Chapter 14

‘The Breath of the Moon’: The Rhythmic and Affective Time-spaces of UK Tides

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> But the most admirable thing of all is the union of the ocean with the orbit of the moon. At every rising and every setting of the moon the sea violently covers the coast far and wide, sending forth its surge, which the Greeks call *reuma*; and once this same surge has been drawn back it lays the beaches bare, and simultaneously mixes the pure outpourings of the rivers with an abundance of brine, and swells them with its waves. As the moon passes by without delay, the sea recedes and leaves the outpourings in their original state of purity and their original quantity. It is as though it is unwittingly drawn up by some breathings of the moon, and then returns to its normal level when this same influence ceases. (*Opera de Temporibus*, Section XXIX, the Venerable Bede, 703 AD)

Introduction

I have been thinking of buying a tide clock, a clock that does not tell you the time, but, instead, the state of the tide at any given moment. They can be bought in marine chandlers and are of use to those who work, or ‘play’ with the sea and its margins: a shipping pilot who guides large ships into tidal ports at high tide; a farmer who has stock grazing on intertidal pastures which may be at risk of drowning at the highest tides; someone who sails recreationally out of a tidal harbour; a collector of shellfish for a living when the tide is low; an ornithologist who watches (or cares for) the birds that feed on exposed intertidal land; or someone who fishes from a seawall. The clock will show when the tide is rising, when it is at its highest, when it is falling again, when the water level is lowest, and then turning to rise again – starting the cycle over. This tide clock may be as important to these people as their chronographical timepieces which tell the hours and minutes of the day.

Much ecological, social and economic life has circadian rhythms, driven by the daily rotation of the earth in relationship to the sun. Although much has been written about the extent to which social, human (clock) time has broken free from this profound natural rhythm, it still remains a ubiquitous pattern of life – not least through human and non-human body clocks which are finely tuned to the turn of day and night and result in patterns of sleep and wakefulness and much besides (Foster and Kreitzman, 2004). Along the coast of the UK and other places of high tidal fluctuations, tidal rhythms also influence the temporal patterns and rhythms of life. Thus it could be argued that forms of lunisolar, *hybrid* temporality occur in

these places – driven by the interlocking rhythms of day-night (solar rhythm) and tidal rise and fall (lunar rhythm).

I offer a personal example. My father was a farmer whose working day was generally diurnally and seasonally dictated – getting up at first light (or before in the winter) to milk; finishing off work when evening came. But there was another pattern woven through this. We grazed sheep and cattle on intertidal grazing land near the docks of Cardiff, Wales, a few hundred acres of flat land where the protective sea walls snaked inland leaving the grazing open to the higher tides. At the times of monthly, and especially seasonal high tides, my father, often with us children along as helpers, would ensure the stock were safely on, or behind the seawall. In the organised chaos that was my father's desk – the farm office -a small yellow *Arrows Tide Table* for the Bristol Channel was always in its place (his equivalent to the tide clock). (Jones, 2005).

This chapter explores the temporal rhythms of tides and their effects on everyday life. Intertidal spaces and their land margins are spaces of extraordinary richness for entangled human and non-human becomings. Economy, ecology, culture, identity, all meet transformative moments at the water's edge, yet with(in) the tides that edge is in a perpetual, complex rhythm of ebb and flood.

I briefly illustrate material cultures of tidal rhythms before considering intertidal areas and their margins as *affective spaces,* drawing upon examples from art and literature. I have long witnessed the tidal ebb and flow of the Severn Estuary so I bring that personal experience to bear. I have collected a range of references to tidal culture in British literature and art, for traces of these 'other-timed' landscapes and the lives within them can be found in these representations of landscape, and are also present in a whole host of practices and accounts of local landscapes and cultures. Thus I follow a tradition within human geography of using literature and the arts as sources of material to consider landscape, relationships between nature-culture, sense of place and identity (Cloke, Philo and Sadler, 1991).

There are scientific studies of tides (Cartwright, 2000) and work on tides and ecology (Carson, 1961) yet while tidal processes are some of the most obvious, ubiquitous and powerful natural processes/rhythms in costal landscapes, they have attracted scant attention in cultural geography, landscape studies or time geographies.

Tidal patterns, rhythms and spaces

If I choose to buy a tide clock there is a complication – to *where* should I set it? You not only have to set the tide time – find out an exact time of high or low water and set the (single) hand to match – you have to decide which point on the coast you will set the clock to. Tides are generally semi-diurnal, rising and falling roughly twice a day. But there is much variation, and the precise timings and rhythms vary from place to place. The moment and point of high tide moves around the globe daily, following the orbiting moon, washing along, or piling up

against, differently orientated coastlines. Tidal processes, ranges and timings can vary markedly within a few miles of coastline.

The complexities of tidal rhythms are created by the relational motion of earth, sun and moon. Briefly, it is the gravitational pull of the moon that draws the mass of the oceans towards it as passes overhead. The more distant sun, whose gravitational influence is much less, either dampens this when pulling against the moon, or heightens it when they pull in concert. Thus tides not only generally rise and fall daily, but have monthly, seasonal and yearly variations which correspond to the complex *pas de trois* of these three heavenly bodies (McCully, 2007).

The basic tidal sequence is a continuing cycle of *low water*; *the flood* (tide rising), *high water*, *the ebb* (tide falling), and *low water* again. The all important *turn of the tide* marks the moment when the cycle switches from fall to rise, or rise to fall, and at the turn of the tide there is a brief period of *slack water*. The highest tides, which occur in conjunction to the equinoxes, are *spring tides*, and the lowest, *neap tides*. Importantly, the spring tides not only mark when the water level rises highest, but also when it recedes to its lowest. In other words, spring tides consist of the largest range between high and low water, whereas neap tides have a much smaller range between high and low water with correspondingly less intertidal area exposed/covered. At the spring tides a landscape such as the Severn Estuary changes very dramatically in the space of six or so hours between low and high water. At the neaps much less happens but the cycle is still in place.

This base rhythm of the tides is affected by all manner of variation. Firstly coastal location, form and orientation all affect local tidal ranges. The oceans of the globe have differing tidal characteristics (Carson, 1961). Bays and funnel shaped estuaries have some of the highest tides in the world because the surge of rising water is confined into an increasingly narrow channel. The Severn Estuary is a classic example of this. As it lies west – east, its mouth open to the vast Atlantic Ocean, when the moon swings across the sky, and the sun is pulling in the same line, the ocean swells in a vast following, shallow bulge which then washes up the ever-narrowing estuary. Many low lying coastal areas have vast areas of intertidal land whereas in other coastal areas, high cliffs emerge from deepish water and there is only a ceaseless rise and fall of tidal level against the cliff face.

In addition to coastal formation, tidal rhythms are affected by weather. Low atmospheric pressure might exaggerate the tidal rise, and high pressure suppresses it. Wind speed and direction can also either exaggerate or dampen tidal range. A *lee tide* occurs when tide flow and wind are in concert, and a *weather tide* when the wind blows in opposition to the tide. Storm tides, sometimes responsible for devastating floods (as in Eastern England in 1953), occur when high winds and low pressure combine with a high tide in such a way to pile water into coastal areas and estuaries.

In thinking about tidal rhythms it is important to note that times of high and low water do not synchronise with the 24-hour-day cycle in any simple way: '(B)ecause the earth rotates in relationship to the moon once every 24.8 hours, high tides occur on average every 12.4 hours' (Young, 1988: 27). Thus the timings

Figure 14.1 Low tide at Sharpness Docks, Severn Estuary (photograph by the author)

Note the figures for some idea of scale. At high tide the water level will rise to the top of the dock wall.

of high and low water slowly migrate across the 24-hour grid. The other monthly cycle of peaks (spring tides) and lows (neap tides) is 14.8 days.

As they rest on the Newtonian movements of sun, moon and earth, the *nominal* times and heights of high and low water can be very accurately predicted into the quite distant future (Carson, 1961). Standing on the sea walls built to defend the coastal levels around the Severn Estuary at the very highest tides I have always marvelled at the confidence of the engineering as the water rises to within a few inches of the top of the sea wall. A vast expanse of tidal, brackish water looms some 4 metres over the protected land at the moment of high tide and would wash far inland if unrestricted. Then the tide turns and slowly recedes to leave a draining estuary. Six or so hours later (depending where you are) no water at all might be visible, just a deep, indistinct perspective of sand, mud banks and draining channels.

In the Severn Estuary at the spring equinoxal tides, the difference between high and low water is some 14 metres, the second highest tidal range in the world. An impression of the difference in high and low water can be gained by looking at dock infrastructure such as locks at low water (Figure 14.1). The force of this natural process shapes the estuary and the life in and around it. A huge wedge of rising water presses up the estuary, filling it up to the very brim of its sea defences

and washing back up the normally draining rivers, through both urban and rural landscapes. The famous Severn bore – a large tidal wave which washes up the lower reaches of the River Severn on days of the higher tides is a notable tourist attraction.

This dynamic, powerful, process presents huge challenges to processes of local government. As the Severn Estuary Partnership (SEP) put it:

> Britain's longest river brings vast quantities of water into the Severn Estuary. Europe's biggest tide takes masses of water back up into the mainland. The mighty Severn influences the ways we live in many ways – and deserves all the attention we can give it! (SEP, 2005: 2)

Beyond the Severn Estuary, The United Kingdom is an island nation with an estimated coast line of 17,820 km. All the intricacy and variety of that coast is washed by some of the highest tides in the world. Estuaries (which by definition are tidal) form a large part of the UK coastal geography and can contain vast areas of intertidal lands (including. Morecambe Bay, 61506.22 ha. and the Wash, 107761.28 ha). The Nature Conservancy Council (1991) identified 155 estuaries around the British coast. They calculated that, 'the 9,320 km. of estuarine shoreline makes up 48 per cent of the longest estimate of the entire coast', and that '18,186,000 people live in large towns and cities adjacent to estuaries'. These landscapes, which can bring nature/wilderness into the heart of urban conurbations, or form our most remote wild landscapes, are distinguished by unique temporal and spatial characteristics which I explore below.

Tides and rhythms of life

I am interested in how tidal rhythms are folded into local processes, materialities and practices of places/landscapes – how tidal rhythms might distinctively pattern everyday life. Matless (2009) discusses studies of the wave patterns sculpted into the sands of estuarine intertidal landscapes, yet I argue that tides sculpt other material and lived patterns of life in coastal areas, creating differently different rhythmic traces in social and cultural geographies of work, recreation, community and individual identity.

This local temporal patterning of life contribute to what *Common Ground* (Clifford and King, 1993) call local distinctiveness, and what Thrift (1999) terms 'ecologies of place'. In these accounts however, it is the distinctive materialities, cultures and identities which are discussed. There is less attention to the distinctiveness of *temporal patterning*. Massey and Thrift (2003) and Massey (2005) have developed a more fully processual view which sees places and landscapes as outcomes of intersecting flows (material and non-material, human and non-human) coming together and coalescing into knowable forms. The temporal nature of these comings and goings and the rhythmic patterning

they can bring merits much further consideration. I turn to Lefebvre's (2004) ideas of rhythmanalysis shortly, but here I point out that the focus on temporality, rhythm and velocity in the everyday, answers Lefebvre's demand to think 'time and space *differently* and to think them *together'* (Elden, 2004: ix), and to think time not as abstracted but articulated through material and lived processes of life.

Latour (1997: 174) argues that space and time are 'the consequences of the ways in which bodies relate to each other… instead of a single space-time, we will generate as many spaces and times as there are types of relations'. Thus the position emerges that socio-ecological processes are not only, as Actor Network Theory (Callon and Law, 1995; Latour, 1993) suggests, the outcome of 'a multiplicity of differing agents … human and non-human, technological and textual, organic and (geo)physical, which hold each other in position' (Whatmore, 1999: 28), but also the outcomes of interconnecting time characteristics (velocity, rhythm, momentum) of those entities/processes which will combine in relational hybrid rhythms of space-time practices.

This idea of intersecting rhythms of all manner of things, including economic process, day and night, weather, tides, animal life cycles is beautifully illustrated by Young (1988), at the very end of his book on the interlinkages between 'natural rhythms and human timetables'. Seeking a vivid example for his coda, he turns to a tidal landscape, the Bristol Channel, which forms the western seaway leading into the Seven Estuary:

> It is dawn at an English West Country fishing port on a summer morning. Norman Widdicombe, the skipper of the Mary Jane, has been woken by an alarm clock which is reset each night to a different time. (262)

Young goes on to describe the complex calculations this commercial fisherman has to make to plan his trip. He will be after mullet and squid 'who like swimming against a strong tide'. He is also aware of the fishes' seasonal migrations. But he needs to be aware of other timings and rhythms as well. It is Wednesday and he needs to get out to sea and back to make the Friday fish market. There is no market on Saturday. Also, the cycle of fish prices are currently in his favour – but may not be for long. The weather will have a bearing on the timings too, how long and difficult the sail to and from the fishing grounds will be. He has to decide whether to wake his two man crew by telephone (families whose temporal rhythms are also linked to tides, seasons, weather *and* economy). Young paints a picture of many rhythms and temporal patterns – the seasonal habits of the fish, the tides, the weather, day and night, the fish trade prices, the weekly rhythm of the commercial fish markets – in complex, geared interplay, like some lush orchestration with different parts playing at different tempos and beats. Landscapes become timescapes (Adam, 1998) in which intersecting rhythms are key features.

Rhythmanalysis

In his notion of rhythmanalysis Lefebvre (2004) contends that spaces (such as cities) have multiple types of temporal patterns and rhythms (linear, sequential, cyclical), and this is key to understanding the pulse(s) of life within them. Lefebvre actually highlights tides as one profound form of cyclical, natural rhythm, making the fascinating point that cities on the Mediterranean coast (where tidal rise and fall is generally far less) might have fundamentally differing temporal/rhythmic signatures to cities on the Atlantic coast where tidal ranges are much greater.

> We shall [ ] begin by indicating briefly certain contrasts between Mediterranean and oceanic towns. These are governed by the cosmic rhythms of tides – lunar rhythms! With regards to Mediterranean towns, they lie alongside a sea with (almost) no tides; so the cyclical time of the sun takes on a predominant importance there. Lunar towns of the oceans? Solar towns of the Mediterranean? Why not? (2004: 91)

But Lefebvre's suggested methodology to conduct rhythmanalysis is not straight forward. He states that:

> In order to grasp and analyse rhythms, it is necessary to get outside them: be it illness of through technique. A certain exteriority enables the analytic intellect to function. However, to grasp a rhythm it is necessary to have been grasped by it; one must let oneself go […] abandon oneself to its duration. (27)

This methodological, positional and procedural call chimes with ideas of non-representational theory (Thrift, 2008) with its ambitions towards practice, performativity, and interests in affective becoming. It is to affective processes of specific instances of rhythmic tidal culture that I turn in the second half of this chapter.

However Lefebvre's proposal is made in the context of thinking of the rhythms of the city as seen from a window and balcony. You are at once in, and observing, the flow of life in the street. But this is very much a social rhythm. How do we abandon ourselves to the larger/longer, space/time, patterns/rhythms of non-human processes which operate at very differing scales, frequencies and intervals? Thinking of a landscape as a musical score is one way, with differing parts played by light, seasons, weather, human non-human traffic, and tides. Although there are rhythms and patterns to be discerned in the moment, there are many which cannot be so readily seen, heard or felt. Some indications of new methodologies emerge in the second half of the chapter.

Harvey (1996: 210) states that 'night and day, the seasons, lifecycles in the animal and plant world, and the biological processes [of the body] are typical encounters with various kinds of temporality'. Tides need to be added to this list.

The *agencies* of tides and other *processes* and their associated rhythming and patterning, deserve our attention. Although attention is now being paid to the agencies of non-humans (Jones and Cloke, 2008) it is often as discrete entities (materials, organisms, machines) rather than processes.

Glimpses of tidal material culture

This is a watery globe with oceans covering some 70 per cent of its surface. Tides (of a sort) are ubiquitous phenomena, as all water responds to the gravity of the moon, though this only become obvious when it hits land. This means that they are ecologically highly significant. Watson (1973: 22) states that, 'every drop of water in the ocean responds to this force, and every living marine animal and plant is made aware of the rhythm'. Beyond these natural rhythms, all manner of material culture has been and is shaped by tidal rhythms. For example, boats which were designed to ply tidal coastal waters were often differently designed, having flat bottoms for settling on mud at low tide. Such distinctive boats as Severn Trows sailed coastal trade routes for centuries between small harbours set in tidal creeks and would have done so in rhythms and timings dictated by the estuary's fearsome tides.

In London, the great 19th century sewage engineering works, which saved the city from the worst excesses of pollution, were designed and (still) operate in conjunction with the tidal rhythms of the river Thames. Mains sewers were built parallel to the river to intercept existing sewage outfalls, and these ran east to a point where the sewage would be released when the tide of the river was falling, thus taking the outflow down-stream and away from the city. Thus the whole sewage network has a tidal rhythm. Similarly, the active nuclear power stations on the Severn Estuary discharge low level radioactive polluted water into the Estuary when the tide is ebbing, thus carrying it out into the Atlantic and away from the estuary's cities.

These are just a few of many possible examples of tidal material culture, which further includes intertidal spaces and their margins as key nature conservation sites; locations of heavy industry and civil infrastructure; places of work (ports, commercial fishing, coastal agriculture); and places of recreation (sailing, bird watching, recreational fishing, walking). Many of these practices have distinct temporal rhythms and distinctive material arrangements (sluices, swing bridges, piers, slipways, locks, jetties, steps leading to apparently nowhere, putcheon (tidal fishing traps). Being neither land nor sea, many exposed intertidal lands are peculiarly difficult to access. Often there are very specific local knowledges of how to access the spaces in terms of where, when and how (Robinson, 2007). They can be highly dangerous, and sites of labour exploitation, as the tragic case of the Chinese cockle pickers drowned by a rising tide in Morecambe Bay attests.

Rhythm and affective tidal spaces

Beyond the material cultures of tidal landscapes, I am interested in how the rhythms of tides get folded into affective practices/experiences of places/landscapes. On remote beaches, urban seaways and in vast estuarine landscapes, intertidal spaces and their land margins become highly potent, affective spaces of becoming which are generated and experienced in multiple ways. The impact of these landscapes has been remarked upon by Bill Adams,

> these places seem to have a very particular power. This lies in the sense of freedom that beaches offer, their sheer openness, and the novelty of the life they support … They are places that literally have a life of their own, where rhythms of tides and seasons set an agenda that seems to stand outside human time. (1996: 2-3)

Tidal landscapes are affectively charged places because they stand at the edge of the sea, scramble that profound margin 'betwixt land and sea', create the liminal spaces of intertidal zones, threaten to inundate at high tide, threaten to drain to nothing at low tide, repeatedly empty and fill, and provide a temporality which is highly visible hour to hour. This then is a natural rhythm which is apprehended within *everyday* human time unlike other natural cycles such as that of the seasons, which usually only bring imperceptible change on a daily basis, and yet longer cycles, such as the growth and death of trees.

In what follows, I explore this idea drawing examples from literature and art. As I will show, numerous writers/artists use the turn of the tide and the relating transformation of space as affective settings for a whole range of narrative moments, experiences and feelings. Critical to the affective registers of tidal rhythms and their spaces is the fact that human life is a temporal process, one lived narratively over time which has progression from birth to death, but contains all manner of ebbs and flows and rhythms.

Tide, time and narrative

In literary narratives, high and low water are often used as symbols of beginnings and ends. The turn of the tide is used to locate 'us' and our stories in time – to mark a point where things can start, and things can end. This reflects a need not only for human stories to embed themselves in patterns of space and place, but also in rhythms of time. Just as landmarks and objects can be significant in terms of places (such as the prominent trees in Harrison, 1991) then *moments* and *periods* such as low tide, high tide, rising and falling tide, can become markers of the lived flow of time.

References to the tide occur in the opening and closing of such novels as Dickens's *Our Mutual Friend*, Eliot's *Mill on the Floss*, Du Maurier's *Frenchman's Creek*, Murdoch's *The Sea, The Sea*, Cary's *The Horse's Mouth*, Banville's *The Sea*,

Lynch's *The Highest Tide*, Burnside's *Glister* and Gallico's *The Snow Goose*. The flow and especially the turn of the tide, is a scene and mood setter, a symbol of some narrative about to begin, and then end. This motif is also used in travel/place writing, as in *The Kingdom by the Sea* by Paul Theroux and *Coasting* by Jonathan Raban.

A striking example is Joseph Conrad's seminal 20th century novel *Heart of Darkness*. The margins and time-space rhythms at the edge of land and sea are a key motif in Conrad's form of psychological realism. Two sets of his short stories are entitled *'Twixt Land and Sea* and *Within the Tides*. In *Heart of Darkness* Conrad sets the entire narration of the sombre tale on a boat anchored on the Thames estuary, between the turn of one tide and the next.

> (Opening) The Nellie, a cruising yawl, swung to her anchor without a flutter of the sails, and was at rest. The flood had made, the wind was nearly calm, and being bound down to the river, the only thing to do was to come to and wait for the turn of the tide. (1973: 5)

> (Close) Marlow ceased, and sat apart […] in the pose of a meditating Buddha. Nobody moved for a time. "We have lost the first of the ebb", said the Director, suddenly. I raised my head. The offing was barred by a black bank of cloud, and the tranquil waterway leading to the uttermost ends of the earth flowed sombre under an overcast sky – seemed to lead into the heart of an immense darkness. (1973: 111)

Here, turn of the tide, the stillness, the vast looming space of the estuary and its sky, the proximity to the great city of Empire, London, act as a dramatic pause, even lacunae, in which the weight of the narrative and the horrors and uncertainties it portrays are framed to dramatic effect.

Key moments in human narratives are birth and death of self and others. A number of folklore sources tell how such moments in human and non-human lifecycles were believed to be affected by tidal rhythms. In *The Golden Bough* Fraser points out that,

> dwellers by the sea cannot fail to be impressed by the sight of its ceaseless ebb and flow, and are apt […] to trace a subtle relation, a secret harmony, between its tides and the life of man, animals and plants. (1993: 34)

In the death scene of Mr Barkis in Dickens's *David Copperfield*, Mrs Peggotty claims that:

> People can't die, along the coast … except when the tide's pretty nigh out. They can't be born, unless it's pretty nigh in – not properly born, till flood. He's a going out with the tide. It's ebb at half-arter three, slack water half an hour. If he lives till it turns, he'll hold his own till past the flood, and go out with the next tide. (1996: 413)

Figure 14.2 Beach art, Tenby: drawn upon the fresh sands after the previous tide and to be washed away by the next. (Photograph by the author)

Are such things just fancy? Watson (1973) tells of biological research showing that marine creatures such as shellfish can feel the pull of the moon and are physiologically in tune with it, even when removed from their normal environment. This link between the body and the pull of the moon is exemplified in a human sense by Walt Whitman, who when visiting American Civil War hospitals in Washington, felt that the wards, and the seriously wounded in them became calmer, (and died 'easier') in harmony with the turns of the tides (see Raban, 1992: 474).

Beyond the obvious (anti)climax of death, novelists use tides, particularly the Spring tides as psychogeographical moments of narrative climax. Two recent examples are John Banville's *The Sea*, and David Lynch's *The Highest Tide*. In *The Sea* the narrative as memoir takes an elliptical form where the dramatic, tragic denouement of the story, which takes place at an exceptionally high tide, is anticipated in the opening lines.

> They departed, the gods, on the day of the strange tide. All morning under a milky sky the waters in the bay swelled and swelled, rising to unheard-of heights. (Banville, 2005: 3)

In *The Highest Tide* the narrative opens with a discovery made by a boy while exploring intertidal land at a very low tide. The ebbing and flowing of the tide is then woven into the story which unfolds more optimistically as Lynch uses an exceptionally high tide to mark, and contribute to, the resolution of various strands of the story in the denouement. The use of tides in such works is unsurprising, precisely because it is such a monumental force and lives beside the sea are entangled with it!

There is a very obvious and literal way in which intertidal space feels new after the inundation of the previous high tide. On the sandy seaside beaches of Tenby and so many other resorts, the footprints, the sand graffiti (Figure 14.2), the sandcastles of one day are obliterated by the tide to leave the beach pristine again on the morrow. This cleaning of the marks of past occupation, and the knowledge that, for a while at least, this space was aquatic and deeply non-human, can make intertidal space feel fresh and new, a space of rejuvenation and euphoria, as the mark of the social is repeatedly washed away. This feeling is captured in the novel *Agnes Grey* by Anne Brontë:

> My footsteps were the first to press the firm, unbroken sands; nothing before me had trampled them since last night's flowing tide had obliterated the deepest marks of yesterday, and left it fair even, except where the subsiding water had left behind it the traces of dimpled pools and little running streams … Refreshed, delighted, invigorated, I walked along, forgetting all my cares, feeling as if I had wings on my feet… and experienced a sense of exhilaration to which I had been an entire stranger since the days of early youth. (1996: 145)

Conversely the draining and creeping tide and the unknowableness and openness of often vast intertidal landscapes can be a spatio-material medium for feelings of angst, threat, fear and dread. In George Crabbes' narrative tragic poem *Peter Grimes* the tidal marshes become a place of isolation and desolation.

> Thus by himself compelled to live each day,
> To wait for certain hours the tide's delay;
> At the same times the same dull views to see,
> […]
> The water only, when the tides were high,
> When low, the mud-half covered and half-dry;
> […]
> There anchoring, Peter chose from man to hide,
> There hang his head, and view the lazy tide
> In its hot slimy channel slowly glide (cited in Drabble, 1979: 73).

Similarly, Sylvia Plath found intertidal space raw and visceral – a place for sombre reflection:

> Dawn tide stood dead low. I smelt

Mud stench, shell guts, gulls leavings.
Mussel Hunter at Rock Harbour (Plath, 1981)

To associate so many affective states with intertidal lands might imply that they are merely backdrops which are somehow socially constructed into different kinds of landscape. However I argue that tidal landscapes are stirring landscapes through ways which somehow penetrate the body/mind, not least through rhythm itself. In this way they might stir – or heighten emotional/affective states and thus might be fearful landscapes for some, euphoric landscape for others. The affective processes of tidal rhythms interpenetrate the rhythms of affective becoming in individual lives.

Performative practices of tidal rhythms

Sculptors, artists and photographers also explore intertidal spaces and their margins and examples abound of work that seeks to capture the rhythmic moods of tidal spaces in the representation of a moment – or series of moments. Turner painted estuaryscapes, Coster and MacDonald (1989) produced a wonderful photographic essay, *Man Made Wilderness,* about people using the 'beaches' of the Tees Estuary at various states of the tide, alongside the heavy industrial sprawl of the area. Cornish artist Wilhelmina Barns-Graham created a series of delicate etchings of changing wave patterns of the sea – *Water Rhythm; Linear Movement (Incoming Tide Series).*

Here I am more interested in the work of artists who work with tides in a more performative, material sense incorporate the space-time rhythms of the ebb and flow of tides into their artwork. Richard Long has produced a performative artwork which involved walking along the bank of the river Avon (UK), following the front of a rising tide, translating the rhythm and velocity of the tide into his own body. Simon Starling produced a hybrid performance/gallery work of a large piece of rock floated up the Avon on a wooden raft at high tide, this then being hoisted out of water in Bristol and placed in a gallery space. (http://www.spikeisland.org.uk/?q=exhibitions/long-starling). This echoes how the tide has been used for trade and transport, connecting Bristol to global sea trade routes and local coastal trading networks. It should not be forgotten that the slave ships which made Bristol a centre of the UK slave trade floated up the Avon on high tides, bearing their cargo of tightly packed, chained living souls. *Drift* by the Teri Rueb (http://www.terirueb.net/drift/index.html) is an artwork which employs locative ICT to allow and encourage people to 'wander among layered currents of sand, sea and interactive sounds that drift with the tides, and with the shifting of satellites as rise and set, introducing another kind of drift'.

Paul Nash's work *Wooden Boulder* is an ecological/elemental art work that incorporates natural rhythmic processes over time. An oak boulder, three feet in diameter, was created in the late 1970s. Partly by accident it got stuck in a

mountain stream in Wales. From then on, at times when the stream was in spate, the boulder was occasionally moved down stream. The artist began to chart this progress. Eventually the boulder found it way into the tidal reaches of the estuary of the River Dwyryd. According to Deakin (2007: 163) the boulder began to,

> wander the waters of the estuary, mysteriously disappearing up creeks, endlessly doubling back on itself in the ebb and flow, moving with each new tide, responding to the moon […]. Nash went searching for it in a boat and lost it all together for a while […]. During those chilly winter days of hide-and-seek he studied the tides and pored over charts, mapping the uncertain voyage. Then one January day the great oak apple reappeared on a saltmarsh and seemed almost settled for a moment until that equinox tide of 19 March 2003 floated it free. Nash watched from the boat […] as the heavy sphere floated, most of its body submerged 'like a seal'. […] It was just a far off dot when he last saw it on 30th of March. Somebody sighted *Wooden Boulder* floating close to the estuary's mouth a few days later, but it vanished in April 2003.

Perhaps the most significant 'tidal sculpture' in the UK is Anthony Gormley's *Another Place.* The piece consists of 100 life-size identical cast iron figures spaced along a two mile section of Crosby Beach in North West England. The figures all are orientated the same way, apparently looking out towards the sea horizon. They are placed at differing heights on the beach and at high tide are nearly all submerged, at low tide all exposed. In between, some figures are partially submerged, others at the water's edge and yet others standing clear of the water. The ceaseless, varying cycle of the tide becomes a critical component of the work. In a sense this work cannot be fully seen, as each tide, through day and night, and varying in heights from neap to spring, will bring a different extent and speed of inundation of the figures. The figures will also change colour each time they dry after submersion (according to a cyclical rhythm), and change over time (following a linear rhythm) as the sea, and sea creatures such as barnacles, affect their fabric.

Conclusion

I have shown in this chapter that the time-space rhythms of tides around the UK shore are bound into ecologies of place in many ways and that this produces affective relationships with place and landscape which inevitably dance to this fundamental, cyclical, but complex rhythm. How the rhythms of the tides interlink with other rhythmic processes of society has only been touched upon. Tides and their immediate effects can be a particularly powerful rhythm in coastal ecologies, partly because of their sheer scale and physical power.

However, tidal culture can come under threat. In Cardiff, the Taff estuary, with its large tides and mud banks, and wildlife designations, has been permanently flooded in order to create a cityscape of high real estate value. The old estuary

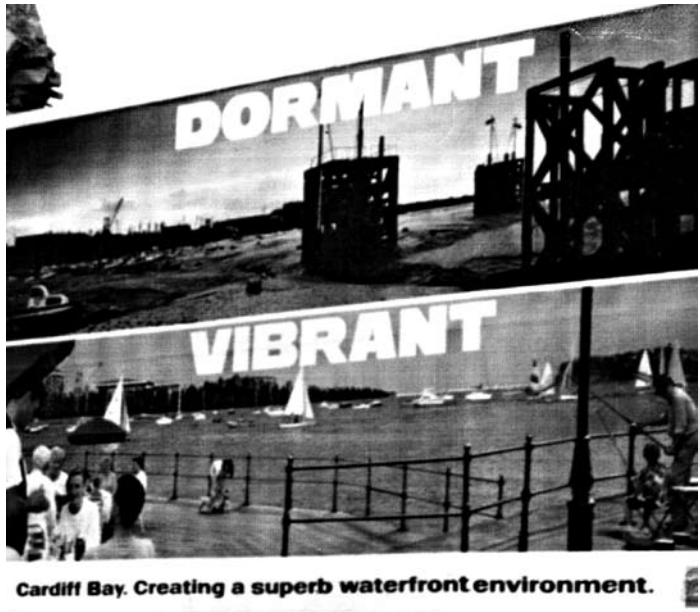

Figure 14.3 The denial and obliteration of tidal culture. The Taff Barrage created permanent high water in the Taff Estuary which was renamed Cardiff Bay (photograph by author)

has been represented as 'dormant' in contrast to 'vibrant' new dockland housing, but such an assessment serves only particular interests (Figure 14.3). Moreover, the NCC (1991) show how tidal areas of the Humber estuary (and many other estuaries) have been reduced through a series of land reclamations. The Seven Estuary itself now faces the threat of a barrage for the purposes of tidal power generation – trapping high water up stream of the barrage and then releasing it through turbines. The tidal patterns and ranges will be severely affected, producing a landscape of necrosis (dead flesh), for in the tides is the life of this landscape. Indeed the prospect of sea level rise due to climate change poses a threat to many inter-tidal areas around the UK and beyond.

The moon, when first formed, was much closer to the Earth and tidal ranges and processes would have been much greater and more violent than they are now. This would have caused extreme levels of flooding, erosion and mixing of materials at the margins of land and sea. This possibly played a key part in generating suitable conditions for the creation of life on earth. We are in some respects hybrid in essence. The outcome of rhythmic mixings and the rhythms of the tides may speak to us in very deep ways.

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