing, skateboarding, climbing and mountain biking. Despite some lingering fears and anxieties, such alternative sporting mobilities offered participants new social and physical pleasures. Moreover, for the Christchurch residents in this project, beaches, indoor skate parks, bouldering routes and mountain bike trails became 'therapeutic landscapes' (Gesler and Kearns, 2002; Van Ingen, 2004; Williams, 1999)—their sporting participation in these spaces contributed to perceived improvements to health and wellbeing.

Based on my research, I argue that local governments would do well to give greater consideration to the role of non-traditional sporting spaces for residents' recovery and resilience following a natural disaster. The rebuilding of such facilities, however, is highly political and oft controversial: whose sporting and physical activity pursuits are prioritized in the rebuild process? The decisions to rebuild the Super Dome in New Orleans, and a new rugby stadium in Christchurch, were hotly contested. The redevelopment of action sport facilities is typically low on the list for local governments. With the CCC actively involved in the planning of new sporting facilities, I looked internationally to consider efforts to build action sport facilities in post-disaster geographies. Interestingly, the DEWeezy indoor skateboard park opened in New Orleans on the seventh anniversary of Hurricane Katrina. The skatepark was opened with support of Mountain Dew, the rapper Lil Wayne and the Make it Right Foundation; designed to 'echo the landscape of the Lower Ninth Ward', the skatepark is intended to become a 'beacon of hope and a rebirth for the community' (Fleming, 2012). While attending the 2012 North American Sociology of Sport Conference in New Orleans, I also visited 'The Peach Orchard', a community-built skatepark that began as a grassroots response to the devastation of Hurricane Katrina. I conducted semi-structured interviews with two local skateboarders who had helped set up a non-profit organization, Transitional Spaces, with the aim to empower local residents through building community skateparks. After their first unofficial do-it-yourself skate park was destroyed by a railroad company, the group has begun working with various organizations and key individuals to help them engage in effective dialogue with local government, and thus to make a successful campaign to garner official support for their efforts.⁹ Interestingly, they were very critical of the top-down approach adopted by the founders of the DEWeezy skateboard park, and were skeptical of the motives of corporate investors, such as Mountain Dew and Lil Wayne. Post-disaster action sport development thus seems ripe terrain for commercial investment and the 'politics of hope' (see Thorpe and Rinehart, 2010).

Unfortunately, it is beyond the scope of this paper to delve more deeply into such action sport-related community-based projects in post-disaster spaces, or to examine the politics involved in rebuilding sports facilities. Drawing upon spatial and movement theorists such as Henri Lefebvre, however, disaster and sports scholars might continue to explore the affects of natural disaster on the bodies and everyday mobilities of those who choose, or are forced, to live in post-disaster geographies, and the responses of individuals and communities as they seek to re-establish familiar patterns, routines and movements, and re-define the production of sporting places, in the weeks, months and years following such arrhythmic experiences.

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Notes

1. Processes are underway for the rebuilding of sports facilities such as fields, courts, clubrooms and training facilities. In May 2012, the Christchurch Earthquake Appeal Trust announced details of NZ\$2 million in sports grants to help a range of sports, particularly hockey, rowing, cricket and bowls. In the words of Appeal Trustee Rod Carr, 'Sport is an integral part of New Zealanders' way of life and it is important that the people of Christchurch can continue to take part in sport and recreational activities. These projects will benefit the thousands of people in Canterbury who play these sports and use these facilities every week' (cited in Gorman, 2012). This was wonderful news for hockey players, rowers, bowlers and cricket players. However, decisions as to which sports get funded, and the neighborhoods that are prioritized in the rebuilding of these sporting facilities, are highly political processes.
2. This is not to suggest, however, that participants in other forms of sport and exercise will not experience affective responses to the closure of facilities.
3. As per my university ethics requirements, pseudonyms have been used for all interviewees.
4. The SVA—a 15,000-strong group of university and high school students organized primarily through social media (e.g., Facebook, text message)—has been widely praised for their collective efforts during the immediate and long-term rebuild process. In particular, the SVA cleared over 65,000 and 360,000 tonnes of silt following the September 2010 and February 2011 earthquakes, respectively; the latter was a result of 75,000 volunteer hours (see www.sva.org).
5. Although sporting clubs are not the focus of this paper, it is worth noting that most of the surfers and climbers in this project were members of surfing and climbing clubs. Although most of these clubs 'went into recession for a few months' after the February earthquake, many members continued to reach out to their colleagues (either via surf or climbing trips, visits to their homes or electronic communication), some of whom had been forced to leave Christchurch following the earthquakes. According to Peter, surfing was 'extremely important' for rebuilding a sense of community among local surfers in the Sumner area. In his own words: 'the reason our membership stayed so stable, despite the closure of our beach and damage to our clubrooms, was because the club is part of a small and active community, and keeping in touch—especially for those forced to relocate—was important because they virtually all have, or intend to, relocate back to the area when they can' (Peter, 2013, personal communication).
6. My research assistant, Nick Maitland, was integral to this operation. As a Christchurch resident, Nick helped me establish contact with participants prior to my visit. Moreover, our conversations throughout the data-gathering phase helped me develop a greater sensitivity to some of the everyday lived experiences of residents.
7. The closure of other sporting facilities, such as climbing walls and sporting equipment stores, and the cancellation of events, also caused disruption to sporting participation and consumption.

8. As of submission date, this short video could be viewed at <http://www.youtube.com/watch?v=i2bvozq-KK8>.
9. For further information on this unique community skatepark project, see the Peach Orchard website: <http://peachorchard.wordpress.com/>

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