Knowledge of Aboriginal and Torres Strait Islander histories and cultures presents opportunities for geography students to learn about holistic belief systems that are spiritually and intellectually connected to the land, sea, sky and waterways. One means that geographers use to examine these connections is through the notion of relational space. The space occupied by Gweagal inhabitants of Kamay/Botany Bay, circa 1770, is presented in relational terms. By way of contrast, absolute space is emphasised in the context of Cook’s expedition two hundred and fifty years ago. Of course, both absolute and relational space are co-present in both contexts.

A relational view of space sees space as a product of cultural, social, political and economic relations; space that is given meaning by myth, language and ritual (Hubbard et al., 2002, p. 14). Here, space is not fixed or innate but rather created and re-created through the actions and meanings of people (Gieseking et al., 2014, p. xxix) and spatial meaning is built up through people’s memories and attachments to space. Such a view of space accords with the knowledge and understanding of the interconnected elements of Country/Place, Culture and People expressed in the Aboriginal and Torres Strait Islander Histories and Cultures cross-curriculum priority (ACARA, n.d. Aboriginal and Torres Strait Islander Histories and Cultures).

The absolute space of the Gweagal clan is centred on the Kurnell Peninsula and the clan is a subsection of the Dharawal language group (Attenbrow, 2010, pp. 22–3; Bursill & Kurranulla Aboriginal Corporation, 2007, p. 9). Dharawal country extends from the southern shores of Botany Bay and the Georges River, west to Appin then down to Goulburn and to Wreck Bay near Nowra (Bursill & Kurranulla Aboriginal Corporation, 2007, p. 9).

The relational space of the Gweagal is not only constructed by social relations and material social practices but it is also given distinctive meaning through myth, language and ritual. ‘All the elements of the natural world, the earth, the sea and the sky are aspects of the unique relationship that all Aboriginal people have with the world. These parts all make up the idea of country’ (Bursill & Kurranulla Aboriginal Corporation, 2007, p. 8). Country/Place has a complex of meanings for Indigenous people: their occupied space or homeland, the past, the ‘here-and-now and horizon’ (Howitt & Suchet-Pearson, 2003, p. 561). Moreover, ‘each country has its sacred origins, its sacred and dangerous places, its sources of life and its sites of death. Each has its own people, its own Law, its own way of life’ (Rose & Australian Heritage Commission 1996, p. 9). Country/Place is fundamental to the ‘everywhen’ of the Dreaming (Stanner, 1969, p. 24) ‘a sacred, heroic time of the indefinitely remote past’ (p. 24), where everything comes from, and will always come from, continuing relationships between people, their living space and other species and entities (Howitt & Suchet-Pearson, 2003, p. 561). Perhaps, in the context of relational space, the French phrase espaces de rêve (Głowczewski, 2016; Nicholls, 2014b, para. 11) is more apposite: dream spaces or spaces of dreams. Whichever term is used, and Gweagal use the term Garuwanga (Andrews et al., n.d.), it refers to a religion grounded in country incorporating ‘land-based narratives, social processes including kinship regulations, morality and ethics’ (Nicholls, 2014a, para. 6).

Gweagal social relations are somewhat typical of other nations in central and southern coastal New South Wales, from Awakabal, in the north to the Yuin in the south, but there are some distinctive relationships particular to the Dharawal language group. Gweagal clan membership is based on patrilineal descent (Attenbrow, 2010, p. 57). A Gweagal clan member attains social identity through the country of their father (Bursill & Kurranulla Aboriginal Corporation, 2007, p. 9) and through ancestral beings who created the natural and social world (Attenbrow, 2010, p. 57). The Dharawal nation has a strong association with Biame, the sky spirit and creative being, (Bursill & Kurranulla Aboriginal Corporation, 2007, p. 10). There is a possible rock engraving of Biame at Heathcote (p. 10) and there is a
serpent overlaid with a kangaroo engraved at Waterfall (p. 10). Belief in the Rainbow Serpent is common throughout Southeast Australia, a hybrid creature with the head of an animal and body of a snake: *Yulungur* (Bursill & Kurranulla Aboriginal Corporation, 2007, p. 10), a *Creator Serpent* being, that shaped the biophysical landscape as it slithered across the countryside, also ensuring that clans were in their proper place in the landscape (Attenbrow, 2010, p. 131).

In the evening sky, the rising of the Pleiades low above the horizon in May marks the onset of the cool season, and forms part of Dharawal *Garuwanga*. This is a time just after the Lilly Pilly fruit ripens and the time for gathering nectar for ceremony (Bodkin, n.d., p. 2). There are many Indigenous stories across the continent associated with this star cluster referred to worldwide as the Seven Sisters (Norris, 2008, p.22). The star cluster lies just below Orion and as the night sky unfolds the Seven Sisters appear to be pursued by Orion. In Dharawal stories, the Pleiades was where it was possible the *Djuvali* sisters came from to meet up with the Big Brothers (Bursill & Kurranulla Aboriginal Corporation, 2007, p.10). Bodkin and Bodkin-Andrews (n.d., pp. 2–3) explained that stories should be approached on three levels: the secret knowledge that is only discussed with someone at the same level or higher than the story teller; as a means to discuss with the listeners the Law, or laws, to be obeyed; finally, the lessons to be learned introducing listeners to the means to live ‘in harmony with each other, and the land and its resources’ (p. 3)

The whale is an important Dharawal totem with seven depictions in Royal National Park (Bursill & Kurranulla Aboriginal Corporation, 2007, p. 11). An important Dharawal story is recounted about the flowering of the Gymea Lily indicating the times of year when whales start to migrate south to return to their Antarctic feeding grounds (Bodkin, 2018). Further, Bursill and Jacobs (2012, chap. 25, para. 3) recount a story about Warumbal, in Royal National Park, where there are life-size engravings of Orcas shown hunting seals, and where *Luma Luma* the whale spirit came ashore to direct people in their singing of the Law, and assists in payback ceremonies, marriages and other cultural events (chap. 26, para. 1).

Warumbul was a traditional gathering place for large groups of Aboriginal people who lived around the bay. Sometimes it would be reported that the Gweagal from Kurnell would come down to the bay to join in with *Noron Geeragal* (past Woronora) and *Dhargarigal* (Bundeena) for feasts of dolphin or whale brought into the bay by the Killer Whales (Totem) that hunted around the entrance to the bay (Bursill & Jacobs, 2012, chap. 25, para. 6).

Gweagal also accumulated totems, frequently animals and plants, associated with other sorts of relationships such as conception or birthplace (Attenbrow, 2010, p. 58). Two totemic names were conferred to boys at initiation ceremonies performed in neighbouring Yuin country. One was inherited from the father and another was given by the *gommera* (Attenbrow, 2010, p. 129), or *carradhy* (Bursill & Kurranulla Aboriginal Corporation, 2007, p. 44) in Dharawal language, powerful men who led ceremonies and carried out healing procedures (Attenbrow, 2010, p. 60). In Dharawal culture, children were assigned their adult name at initiation ceremonies. In southeast Australia another totem was assigned along gender lines involving bats and emu wrens for men and treecreepers/nightjars for women (p. 129). Indeed, there was a Dharawal belief that encouraged children not to throw sticks or stones at bats (p. 129).

A classification system with moieties and sections, which affects who one may marry and the conduct of initiation ceremonies, did not exist for Gweagal, nor for other clans in the Sydney, central coast and south coast regions (Attenbrow, 2010, p. 58). However, a Gweagal skin name, similar to a surname, is the key to relationships. It conveys information about how generations are linked and how they should interact, whom they may marry and whom to avoid, avert their eyes from and not talk with. (Attenbrow, 2010, p. 58). Skin name and totemic affiliations were the basis on which marriages were arranged with wives coming from a separate clan group, but marriage partners could reside with the woman’s family for some parts of their life cycle (Attenbrow, 2010, p. 58).

Gweagal material culture allowed the clan to travel outside their country in search of resources whereas their identification with country was very much aligned with *Garuwanga*. Clans could, with permission, cross boundaries, often defined by a river or a marked tree, to gather food and take part in social gatherings or spiritual or religious ceremonies (Bursill & Kurranulla Aboriginal Corporation, 2007 p. 30). These, and other ceremonies, drew people from many clans and from different nations. In 1824, the French explorer d’Urville witnessed a ritual combat ceremony on high ground somewhere between Sydney and Botany Bay, about three kilometres inland from the coastline. Aboriginal people came as far afield as Liverpool, Emu Plains, Wollongong, and Newcastle. ‘All were distinguished by the design of their body painting’ (Attenbrow, 2010, pp. 137–138).
Gweagal were said to be the guardians of the sacred white clay pits on their country and they adopted the geometric designs in their body paintings typical of the Dharawal nation (Bursill & Kurranulla Aboriginal Corporation, 2007, p. 20). Their material culture depended on the aquatic resources of Botany Bay, the saltwater bays and estuaries of Port Hacking, and the freshwater resources of the upper Hacking River, Heathcote Creek and the Woronora River. Although Gweagal were a saltwater people they also relied on a great variety of land-based plant and animal resources. There was some seasonal movement involving access to food resources, with more reliance on terrestrial resources in winter (Attenbrow, 2010, p. 81), though whale beaching also occurred in winter months. However, daily movements in search of resources was more common rather than large-scale movements. In rough weather, shell-fishing took precedence over hook and line fishing from a nuvi, or bark canoe; when mutton birds migrated to the coast between September and January people gravitated towards the coastline (p. 80) to resume their daily peregrinations.

Apart from ceremonial and other ritual occasions, Gweagal, and other coastal clans, did not travel far from their own country, or the countries where they were linked by marriage or kinship relations (p 79). Trading relationships were established through intermediaries so that materials could travel along established trading pathways. Although trading networks for flaked stone tools tended to be quite extensive across the Sydney region, Gweagal tended to trade for these raw materials across Dharawal country rather than with the inland nations of the Cumberland Plain (p. 124). Another line of distinction is apparent in the configuration of kangaroo rock engravings where there are slightly different designs to the north and south of Botany Bay. Again, these largely conform with the language boundaries between the Dharawal and coastal Darug language group (p. 149).

Rather than view material culture as being separate from social and spiritual connections, relational space is here conjointly assembled. Material culture should be viewed as a fusion of natural resources, the atmosphere and land, stories and songs, kinship and cosmology (Głowczewski, 2016, p. 60). In short, looking after Country/Place is paramount. It provided the strongest and deepest purposes in life (Rose and Australian Heritage Commission, 1996, p. 10) where, for the Gweagal, every animal, tree, stream, and rock had a dreaming spirit; where, the spiritual and the corporeal world are wedded (Pascoe, 2014, p.114).

**Cook’s preoccupation with absolute space**

Reading James Cook’s journals there is an apparent preoccupation with absolute space. Naming Point Hicks on the 19 April 1770 he recorded,

> The Southermost point of land we had in sight, which bore from us West 1/4 South, I judged to lay in the latitude of 38 degrees 0 minutes South and in the longitude of 211 degrees 7 minutes West from the Meridian of Greenwich (Cook, n.d., Wharton, 1893, & Libraries Board of South Australia, 1968 & 2015, Chapter 8, para. 1).

Absolute space is based on a system of organisation that saw a universal and mathematically describable grid where objects could be precisely located, an abstract container where things could be measured and modelled by geographers with inclinations towards spatial science (Cresswell, 2013, p. 220). Cook’s fixation with absolute space was based on a mariner’s respect for the sea. The North and Baltic Seas, where he learned his trade during his apprenticeship years, was a dangerous place. The Pacific Ocean was even more daunting. The North Sea had a treacherous, poorly illuminated coast, devoid of buoys, with the offshore full of sunken rocks and shoals. Stormy skies prevailed as did the all too common ‘thick weather from England to the Baltic’ (Beaglehole, 1974, p. 8). As far as the Pacific is concerned, it has been suggested that, over the course of the 18th century, more than 40 per cent of the European mariners that sailed into these waters never returned home (Dening, 1992, p. 106, quoted in Phillips, 2016, p. 36).

Cook learned the art of pilotage, or ‘the knowledge by sight of capes, rivers and ports’ (Livingstone, 1992, p. 40) in the North Sea. Volunteering for the navy in 1755 his appreciation of the nuances of absolute space deepened. Appointed master in 1757, Cook was responsible for the ship’s navigation as well as responsibility for pilotage, taking soundings and bearings and correcting or adding to charts. He was also responsible for the ship’s log (Beaglehole, 1974, p. 26). During the Seven Years’ War, his ship was ordered to Canada where he learned to use a plane table and how to survey and chart coastlines. Following French defeat in Canada, he was given responsibility for charting and surveying the rivers and coastlines of Newfoundland, described as ‘an infinite mass of indentations, bays, harbours, arms of the sea, which give it six thousand miles of coastline’ (Beaglehole, 1974, p. 68). Using the theodolite on land and a modified plane table
and new telescopic octant (an earlier variant of the sextant) at sea they laid the foundation for his considerable skill in surveying of the New South Wales shoreline in 1770. The *Endeavour*’s course was carefully noted and plotted as it sailed along the eastern coast of New Holland ‘the outstanding coastal features equally carefully plotted from cross-bearings taken from the ship; the outline would be filled in by careful sketching’ (Beaglehole, 1974, p. 69).

Cook also developed skills in astronomy. Using a brass telescopic quadrant, he observed the 1766 eclipse of the sun from an island off the Newfoundland coast. The longitude of this island was accurately determined by comparison with the same eclipse observed in Oxford. When a paper concerning these achievements was read at the Royal Society in London, Cook was described as ‘a good mathematician, and very expert at his business’ (Frame & Walker, 2018, p. 17).

As Thomas (2018, p. 8) poetically observes, ‘This surveyor had spent the better part of his thirties engaged in exercises in measurement and applied geometry, working magic on rugged and intricate coastlines, reducing shoreline as torn as an awful wound to points and lines on paper’.

Cook was much more than a painstakingly accurate mathematical geographer. He was also an intuitive and perceptive mariner open to the counsel of others. Tupai’a, described as a ‘high priest, artist, scholar, warrior, linguist and navigator’ (Salmond, 2012, p. 57) joined the *Endeavour* expedition in Tahiti and piloted the vessel through the Society Islands. During the voyage, Tupai’a told Cook and Molyneux, the ship’s master, of some 130 islands, locating seventy of these on a chart. The details Tupai’a imparted were astonishing, distinguishing between high volcanic islands and low necklaces of coral islets, whether they were inhabited or not, and by whom, whether fringed by reefs or navigable, and how many days they were inhabited or not, and by whom, whether fringed by reefs or navigable, and how many days away from Tahiti (Thompson, 2019, p. 83). His chart was something of a topological one, with the islands on the map radially arranged around Tahiti with the arithmetic distances among the islands not accurately portrayed. Pacific navigators, such as Tupai’a, saw the relational space of the ocean as the product of complex interactions with the stars to determine latitude, and, the establishment of backsight from their destination to successfully align a selected course.

Robson (2012, para. 17) implicitly compares Cook’s navigational prowess with Tupai’a’s.

Whereas other European explorers managed to cross the Pacific hardly making contact with land, Cook bounced from island to island like a ball in a pinball machine. More than other navigators he blended scientific navigation with intuitive methods, similar to those used by the Pacific peoples he was sailing amongst. Cook found his way to new islands by recognising the tell-tale signs of the proximity of land such as cloud formations, land birds flying around the ship, and flotsam on the water. His work was significant not only for the islands he located but for the large swathes of open water that he determined from ocean swells and currents.

Nevertheless, it must be emphasised that Cook was very precise about absolute location. To do otherwise would be catastrophic for those to follow in his footsteps. On January 25, 1769, in the waters off Tierra del Fuego Cook and Green, the astronomer, took pains to correct former charts that were found to be incorrect, ‘not only in laying down the land but in the latitude and longitude of the places they contain’ (Grenfell Price, 1971, p. 23). They both determined accurate location by several observations of latitude and longitude. This marked a distinct break with the experience of past European Pacific sailors. As White (1970, p. 52) puts it, ‘The uncertainty of the past is gone, and Cook proceeds with the confidence of a skilled navigator always aware of his ship’s position and taking many observations for the benefit of others’. And Richardson observes, in more florid prose, that the ability to determine longitude reliably marks a significant shift in how Europeans could know the world.

Throughout his voyages, Cook demonstrates first to himself and his crew and then to his readers the existence or non-existence of places; he locates every place in a single, fixed grid of coordinates; he moves away from the continental coastlines into the fragmented plane of the Pacific Ocean; and he travels along watery tracks that prior European navigators could only dream of (Richardson, 2005, p. 6).

Cook’s voyages offer answers to ‘the problems of our earth’s shape, its size, its character, its products, its inhabitants’ (Conrad, 1924, p. 1). In effect, absolute ‘space comes into meaningful existence through measuring, writing, drawing, and printing’ (Richardson, 2005, p. 10).

**Contested space**

The contested space of the shores of Botany Bay was amplified by two distinctly different worldviews, different ways of being, knowing, thinking and doing (ACARA, n.d. Aboriginal and Torres Strait Islander Histories and Cultures). For Gweagal, it was Country/Place and its spatial
meaning was built up through people’s memories and deep and abiding attachments to this part of the Dharawal nation. For the voyagers on the Endeavour, it was essentially a place to refurbish supplies, to fill water casks and to fish the waters with seine nets; it was a stopping place to somewhere else (Dening, 1980, p. 23, cited in Nugent, 2005, p. 33). It was an inscribed point on the vast page of the Endeavour’s voyage. But, of course, it was more than this.

Karskens maintained that Cook botched his first encounter with Gweagal, on April 28, 1770, when an initial show of strength from two armed warriors ‘was probably a ritual prelude to meetings and exchanges of names and gifts’ (2010, p. 35). This worldview is supported by Nugent (2005) drawing from the work of Hallam (1983) whereby meetings between different Aboriginal communities were and are, ‘highly structured affairs, with elements of ceremonial preparedness for conflict, formal peacemaking, reciprocal exchange of gifts, and sometimes actual conflict and resolution of conflict’ (Hallam, 1983, p. 134). Williams (n.d., para. 6) argues that ‘the two Gweagal men were assiduously carrying out their spiritual duty to Country by protecting Country from the presence of persons not authorised to be there’. However, Thomas (2018, p. xvi) points out the morality of cross-cultural contact was much debated when the voyage journals were first printed and continued in the many decades after Cook’s death. Molony (2012, p. xvi) points out the morality of cross-cultural contact was much debated when the voyage journals were first printed and continued in the many decades after Cook’s death.

Whatever the case, it would be presumptive to attribute the differences in worldview solely to different conceptions of space/Country between those of the voyagers and Gweagal. Nevertheless, a deeper and more all-encompassing conception of space may assist in our understanding? Absolute space lies at the bedrock of our intellectual enquiry through an understanding of relational space. In so doing, it may better enable all students to reconcile with respect and recognise the world’s oldest continuous living culture.

References


