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Tourism, cetaceans and sustainable development

Moving beyond simple binaries and intuitive assumptions

James Higham, Lars Bejder and Rob Williams

The majestic aspects of whales – their size; the apparent intelligence of some whales; the songs of others – led to rediscovery of the old iconography – whales as magnificent in their own right

(Corkeron, 2006: 161)

Introduction

Of the few iconic experiences available in the natural world, little compares to killer whales (*Orcinus orca*) outwitting and overpowering their prey, a cooperative group of feeding humpback whales (*Megaptera novaeangliae*), the flukes of a diving sperm whale (*Physeter macrocephalus*) or the spectacular aerial displays of socializing bottlenose dolphins (*Tursiops* sp.). These stunning megafauna experiences explain the widespread rejection of whale hunting and the phenomenal growth of whale-watching in recent decades (Hoyt, 2001; O'Connor *et al.*, 2009; Cisneros-Montemayor *et al.*, 2010). Under the circumstances, it is remarkable that these animals, and indeed all species of cetaceans (whales, dolphins and porpoises), vary so widely in the legal and management protection they receive in jurisdictions around the world.

Cetaceans trigger sentiments of awe, inspiration and excitement. 'Few creatures carry more emotion . . . than whales; and few issues arouse as much passion as whaling' (Hammond, 2006: 54). These emotions and passions give rise to deeply entrenched and, at times, bitterly conflicting views on whales in terms of utility, identity, nationhood and sovereignty. The sinking of the *Ady Gil*, flagship of the Sea Shepherd Conservation Society, while protesting against the Japanese whaling fleet in the Southern Ocean whale sanctuary[1] in 2010 highlights these entrenched views. Few wildlife species are contested as intensely as whales.

It is not very long since whales were the focus of industrial-scale exploitation (Hammond, 2006), a practice that brought many populations of great whales dangerously close to extinction. Indeed, the closure of whale-processing factories and the discontinuation of commercial whaling has been due almost entirely to over-efficiency, resulting in 'economic extinction' (the depletion of stocks to the point of commercial non-viability; Hammond, 2006). It was this status of 'near obliteration' that gave momentum to the 'Save the Whales' global environmental movement in the 1970s; since then, whales have become the 'standard bearers of marine environmental issues' (Corkeron, 2006: 161). The shift from whale-hunting to whale-watching

[1] The Southern Ocean Whale Sanctuary was established by the IWC in 1994 to ban commercial whaling in the oceans surrounding Antarctica. Representing an area of approximately 50 million km^2, it generally exists to the south of latitude 40°S (in the Indian Ocean it adjoins the Indian Ocean Whale Sanctuary at 55°S; adjacent to the South American continent it exists from 60°S).

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has not been universal. While the International Whaling Commission (IWC) adopted the moratorium on commercial whaling in 1982 (International Fund for Animal Welfare, 1995), and in 1993 'formally recognised whale-watching as a legitimate tourism industry which provided for the sustainable use of these animals' (Orams, 2000: 561), whale-hunting practices continue (see Chapter 6).

There are inherent tensions between different world views associated with whales. The efforts of environmental non-government organizations (NGOs) such as the International Fund for Animal Welfare (IFAW), Greenpeace and the World Wildlife Fund (WWF) have for many years steadfastly promoted whale-watching as an economically viable alternative to whaling. In 1987, for example, dedicated efforts in the Azores targeted attitudes towards the practice of sperm whale hunting, which continued in the Atlantic at that time. There followed a transition from a whale-hunting to a whale-watching economy in the Azores (Neves, 2010). The following year, IFAW documented and disseminated the feasibility of whale-watching in Iceland to establish an economically viable counter to the proposed resumption of whaling (O'Connor *et al.*, 2009). Initial success and international support for whale-watching in Iceland has, however, been complicated by the resumption of whaling (Higham & Lusseau, 2008; see Chapters 7 and 8). Some find the processing of whale parts sufficient to justify a tourist boycott of Iceland (Williams, 2006). Others continue to support the development of a lucrative Icelandic whale-watching industry in the hope that this growing economic pressure will eventually serve as a countervailing force to the whaling industry.

The transition from whale-hunting to whale-watching seems logical when considered in terms of sustainable utility and marine conservation. However, the wheels of change have turned slowly. Three decades passed between the first whale-watching trips in California, USA in 1952 and the IWC whaling moratorium in 1982. Since that time, the public appetite for viewing cetaceans in the wild has become insatiable, growing itself to industrial scale. The transformation that was witnessed in the Azores has become a global trend (Neves, 2010). Maritime communities have realized the considerable socio-economic benefits available through the development of whale-watching (Garrod & Fennell, 2004). Indeed, commercial whale-watching has become the economic lifeblood of many peripheral coastal regions. The case of Kaikoura (New Zealand), for example, is one of transformation from a depressed and decaying rural community to a thriving regional tourism economy built principally upon whale-watching. The Kaikoura story is also one of cultural renaissance (see Chapter 22). Indeed, whale-watching has become the economic mainstay of many coastal communities in both the developed (Hoyt, 2001; Hoyt & Hvenegaard, 2002) and developing worlds (Mustika *et al.*, 2012a).

The socioeconomic benefits of whale-watching have sustained remarkable growth; 12% per annum growth in global whale-watch numbers throughout the 1990s coupled with increases in tourist expenditure of 18.6% per annum (Garrod & Fennell, 2004). From approximately 2 million whale-watchers in 1990, the industry grew to 9 million participants in 1999 (Hoyt, 2001). IFAW estimates that whale-watching is an industry that now exceeds $US 2.1 billion per annum, 13 million whale-watchers, generating 13,000 jobs (O'Connor *et al.*, 2009). Such figures point to a rapidly changing socio-political and economic context, both globally and regionally, as communities and nations recognize and seek to pursue the economic benefits of whale-watching. With appropriate business models (Neves, 2010), these benefits are generally more equitably available at the community level than extractive practices (Herrera & Hoagland 2006; Parsons & Draheim, 2009).

Growth in whale-watching has matured in the developed world, but shows few signs of slowing in developing world contexts (Lusseau *et al.*, 2013). Indeed, Cisneros-Montemayor *et al.* (2010) indicate that an additional $US 413 million and 5700 jobs could exist in the global whale-watching system, with much of this capacity available to developing world nations (Mustika *et al.*, 2012b). This existing and latent capacity equates to a whale-watch

industry of over $US 2.5 billion, supporting 19,000 jobs globally (Cisneros-Montemayor *et al.*, 2010: 1275). However, Kuo *et al.* (2012) demonstrate that achieving the latent capacity of the global whale-watch industry requires the discontinuation of commercial whale-hunting practices, observing that whaling reduces the capacity of the global whale-watch system, most particularly in those countries that continue to engage in whale-hunting (Higham & Lusseau, 2007). This is a line of debate that has been ignored in countries such as Iceland and Norway which seek to prove that hunting and watching whales are practices that can coexist.

This edited volume addresses the phenomenon of whale-watching, which we define as commercial tourist ventures including opportunities for people to observe, swim with, touch or feed wild cetaceans from shore, sea or air. The term whale-watching is used 'to denote a wide range of activities involving human interaction with various species of whales, dolphins, and porpoises, collectively known as cetaceans' (Garrod & Fennell, 2004: 335). From humble origins whale-watching has grown largely without restraint to industrial scale – bringing with it a host of planning and management challenges. Over 25 years of accumulated science demonstrates that human interactions with cetaceans can affect animal behaviour (Baker & Herman, 1989). However, without acceptance that altered behaviours could have broader biological and ecological consequences (Corkeron, 2006; Neves, 2010) whale-watching has continued to grow in the almost complete absence of regulatory and management frameworks (Higham *et al.*, 2009). Given the economic importance of whale-watching, it is remarkable that such disregard for sustainable management has so widely prevailed.

The disservice of binary debates and assumptions

There is little doubt that the search for sustainability has been hindered by the simplification of complex issues (see Neves, 2010). Despite the efforts of the scientific community, a range of binary debates have dominated whale-watching discourses. These binaries, we argue, have sustained a number of unhelpful assumptions that need to be more critically interrogated. In this chapter we outline five binaries, and question the misplaced assumptions that they may have perpetuated.

1. Whale-hunting is bad so whale-watching must be good

The groundswell of abhorrence towards the practice of whale-hunting perhaps dates to 1922 when, according to Corkeron (2006: 161), 'Sir Sidney Harmer of the British Museum described Norwegian whaling in British sub-Antarctic waters as "*insensate slaughter arousing feelings of horror and disgust*"' (emphases added). Since then, there has been an upwelling of general opinion that treating whales as extractive resources has 'cheapened humanity' (Corkeron, 2006), culminating in the 1970s in one of the first truly global socio-environmental movements (McCormick, 1989). Subsequently, whale-watching has come to be viewed as an extension of the great victories of the environmental movement of the later twentieth century, such as the moratorium on commercial whaling (1982) and the creation of the Southern Ocean Whale Sanctuary (1994). Experiencing whales in the wild, according to some, apparently equates to conservation of the marine environment (Neves, 2010).

However widespread these sentiments may be, they are not universal. Commercial whaling practices (based in some cases on claims of science and sustainable harvest) continue despite the uncertainty of current whale population estimates and the impossibility of achieving a high degree of scientific certainty in those estimates, in large part because the quota-setting algorithms are designed to take that uncertainty into account (Hammond, 2006). It could be argued that the emotional stakes of whale-hunting have led to management frameworks to account for uncertainty that have improved management procedures for fish stocks

(Hammond, 2006). Japan, Norway and Iceland have continued 'scientific' whale-hunting claiming the need for research to understand how whale populations 'interact' with 'other components of marine ecosystems, notably commercially important fish species' (Corkeron, 2006: 162). The sale of whale meat for commercial markets is a by-product of this science (in much the same way that some countries pay for fishery stock assessments by chartering fishing boats to do the surveys, and using fish catches to meet the costs of data collection). Coastal communities in parts of Scandinavia strongly resist the external imposition of views on whale-hunting, claiming autonomy and identity arising from the tradition of seasonal whale-hunting practices (Ris, 1993; Smested, 1997). Indigenous whale-hunting in the Arctic regions of North America arise as representations of cultural identity, self-governance and indigenous rights (Hinch, 1998).

The diversity of whale-hunting practices is mirrored by whale-watching. If the act of whale-hunting in any form is considered barbaric, it is intuitively appealing to consider whale-watching as (comparatively) benign. This may have been an acceptable position in the 1970s when whale-watching emerged as a viable alternative to extractive whale industries. It may also have been excusable in the 1980s when phenomenal growth in whale-watching, and other forms of 'ecotourism development' so conclusively advocated by the United Nations World Tourism Organisation (UNWTO) (Hall, 1994), profited from the 'green tourism' discourses of the day. However, Knight (2009: 180) observes that we now live 'in an age when our visual appetite for wildlife has never been greater'. Wildlife viewing, once the domain of dedicated enthusiasts, or 'specialists' (Duffus & Dearden, 1990), has moved into the mainstream of commercial tourism (Knight, 2009). With this has come a proliferation and diversification of opportunities to encounter wildlife (Higham *et al.*, 2008). Under the circumstances, uncritical treatment of 'whale-watching as good' does a disservice to the pursuit of sustainability.

This binary assumption conceals an inescapable tension. Knight (2009: 167) identifies a fundamental contradiction in wildlife viewing in that 'wild animals are generally human-averse; they avoid humans and respond to human encounters by fleeing and retreating to cover'. This tension has perhaps been overlooked on socioeconomic grounds, in much the same way that decisions are made about fishery by-catch or ship strikes (see Chapter 2). The regional politics of whale-watching has been driven by the economic development agenda, to the extent that efforts to adequately protect whales have at best been neglected and, at worst, resisted. Meanwhile, at the global level, the international politcs of whale-watching has been deliberately and consistently located in relation to the practices of whale-hunting (Neves, 2010). While the case for continued whale-hunting has been perpetuated on 'scientific' and socio-cultural grounds, the case for whale-watching has been stated in unitary terms, as an alternative to all forms of whale-hunting. Neves (2010: 719) critiques the 'monolithic presentation of whale-watching as the antithesis of whale hunting', arguing that the 'homogenized portrayal of whale-watching in mainstream environmental discourse as diametrically opposite to whale hunting . . . obscures the existence of bad whale-watching conduct'.

2. Industrial mass tourism is high in impact, so ecotourism must be relatively low impact

The view that ecotourism is a 'green' economic activity that is synonymous with wildlife conservation is longstanding. Since the 1960s, the term 'ecotourism' has been used to describe a benign form of tourism that offers the potential of mutual interests in economic development and nature conservation (Hetzer, 1965). By the 1980s, following the rise of global environmental issues in the 1970s, the term 'ecotourism' had become firmly established. In 1987, Ceballos-Lascurain defined ecotourism as '*that tourism that involves travelling to relatively undisturbed or uncontaminated natural areas*

with the specific object of studying, admiring and enjoying the scenery and its wild plants and animals' (Ceballos-Lascurain 1991: 31, emphases added). Taken on face value, ecotourism is a passive and appealing form of tourism (Dowling & Sharpe, 1996).

A plethora of terminology can be applied to the whale-watch phenomenon. Wildlife tourism, including tourism that focuses on free-ranging cetaceans, is generally perceived to be inherently beneficial, and so tends to be considered 'ecotourism'. Cetacean-focused tourism and ecotourism are both subsets of nature-based tourism, which encompasses a variety of ways for people to enjoy nature (Bejder & Samuels, 2003). Ecotourism by definition requires *contributions to the conservation of species or habitats* (Higham, 2007). It is not enough merely to mitigate harm; ecotourism should provide a net benefit to conservation. Strictly defined, ecotourism is environmentally responsible travel that contributes to conservation of biodiversity, sustains the well-being of local people, is inclusive at the local community level, offers learning experiences for tourists, involves responsible action on the part of tourists and the tourism industry, and requires the lowest possible consumption of nonrenewable resources (e.g. UNEP, 2002).

Indeed, it is true that at the local scale of analysis, ecotourism may contribute to the protection of natural environments and conservation of endangered species (Higham, 2007). It may also foster economic transition, regional development, community empowerment and the creation of employment opportunities in peripheral areas and for indigenous communities (Butler & Hinch, 1996; Hall & Boyd, 2003). Advocates also point to the argument that ecotourism businesses may contribute to the communication of conservation messages to the general public (Beaumont, 2001). The potential for well-developed education programmes to contribute to this end has been explored, highlighting the importance of business philosophy (Higham & Carr, 2002; Neves, 2010), education programme design (Orams, 1997) and the critical role of the guide/interpreter (Weiler & Ham, 2001; and see Chapters 9–11). In best practice cases it is evident that interests in environmental conservation and conservation advocacy can be advanced through this form of tourism (see Higham & Carr, 2002). These sentiments allow ecotourism to be seen as a 'caring partner for the environment' (Becken & Schellhorn, 2007: 87).

There is a counterview that does not deny these potential benefits, but calls for a more balanced and critical appraisal of ecotourism. The counterview questions the assumption that alternative forms of tourism development such as ecotourism are desirable simply because they are preferable to popular forms of mass tourism (Butler, 1990). Wheeler (1991) offered an early articulation of this view, describing ecotourism as an 'elaborate ruse' and effective marketing tool for building further demand for tourism. Indeed, Orams (1995) observes that many definitions of ecotourism are so broad as to make ecotourism indistinguishable from any other form of tourism. Studies of the social values of 'ecotourists' have demonstrated that they are no more likely to have 'green' social values than others (Blamey & Braithwaite, 1997). Wheeler (1991: 95) is more direct. 'Veracious wolf in lamb's clothing, the sensitive traveller is the real perpetrator of the global spread of tourism and in this capacity must take responsibility for some of tourism's adverse impact'.

Indeed, a range of specific environmental management challenges have emerged in association with ecotourism. They arise from the fact that ecotourism operations should take place in unmodified (Valentine 1993), natural (Orams 1995; Blamey & Braithwaite, 1997; Fennell, 1998) or pristine (Ceballos-Lascurain, 1991) areas. With this emerges a raft of challenges associated with the management of visitor activities in environments that are fragile, finite and valued primarily for conservation. This operational environment is difficult to reconcile with the further definitional requirement that ecotourism visitor operations and activities should be low in impact (Lindberg & McKercher, 1997; Orams, 1995; Wight, 1993). Furthermore, the pace

of ecotourism development has been the cause of policy paralysis as management agencies are forced to act reactively to rapid shifts in demand (Higham *et al.*, 2009). Variations of these challenges arise in the developing-world context due to factors that include 'shortages in the endowments of human, financial and social capital within the community, lack of mechanisms for a fair distribution of the economic benefits of ecotourism, and (resource) insecurity' (Coria & Calfucura, 2012: 47; see also Chapter 21, this volume).

The sheer weight of demand for ecotourism experiences has resulted in the swift transition from 'alternative tourism' to the commercial mainstream. Indeed, the evolution of ecotourism in the 1980s can be seen quite simply as one form of periodic transformation in the global capitalist economy (Neves, 2010). Wheeler (1991: 96) highlights the capitalist underpinnings of ecotourism, observing that 'by clothing itself in a green mantle, the industry is being provided with a shield with which it can both deflect valid criticism and improve its own image while, in reality, continuing its familiar short term tourism commercial march'. Indeed, from the outset, Hall (1994) described ecotourism as a new form of ecological imperialism and western economic domination, a line of debate that has extended to the politics of the IWC (Bailey, 2012).

Lately, the global scale of analysis has been applied to the environmental outputs of ecotourism. Much science has attended to locally contextualized, site-specific impacts of whale-watching (Higham & Lusseau, 2004), with temporal scale (short-term–long-term impacts) being a critical consideration (Bejder *et al.*, 2006). The effects of local exhaust fumes on resident killer whales has been addressed by Lachmuth *et al.* (2011). However, in addressing the broader spatial scale of analysis, it is necessary to also accept that tourists – and most particularly 'ecotourists' (Hall, 2007) – contribute significantly to global environmental change, perhaps most notably climate change by way of CO_2 emissions from international air travel. Little scholarly attention has been paid to the likely consequences of global climate change for whale-watching (Lambert *et al.*, 2010) although Neves (2010) does briefly contemplate the ecological footprint of 10 million ecotourists. Becken and Schellhorn (2007) call for an 'open-system' approach to understanding ecotourism, arguing that local/regional studies are incomplete and flawed. They state that the 'open-systems approach and the link to global issues clearly challenge the widely accepted conceptual link between ecotourism and nature conservation' (Becken & Schellhorn, 2007: 99). These issues also challenge the mainstream ecotourism rhetoric in ways that can no longer be conveniently ignored.

3. Whale-watching is a non-consumptive alternative to extractive (consumptive) whale-hunting practices

Like all forms of wildlife tourism, whale-watching has been perceived uncritically as a non-consumptive activity (Knight, 2009) which underpins the false assumption of ecological sustainability (Lusseau *et al.*, 2013). Wildlife viewing has been described as non-consumptive in contrast to the immediate and lethal outcomes of hunting (Duffus & Dearden, 1990). This terminology dates to the early 1980s when the IWC co-sponsored the first whale-watching conference, *Whales Alive* (1983) in Boston, MA. This conference recommended that new forms of 'non-consumptive' utility should be specifically considered by the IWC in managing global whale stocks (O'Connor *et al.*, 2009). As Knight (2009: 168) observes, 'on the face of it, the two activities – viewing and hunting – could not appear more different'. There are, in fact, inherent contradictions in such unitary terminology (Tremblay, 2001). It has been suggested that the 'consumptive versus non-consumptive dichotomy that is often associated with numerous definitions of wildlife tourism may be somewhat misleading' (Lemelin, 2006: 516).

A number of scholars have critiqued the consumptive/non-consumptive dichotomy at a number of different levels. One line of writing has it that hunting, while lethal at the level of individual

animals, is not necessary deletive at the population level. Hunting, therefore, may not be inconsistent with species conservation (Tremblay, 2001). Conversely wildlife viewing can be positioned as a form of 'ocular consumption' (Lemelin, 2006), which may then frame questions of impact upon focal animals (and wider animal populations) being subject to the tourist gaze (Urry, 2002) and, therefore, consumption by the human eye. 'While the gaze itself may be virtually harmless, this form of leisure is still dependent on the transformation of landscapes . . . and tourism infrastructures (transportation, accommodations, services, etc.)', which may or may not be sustainable (Lemelin, 2006: 518). Such avenues of development, for supposedly benign 'non-consumptive' activities are, in fact, implicated in the sustainable capacity of whale-watch systems (Higham & Lusseau, 2007).

Knight (2009) takes this critique further, stating the case that hunting and viewing are fundamentally similar. Tourists who seek to observe wild animals at close quarters must (be assisted to) locate and approach focal animals. This requires precisely the same techniques as the hunter. Both engage in systematically locating, identifying and pursuing target animals, which are generally 'wary of human presence and reluctant to expose themselves to human eyes' (Knight, 2009: 169). Neves' (2010) Marxist critique also 'reveals significant continuities between whale hunting and whale-watching, especially the fetishized commoditization of cetaceans and the creation of a metabolic rift in human–cetacean relations. In both contexts nature is produced first and foremost according to capitalist principles, which problematizes the pervasive assumption that whale-watching correlates primarily and directly with conservation' (Neves, 2010: 719).

The directed, intensive and sustained tourist gaze offers further parallels with hunting (and predation more generally), which trigger alarm and anti-predatory responses to avoid detection and minimize close and/or prolonged interaction (Tremblay, 2001; Knight, 2009). The importance of managing 'human–wildlife viewing interactions' (including pursuit, intensive gaze and proximal interaction) receives further emphasis given that tourist satisfaction is commonly associated with close-up, unconstrained and prolonged interactions with wild animals (Orams, 2000), the experience of critical behaviours (e.g. hunting, feeding, socializing and courtship) and, in some cases, immediate proximity extending to touch (e.g. Muloin, 1998). In addressing this issue, Bejder *et al.* (2009) apply aspects of evolutionary theory for decision-making under the risk of predation to make predictions about how individual animals respond to non-lethal forms of human disturbance. This approach assumes that animals use analogous decision processes to evaluate responses to the risks presented by natural predators and those presented by anthropogenic agents of disturbance. If so, individual animals will take the same ecological considerations into account when they experience human disturbance as they do when they perceive the risk of predation (Lima & Dill, 1990; Beale & Monaghan, 2004b). In fact, experimental studies have shown that, when approached by whale-watching boats, killer whales adopt evasive tactics that look surprisingly like those used by moths to evade bats (Williams *et al.*, 2002). The net effect of repeated disturbance is a reduction of time spent feeding (Williams *et al.*, 2006), and this energetic cost is a concern for populations of at-risk, food-limited whales. The body of whale-watching science would strongly suggest discontinuation of the term 'non-consumptive' and the unhelpful assumptions that this terminology supports. If it is consumptive, to quote Meletis and Campbell (2007), 'call it consumption!'

4. Whale-watching equates to conservation of the marine environment

If one accepts the problematization of 'non-consumptive' wildlife tourism, then the assumption that whale-watching is akin to conservation of the marine environment is also drawn into question. It is intuitively appealing to assume that whale-watching, as an alternative to whale-hunting, is a

form of stewardship that contributes in some way to species conservation. Neves (2010) observes that this assumption has been perpetuated through the public communication strategies of environmental NGOs, and the marketing practices of most whale-watch companies. She contests 'the reductionism that is entailed in taking for granted that the relationship between (whale-watching), economic development/growth, and conservation is essentially and universally benign' (Neves, 2010: 721). Such practices have contributed to a deep-set predicament insofar that they 'undermine the possibility of distinguishing between different types of whale-watching and the degree to which they effectively live up to conservationist goals' (Neves, 2010: 721).

The problem is that successful commercial wildlife viewing requires that visitors are concentrated in well-defined locations where interactions with wild animals are predictable (Whittaker & Knight, 1997). Viewing wildlife naturally takes place where sightings are consistent, focal animals can be viewed in abundance or where spectacular behaviours may be predictably observed (see Chapters 17 and 19). For resident killer whales, the species aggregates in critical habitats, and for reasons of efficiency, whale-watching traffic is concentrated in precisely the habitats that are most critical to the whales' survival (Williams *et al.*, 2009). The critical nature of these locations, in terms of site ecology and wildlife behaviours, raises two important points. First, the behavioural state of wild animals varies significantly over time (e.g. over both stages of the breeding cycle and life course); and second, animal responses to external stimuli (e.g. including the presence of tourists) are likely to vary over time, as influenced by these temporal determinants (Williams *et al.*, 2006). Knight (2009) questions how wildlife intolerance of humans and industrial-scale tourist interactions with wild animals can be reconciled. He argues that 'wild animals are only viewed on this scale because they have been made viewable through human intervention' (Knight, 2009: 167). Such interventions include attraction (e.g. food provisioning), capture and confinement (e.g. for display in aquaria) and habituation (i.e. a waning in flight response to repeated stimuli) (Knight, 2009). All are considered to produce diminished behaviours in 'wild' animals and reduce population fitness (Knight, 2009; Bejder *et al.*, 2009; Higham & Shelton, 2011).

The dangers of assuming that tourist interactions with cetaceans in the wild are benign are clearly evident. Extensive field-based behavioural studies have been peer-reviewed and published over the last 25 years. Most studies have focused on behavioural changes depending on the presence and density of boats. They find that groups of animals tend to tighten when boats are present (e.g. Blane & Jaakson, 1995; Novacek *et al.*, 2001; Bejder *et al.*, 2006). Some species show signs of active avoidance. Responses range from changes in movement patterns (Edds & MacFarlane, 1987; Salvado *et al.*, 1992; Campagna *et al.*, 1995; Bejder *et al.*, 1999; Novacek *et al.*, 2001), increases in dive intervals (Baker *et al.*, 1988; Baker & Herman, 1989; Janik & Thompson, 1996; Bejder *et al.*, 2006) and increases in swimming speed (Blane & Jaakson, 1995; Williams *et al.*, 2002). These signs of avoidance can be a result of not only the presence of boats, but also the manoeuvring of boats including sudden changes in vessel speed or rapid approaches (Gordon *et al.*, 1992; Constantine, 2001). While many of these papers make management recommendations, few have been acted upon.

These studies illustrate the folly of equating animal observation to species conservation. They also perhaps point to the global politics of whale conservation. Neves (2010) argues that 'the efforts of some of the world's most prominent environmental NGOs to save whales from being hunted to extinction have produced and propagated whale-watching as a quintessentially and uniformly benign activity'. Efforts to counter this deeply embedded assumption have been slow to gain traction, although a milestone was achieved in May 2006 with the IWC's St Kitts Declaration on dolphin and whale-watching tourism. This declaration recognizes that the rapid development of cetacean viewing activities has been largely unchecked, accepts that

cetacean populations can be significantly affected by these activities and states the importance of moving towards sustainable practices. In a marked change in rhetoric the St Kitt's declaration (2006: np) also observes that 'cetacean watching operations should be confined to those populations best able to sustain *exploitation*' (emphasis added). Meanwhile, the portrayal of whale-watching as nature conservation (Neves, 2010) has contributed to perpetuating unsustainable practices (Lusseau *et al.*, 2013).

5. Whale-hunting and whale-watching are mutually exclusive

A fifth binary assumption is that whale-hunting and whale-watching are mutually exclusive. This reductionism has been central to the widely held view that whale-watching will ultimately displace global hunting practices (Corkeron, 2006). The fact that whale-hunting has continued uninterrupted in some regions, and has been resumed in recent years in others, clearly contradicts this assumption (Higham & Lusseau, 2007). In fact, there is widespread evidence that whale-hunting and whale-watching are not mutually exclusive (see Chapters 4, 7 and 8). Rather, whales represent a site of political contestation. Whale-watching is seen by some as a form of cultural imperialism that is imposed globally by urban liberals in the global north. Bailey (2012: 490) documents one view of the IWC's hunting moratorium as 'an imperialistic infringement of sovereignty by industrialized, urbanized countries, and English-speaking countries'. However, she also observes the growing influence of whale-watching interests in the political dynamics of the IWC with specific reference to the interests of the global south. 'At the 62nd Annual Meeting of the IWC in Agadir in 2010, a group of Latin American and Caribbean states known as the Buenos Aires Group (BAG), acted in concert to support the conservationist position' (Bailey, 2012: 490), an action that is seen to counter claims that the whaling moratorium is an act of neo-imperialism.

In fact, Corkeron (2006: 165) notes that 'if there is one clear message, it is that the relationship between whaling and whale-watching is not simply the case of one replacing the other'. He observes that whaling nations (where whale-watching activities also take place without exception) see whales as commodities for both culinary and ocular consumption. Different species of whale may be differentiated in terms of conservation status and 'sustainable harvest'. Perhaps most critically, whaling nations have in the past and continue to see 'the act of killing whales as an expression of national identity' (Corkeron, 2006: 165). Given these sentiments, the view that whales can be utilized in more than one commercial manner, and serve a range of economic and non-economic outcomes, prevails in some regions of the world.

It is now the case that whale-watching revenues exceed hunting revenues in all nations that continue to practise whale-hunting (Kuo *et al.*, 2012). Reporting figures dating to the late 1990s, Kuo *et al.* (2012) demonstrate that the revenues generating from whale-watching in both Japan and Norway had at that time already exceeded whale-hunting revenues. There is little doubt that the potential capacity of the whale-watch systems in these countries has been significantly constrained by the continued practice of whale-hunting (Higham & Lusseau, 2007; Kuo *et al.*, 2012). Indeed, several studies claim that tourists who seek to achieve interactions with cetaceans in the wild hold strong pro-environmental values (Parsons *et al.*, 2003; Rawles & Parsons, 2004), which strongly dictate various aspects of their tourist decision-making and behaviour (Parsons & Draheim, 2009). Parsons and Rawles (2003) demonstrate that whale-watchers would not only boycott whale-watching, but in many cases will abandon altogether intended visits to countries that continue to practise commercial whaling, with broader-ranging implications for the tourism/hospitality and service sector industries in those countries. Similarly, Björgvinsson (2003, cited by Kuo *et al.*, 2012) reports that the emergent whale-watching sector in Iceland was compromised by the resumption of commercial whaling, with wider

implications for tourism-related sectors (e.g. transport, hospitality and retail) (Kuo *et al.*, 2012; see also Chapters 7 and 8 of this volume). Virtually nothing is known about tourists' views on aboriginal subsistence whaling. Clearly the relationship between whale-hunting and whale-watching is complex, and the view that whale-watching will inevitably prevail over whale-hunting due to mutual exclusivity must be more critically questioned.

Challenging the reductionist binaries: the search for sustainable whale-watching

These binary debates have given rise to a range of unhelpful assumptions. A more complex and critical treatment of the whale-watching phenomenon may usefully be informed by consideration of whale-watching in terms of the theory of the tourism system (Figure 1.1). Systems theory recognizes that 'global tourism is a highly complex system (consisting) of a multitude of actors who interact at crosscutting levels to produce certain outcomes' (Cornelissen, 2005: 4). The system is an abstract representation of geographic/human, biological/ecological and industrial elements, that are linked in complex relationships and treated as a whole or set of elements (Hall, 2004). Therefore, Figure 1.1 conceptualizes whale-watching as an open system. Whale-watching practices can be seen to interact with a wide range of dynamic external forces, both directly and indirectly related to tourism, in a manner that is dynamic (Weaver & Lawton, 2009). It affords recognition of the fact that whale-watching affects and is affected by the broader local–global, socio-cultural, economic, ecological and political environments within which it exists. Whale-watching does not exist in isolation of these wider contexts, but rather is subject to evolutionary dynamics and stochastic events that play out at the local, regional and global levels of the open tourism system (Higham & Lusseau, 2007; Higham *et al.*, 2009).

In recognizing the importance of scale, this book begins by addressing the global context (Part I). It contemplates whales as a global common pool resource (Moore & Rodger, 2010), which are subject to a range of global environmental threats. Such an approach highlights the uncertainty of local tourism impacts when set within broader global threats to cetacean morbidity and mortality (see Chapter 2, this volume), such as the development of transport networks (e.g. vessel strikes), fisheries by-catch and habitat degradation (e.g. noise pollution and changing global climatic systems). The urgency of such insights is highlighted by recent warnings from the IWC's Scientific Committee about the 'grave state' of two critically endangered species of cetaceans: the vaquita porpoise (*Phocoena sinus*) of Mexico, and New Zealand's Maui's dolphin (*Cephalorhynchus hectori maui*), both of which are being pushed towards extinction due to by-catch entanglement in fishing nets (World Wildlife Fund, 2012). By necessity, treatment of the global context reaches across the environmental, political and socio-cultural domains. These chapters consider global issues of relevance to cetaceans, and how tourism contributes to those issues.

The resolution of analysis then shifts from the global to the local/regional to address the human and ecological dimensions of whale-watching. The former attends to the interplay of whale-hunting and whale-watching, visitor experiences, and the potential for indigenous/traditional ecological knowledge to contribute to important aspects of sustainability (Part II). It also considers the potential for whale-watching to contribute to cultural renaissance. It critically addresses the effectiveness of environmental education programmes, widely considered so important to raising awareness of marine conservation among both visitors and host communities (Garrod & Fennell, 2004). The extent to which visitor education programmes influence the attitudes and behaviours of visitors in an enduring manner upon return to the tourist generating region (see Figure 1.1) is critical to these discussions. The latter explores the ecological effects of whale-watching on cetaceans (Part III), in order to address the behavioural ecology and