

# Swimming with Captive Dolphins: Current Debates and Post-Experience Dissonance

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**Re-Submitted article for the International Journal of Tourism Research**

Authors

Susanna Curtin and Keith Wilkes  
Bournemouth University  
School of Services Management  
Dorset House  
Talbot Campus  
Fern Barrow  
Poole  
Dorset BH12 5BB  
Email: [scurtin@bournemouth.ac.uk](mailto:scurtin@bournemouth.ac.uk)  
Tel: 01202 965851

November 2006

**Short Title:** Swimming with Captive Dolphins

**Word Count:** (8167 excluding list of references)

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## **Swimming with Captive Dolphins: Current Debates and Post-Experience Dissonance**

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### **Abstract**

Dolphins have widespread contemporary appeal and anthropomorphic social representations of dolphins have fuelled a growing desire in tourist populations to seek interaction with them. This paper is concerned with the staged performance of swim-with dolphin interaction programmes in aquaria. Qualitative interviews with tourists who have swum with captive dolphins identified their immediate recollections stressed the grace, size and power of dolphins but a belief the experience was too staged, too short and too expensive. Post-purchase dissonance focussed on concerns with the size of enclosures and about captivity, too many tricks, limited interpretation and unfulfilled expectations of a quality interaction.

**(99 words)**

**Key words:** Swimming with dolphins, tourist recollections, post-purchase dissonance

## Human Fascination with Dolphins

Cetaceans, particularly dolphins, consistently produce a strong positive emotional reaction in many people (DeMares and Krycka 1998; Bulbeck 2005). Indeed, Nollman (1987:55) claims that “*more people love dolphins than just about any other wild animal*”. Dolphins have an ubiquitous contemporary appeal founded on mythical beliefs and narratives of human-dolphin interaction which appear scattered throughout history. Modern, and post-modern, anthropomorphic social representations of dolphins as “*bearers of alternative values such as collectivity, compassion, friendliness, creativity, joyful sexuality, androgyny, spiritual wisdom and intuitive intelligence*” (Bryld and Lykke 2000:2) have fuelled a growing desire in tourist populations to seek interaction with them. The growing popularity of encountering dolphins over the past few decades has brought with it a surge of intensive, commercial commodification of dolphins internationally.

When UK television viewers were asked to vote on the fifty things they thought people should do in their lifetime: swimming with dolphins ranked first (BBC 2003). Cloke and Perkins (2005:910) argue that this arises because dolphins are the subject of a range of “*anticipatory knowledges and expectations*” following exposure to powerful image constructions generated by popular media. Such images provide a means with which to grasp the world; allowing tourists to enter an imaginative world of place-experience and experience-performance (Crang 1997).

According to Bulbeck (2005) there are five kinds of human-dolphin encounter: in captivity in aquaria; in regulated tactile encounters e.g. Monkey Mia (Western Australia); in unregulated locations where ‘*lone*’ dolphins choose to socialize with humans just off-shore; in communities of known dolphins living close to human settlements and in chance encounters with unknown dolphins in open waters. She argues such interactions represent a tourist encounter along a continuum from ‘*staged*’ to ‘*authentic*’. This paper is particularly concerned with the ‘*staged*’ performance of swim-with dolphin (SWD) interaction programmes that occur in aquaria. Using qualitative interviews with tourists who have swum with captive dolphins whilst on holiday, it highlights the post-purchase dissonance associated with captive SWD programmes, alongside the current debate concerning the appropriateness of keeping dolphins in captivity.

Facilities providing the public with an opportunity to watch and interact with dolphins in captivity have become increasingly widespread over the past twenty years. The three main profit-making activities are: ‘*swim-with-dolphin*’ (SWD) programmes; ‘*petting and feeding*’ pools and ‘*dolphin-assisted-therapy*’ (one-to-one human-dolphin interaction designed for the disabled market). Large, themed marine parks such as Discovery Cove and Sea World in Florida have provided the blueprint for facilities to offer opportunities for a small number of tourists to enter the dolphin pools to touch, play and swim with the dolphins. Whilst this is an expanding tourism sector, it is impossible to assign an

exact volume and value as most attractions do not release information on attendance or revenue (Desmond 1999; Kestin 2004a; Dodds 2005; WDCS 2005a) but it is clear that marine mammals have become the rising stars in the nature industry.

Anecdotal evidence from conservation organisations and the press suggests that in the United States alone there are around 18 SWD facilities compared to only 4 ten years ago (Marine Connection 2005; WDCS 2005a). Cruise ship passengers and other tourists can now swim with dolphins at more than 30 marine attractions throughout the Caribbean, double the number that existed five years ago (Kestin 2004b). Similar development is occurring in European mass tourist destinations such as Spain, the Algarve, the Canary Islands, as well as in Egypt, the Middle East and Asia (Luck 2006; Orams 2006). According to Frohoff and Packard (1995) 40000 people swam with captive dolphins in 1990. Since, Kestin (2004a:5) reports that Sea World alone attracted 11 million visitors in 2003; although how many of these visitors swam with the dolphins is difficult to ascertain. The proliferation of captive dolphin facilities is partly due to public demand, generated by very successful marketing that feeds upon the human fascination with dolphins. Offering dolphin interaction facilities adds value to tourism products and destinations and promises '*the experience of a lifetime*' or '*a life-changing experience*'.

For middle class families who can afford the privilege and who champion the guise of 'edutainment' (Fjellman 1992; Desmond 1999), swimming with dolphins is the manifestation of dreams come true. It binds animals and humans together in a vision of harmony and utopian fantasy: "*like adored pets, they embody the difference between us and the animal other, between wild and tame and safety and danger*" (Desmond 1999:237).

There is a body of literature which confirms the positive psychological effects of swimming with dolphins (Stephan et al 1981; Cochrane and Callen 1992; DeMares and Krycka 1998; Webb and Drummond 2001). SWD provides an opportunity to "*touch the flesh..... of one of nature's most charismatic characters*" (Clove and Perkins 2005:918). Such '*participation*' obscures the division between animal and human, and provides an imaginary "*at-one-ment*" with nature (Ackerman 2003). Wang (1999) might argue that being in the water with dolphins is an existential experience in that whilst the setting is inauthentic, the liminal experience is highly authentic as it involves embodied pleasures such as being swept through the water whilst holding on to a dolphin's dorsal fin. This evokes a general transcendence of everyday self and routine life. In this respect, modern facilities have changed the tourist experience from the passive zoological gaze (Franklin 1999) to an embodied experience where both humans and dolphins interact; "*human-animal relations are thus brought right to the heart of contemporary theme park culture*" (Clove and Perkins 2005:907). For the tourist, this can represent a peak experience (DeMares and Krycka 1998; Curtin 2006), or

certainly a highlight of their holiday, as it allows close contact with a mythical and charismatic animal in an apparently safe, controlled and mediated environment.

The increased demand for such experiences is strangely juxtapositioned alongside changing animal sensitivities (Franklin 1999). Desmond (1999) claims that whilst dolphin shows have garnered public interest and affection for the animals and helped win support for their protection, they have contributed ironically to their own potential downfall by building affection for the animals and fuelling animal rights activists in their attempts to discredit performing animal parks. Historically animal rights and animal welfare advocates changed the face of dolphin tourism in the United Kingdom from 41 dolphinarium sites in 1975, to six in 1986 and none by the 1990s (Hughes 2001). Ten years ago, survey findings (MORI 1996) demonstrated that 85% of the British public thought it unacceptable to keep whales and dolphins in captivity (*cited* WDCS 2005a). Franklin (1999) explains how this reflected a shift in public opinion on the confinement and performance of animals in captivity. The moral issues of keeping such wide-ranging marine mammals in a cramped space performing for their food under the guise of education and research began to be questioned. In other sectors, this shift from an exploitative to a caring view of animals has led to a change in the way animals are presented to the public specifically with regards to circus performances and zoos. Zoos, in particular, have repositioned their activities from entertainment to education, conservation and breeding programmes and this message is strongly conveyed throughout their marketing (Broad and Weiler 1998; Bulbeck 2005).

Given this supposed shift in values, it is indeed a strange phenomenon that many British tourists now visit whale and dolphin shows while on holiday abroad (CAPS 2005). There are two possible explanations. First, that demand is industry-led: fuelled by mass tour operators such as Thomson (2005) who promote it as a 'number one' tourist activity in its resorts. Secondly, the belief that dolphins enjoy human company and performing appears to be deeply engrained into our psyche (Orams 1997; 2004; Cloke and Perkins 2005). Stories and myths throughout history and popular media representations of friendly cetaceans such as 'Flipper' and 'Free Willy' reinforce this belief.

Dolphin interaction programmes have hit upon a profitable formula. SWD programmes can cost up to US\$180; you can be a 'dolphin trainer' for a day for US\$650, hold a T-shirt and let a dolphin paint it for US\$55 or send a handicapped loved one to dolphin assisted 'therapy' (DAT) sessions for upward of US\$2000 for a week. Dolphins in particular have become so valuable, some individuals worth up to US\$5 million (Kestin 2004a) due to their ability to raise up to US\$2-3,000 per day (Marine Connection 2005c) or even up to US\$1 million a year. US attractions take out life insurance for their dolphins and transport them worldwide for the chance to breed in captivity whilst Europe, The Caribbean, Mexico and Asia use newly captured stock. Despite the popularity of these Dolphin-

Interaction Programmes, controversy exists concerning the welfare of the participating dolphins and the growing market of live captures for public attractions (WCDS 2005b).

NGOs such as Whale and Dolphin Conservation Society (WDCS), The Worldwide Fund for Nature (WWF), The World Society of the Protection of Animals, (WSPA) and the Humane Society of the United States are convinced, however, that if tourists knew the '*real cost*' (Frohoff 2004) to the dolphin they would think again before buying into such activities. The current debate against captivity is that: dolphins are removed from the wild to supply new attractions; they are forced to perform unnatural tricks for food; their life span is reduced considerably; they can suffer stress-related disorders; their size, strength and unpredictability can be a potential risk to humans and finally, performances fuel an anthropomorphic and distorted understanding of dolphin behaviour. These views are supported in the academic literature (Johnson 1990; Horne 1992; Cochrane and Callen 1992; Hanes 2001; Frohoff 2003; Bulbeck 2005; Rose et al 2006) which questions the case for keeping dolphins in captivity. Other literature, however, (Kirtland and Stringer 1995; Samuels and Spradlin 1995; Small and DeMaster 1995a and 1995b; Zilber 1998; Kyngdon *et al* 2003) suggests that the welfare of the dolphin in captivity is not compromised and that the debate against captivity is laden with emotional overtones.

Whilst there are a number of impact studies in the marine science arena there is a paucity of literature on the tourist experience of the captive SWD programme. In order to counter this, a small exploratory study was undertaken to better understand the captive SWD experience.

To grasp the complexities of a lived experience arguably requires an interpretivist approach. Several authors (Relph, 1981; Suvantola, 2002; DeMares and Krycka, 1998) propose that the most appropriate method for researching a lived tourist experience is phenomenology. Phenomenology aims at getting a deeper understanding of the nature or meaning of our experiences. It asks 'what is this or that kind of experience like?' It offers us the possibility of plausible insights that bring us in more direct contact with a phenomenon through a systematic attempt to uncover and describe the structures and the meanings of a lived experience. As a method, it isolates and identifies the essences of experience. It is not, and can never be, a basis for empirical generalisations; instead it highlights some interesting issues.

Rather than taking an on-site approach where it was considered that the excitement and intensity of the experience might prohibit in-depth responses, respondents who had swum with captive dolphins whilst on holiday were contacted once back at home and some time after their experience. A purposive sampling method was adopted (Patton, 1990) whereby an advertisement was placed on a British University website calling for respondents who had swum with captive dolphins whilst on

holiday, who would be willing to co-operate fully throughout the research and be willing to describe their experiences using narratives, photographs and anecdotes.

There were ten responses, eight female and two male. This difference in gender was perceived as interesting although potentially problematic. In order to get a more balanced view, a second advertisement was placed but unfortunately no new male respondents materialized. It has been suggested by other studies that women tend to outnumber men with regards to cetacean-based tourism (Muloin 1998; Bulbeck 2005), however further investigation is needed in order to confirm gender preferences for swim with dolphin programmes.

The age of the respondents ranged from 24 to 48 and all had undertaken SWD in purpose-built aquaria including the well known Discovery Cove and Sea World in Florida. Experiences at these highly popular tourist attractions had been pre-booked whereas other respondents in smaller aquaria had seen advertisements at the resort and had made a spontaneous decision to take part. The time lapse between swimming with dolphins and being interviewed varied between two months to three years. In all but one case, this did affect the results in that dissonance tended to increase over time with those who had had the most recent experience giving slightly more positive responses.

The respondents had experience of a number of different purpose-built aquaria located in Mexico (*Jill*), Antigua (*Sonia*), Florida (*Teresa, Dorothy and Sally*), the Dominican Republic (*Anna and David*), the Bahamas (*Mike*), the Algarve, Portugal (*Sue*) and Spain (*Laura*). All had encountered bottlenose dolphins (*Tursiops truncatus*) which is the most common species used for SWD programmes.

Overall, the sample was considered adequate due to the range of places and experiences, and more importantly, due to the rapidly diminishing returns which are common in qualitative methods. Nevertheless small sample sizes may be criticised for lacking transferability, in that the research cannot be accurately replicated, and generalisability, as the results are focused on unique cases and cannot be applied to the SWD population at large. Nevertheless the research has internal validity as it accurately portrays the social reality of those participating in it, and external validity as the depth of qualitative enquiry enabled insight into some core experiences and themes which may be applicable and worthy of testing in a wider population (Patton 1990).

The primary research question was open-ended: "What is it like to swim with the dolphins?" Also inherent in the discussion was the overall satisfaction of the experience. General aspects of the captive SWD experience are explored in an initial findings paper (Curtin 2006) whereas this paper focuses on the cognitive dissonance exhibited by the respondents.

The interviews were audio-taped and transcribed allowing a systematic approach to data reduction based on the clustering of invariant meaning units into themes (Moustakas 1994). Whilst fieldwork and data collection are inextricably linked in qualitative enquiry, reflection later allowed the transcripts to be annotated and coded according to the main themes and sub-themes that arose from the *a priori* questions, emergent data based on the respondents' unexpected answers and the authors' knowledge of the literature. Every care was taken to ensure that the coding reflected the themes inherent in the data rather than the authors' preconceptions. As is customary in qualitative research, the results and discussion are presented simultaneously under relevant headings. Respondents' names have been changed to protect anonymity.

## **Findings and Discussion**

Most animal-human interaction tourism research is undertaken on-site or immediately after the consumption of an activity or the visitation of a place (Davis *et al* 1997; Higham 1998; Chin *et al* 2000; Schanzel and McIntosh 2000). Asking tourists about their recollections provides a new and interesting dimension. As Suvantola (2002:248) explains "*the memories of our experiences do not represent only our experiences, but also our prior dreams of those experiences*". Through the process of memory we align our memories to correspond with the prior expectations that preceded the experience. For these respondents, particularly female ones, expectations were based upon a fantasy of being able to really connect with a dolphin: to swim freely with it, to touch it, to play alongside it and for there to be natural, two-way communication. The downside of conducting post-experience research is that when we recollect and reconstruct our past experiences, it is natural to be selective and imaginative (Suvantola 2002). Surprisingly, the opposite was true in this case. In almost all instances memories and hindsight had produced a sense of post-experience dissonance.

According to Foxhall *et al* (1998) cognitive dissonance is a condition reflecting a tendency toward mental unease which occurs when an individual holds two attitudes, ideas or beliefs which are not in harmony with each other. In this small, exploratory study, there are two main strands of dissonance: first of all, experiences did not meet prior expectations of a natural, 'one-to-one', meaningful interaction, and secondly, the strong desire to swim with dolphins versus the question of large marine mammals being held in captivity. The results of the interviews therefore highlight a number of the current debates with regards to captive dolphin programmes.

In nearly all cases, swimming with dolphins represented a long-standing desire based upon the perception of dolphins as charismatic mega-fauna and popular representations of dolphins in the



media (Barney *et al* 2005). Expectations were based upon the notion that SWD programmes allowed a prolonged one-to-one contact with a dolphin rather than the typical 20-30 minutes of highly mediated and controlled interaction in groups of seven or eight people amongst two dolphins. General consensus was that it was a wonderful experience, but *“over just so quickly”* which raised doubts over value for money as SWD programmes are considered *“ridiculously expensive for so little contact”*. Furthermore, the question of *“whether it is right to keep such intelligent creatures in captivity”* (Sally) is raised by nearly all respondents. During the course of the interviews several respondents attempted to reduce dissonance by emphasizing that the dolphins were either bred in captivity and therefore had become accustomed to it or had been rescued:

*“They didn’t actually tell us where the dolphins came from, but I assume they are bred in captivity” (Teresa).*

*“I think there may have been some rescued dolphins who would have died had they not been brought to the marine park” (Laura).*

*I don’t remember them saying where they came from. I was under the impression from somewhere that they if they do capture animals from the wild, that it is for a good reason like research and conservation” (Mike).*

The theme of education, research and conservation structures the fun and obscures the obvious that the performing animals are captured and exhibited for profit thus allowing guilt-free pleasure and a justification for high entry prices (Desmond 1999). Dodds (2005) and Rose *et al* (2006) confirm that captive born animals only represent a small percentage of dolphins especially in the burgeoning attractions in Europe, the Caribbean and Asia but this is not made clear to tourists. According to Rose *et al* (2006) dolphinariums and aquaria still acquire several species of marine mammals directly from the wild. Contrary to conservation principles, little serious work has been done to ascertain what effect these captures have on the populations from which these animals are taken (Reeves *et al* 1994) or on the individuals who may be captured but then immediately released because they are deemed unsuitable. The U.S. Government require an environmental impact analysis before captures are permitted, but these analyses are generally considered inadequate and do not apply to foreign waters, where only vaguely defined “humane methods” may be required (Rose *et al* 2006).

Current conservation philosophies focus on saving natural habitats. Thus, removing dolphins from the wild is contrary to such philosophy, especially given that very often dolphins are captured from populations that are already under threat from other human activities (Frohoff 2004). Captures from the wild impact upon the future of those wild populations due to the fact that most facilities want fit, young dolphins. This usually means the removal of matriarchal females, nursing mothers or

breeding males. If a dolphin dies in captivity, and many do, it can quite easily be replaced but if a sexually mature dolphin is removed from its pod they can never be replaced and the pod's population is compromised as a result (Frohoff 2003; Kestin 2004b; Marine Connection 2005c). .

Moreover, the capture of even a single animal can harm or kill multiple dolphins, since it typically involves harassment, and the temporary capture of more dolphins than those targeted (Frohoff 2004). Methods used to capture and transport dolphins can be shockingly crude and according to the NGOs, many animals die during the process. Several countries supply the captive dolphin industry with bottlenose dolphins. Cuban authorities have issued capture quotas of approximately 15 bottlenose dolphins per year from national waters (CITES 2003). Many of these animals have been sold to other facilities in the Caribbean, with others exported to Europe and Mexico (Rose *et al* 2006). Another major source of animals is the controversial annual dolphin drive fisheries in Japan.

Unfortunately, mortality is not uncommon following capture and transport even in North America where facility standards are generally of a higher standard than those in other regions. Small and DeMaster (1995a) and Woodley *et al.*, (1997) found that mortality rates of captured bottlenose dolphins increase six-fold immediately after capture and did not decrease to normal captive levels for up to 35-45 days. More recent data provided by the WSPA (2005) and The Whale Foundation (2005) claims that 53% of animals who survive the capture die within 90 days. Every seven years half of all captive dolphins die due to the violence of their capture, intestinal disease, chlorine poisoning and stress-related illnesses (Kestin 2004c).

### **The effects of captivity on the dolphin's well-being**

Frohoff (2004) believes that the effects of stress play a significant role in dolphin mortality and aggressive behaviour. Captivity severely compromises a dolphin's quality of life. In the wild, they have complex social lives, impossible to recreate in captivity. Wild dolphins swim long distances each day foraging for food, mating and interacting with other pod members in large social groups. In comparison to the ocean, dolphins are often kept in questionable conditions; no holding pool can be adequate. The Whale and Dolphin Conservation Society (2005b) urge tourists not to be fooled by the attractive backdrops; these are purely for the tourists' benefit and could never truly meet a dolphin's needs. Despite the investment by leading marine parks, tourists are not easily convinced as to the suitability of the setting or the management of the activity; enclosures tended to leave a lasting negative impression:

*"I did come away thinking that the enclosure was very small" (David).*

*"The pool seemed so much smaller than I expected. I couldn't see where the dolphins could really swim, and they weren't specific about what you had to do or where and how you should touch the dolphins" (Sonia).*

*"I don't look back on the experience in a positive way because there were just some concerns and niggling little doubts that maybe it wasn't professional; that perhaps they weren't looking after the dolphins quite as well as they should be" (Teresa).*

*"I was actually quite disappointed when I saw where they did swim with the dolphins because it wasn't very big and they had four separate parties all with a dolphin" (Anna).*

*"I can't be sure obviously but I thought they look bored and unhappy" (Jill).*

The Travel Foundation (2006) has produced a guide to good practice for captive animals which highlight the Five Freedoms: freedom from hunger and thirst; freedom from physical discomfort; freedom from pain injury and disease; freedom to express most normal patterns of behaviour and freedom from fear and distress.

In many parts of the world dolphins encounter unique stressors. Due to our fascination with them and their own curiosity, dolphins are subjected to various forms of human impact to which most other animals are typically not exposed. Consequently, measurements of stress indicators are increasingly important in order to assure their welfare and conservation (Orams 2004).

Stress is a normal physiological and behavioural process that occurs in all animals and is designed to improve its survival during challenging situations. Broom and Johnson (1993:72) define stress as *"an environmental effect on an individual which overtaxes its control systems and reduces its fitness or appears likely to do so."* It is also described as a condition in which abnormal or extreme adjustments to behaviour are necessary to cope with the environment. There is strong evidence to support the long-term implications of stress on the health and wellbeing of highly social animals such as dolphins (Thomson and Geraci 1986; McBain 1999). According to Frohoff (2004: 1158) psychological stressors *"can produce as much or even more of a physiological stress response in dolphins than can physical stressors"*. Moreover, the physiological changes that are referred to as 'stress' are often accompanied by subjective states of suffering.

Assessing stress in captive dolphins, whilst challenging, is a critical component in the management of captive populations (Dierauf and Gulland 2001). Physical measurements of stress are particularly difficult to obtain because of their unique anatomy and their aquatic environment. Obtaining and interpreting physiological data in dolphins is problematic beyond visible characteristics such as

perceptible wounds or emaciation. Therefore, watching the behaviour of dolphins is the primary, and often the only, available indicator of their physiological and psychological condition. Nevertheless, as yet a systematic and proven methodology for identifying and interpreting behavioural indices of stress in dolphins is lacking (Frohoff 2004; Kyngdon et al 2003). More convincing results regarding the long-term impacts of stress are obtained by combining behavioural and physiological changes. For example, Waples and Gales (2002) complemented observing captive dolphin behaviour with periodic blood samples which measured stress hormones. The behavioural data documented changes in social dynamics and association patterns within the group evidenced by a decrease in the close proximity, physical contact and synchronous movements between individuals. The stress resulting from social instability, either from the perceived threat from group members or from changes within dominance hierarchy, contributed to documented mortalities and illnesses.

Such detailed studies are in their infancy, therefore stress-related behaviours are easily over-looked and can be misinterpreted. Moreover individual variations can produce different responses to the same stress stimuli (as per humans). Such disparities can be related to variation in species, previous experience, how traumatic their catch and transportation have been, their age, gender, reproductive status, social and environmental conditions, group size and composition, 'temperament', time of day and season (Frohoff 2004; Kyngdon *et al* 2003)

### **Potential risk to humans**

Frohoff (2004) confirms that stress-related antagonistic behaviour, ranging from submission to aggression is clearly observable in captive dolphins. It tends to occur in challenging situations such as forced, close confinement, continual contact with humans and excessive noise. Aggression towards humans in captivity has included broken bones, bruised and ruptured internal organs and bites and very occasionally human mortalities. Such incidents have typically been related to inappropriate or abusive human behaviour and the dolphin's response or frustration. Several of the respondents had witnessed erratic behaviour:

*"We all had to get out of the water because the dolphins started to swim very frantically up and down and obviously a whack from a dolphin is going to really hurt you" (Anna).*

*"They started to thrash around and really go speeding – so we quickly got out!" (Sue).*

When things do not go according to plan "it throws the willing partner and the familial discourses and ideologies wide open and reveals the hierarchies of force and domination that the performance attempt to naturalise" (Desmond 1999:241). Orams (1997) highlights the unpredictability of wild dolphins in his review of incidents where dolphins have endangered and injured humans. He notes

incidents where bottlenose dolphins have carried or pushed swimmers and surfers away from the shore and prevented them from returning (Lockyer 1990). There are even occasions where divers are held on the sea bottom for short periods of time (Webb 1978), while other episodes include biting, butting and sexual advances towards female swimmers (Morris and Lockyer 1988). Orams (1997) points out these risks are seldom mentioned in tourist brochures or in popular literature since such behaviour would be difficult to manage from a touristic point of view. In general, management responses to SWD have been largely regulatory in terms of permits and relatively crude in terms of controls and codes of conduct. Despite this, all respondents, bar one, had been given similar strict instructions:

*“to remove all rings and jewellery and not to put your finger in their blowhole and to be gentle with them – not to jump or make any sudden movements – no sudden shrieks – and to respect them – not to provoke them” (Jill).*

Nevertheless, most conservation organisations are concerned as much about the potential risk to humans from captive dolphins as they are regarding the cruelty of keeping such free-ranging animals in confinement. Dolphins are wild animals and unpredictable even when well-trained. Swimmers have been known to incur bites, bruises, scratches, abrasions and broken bones (WDCS 2005a). Tourists themselves are aware of the potential power of dolphins and many admitted to being fearful of their power and size:

*“I was under no illusion, they could do me serious harm if they wanted to” (Sue).*

*“There was their slight element of fear when I first got in partially because we felt that they were new to the job. They had only been working with the general public since the Monday – I think it’s because they are big – bigger than you think.” (Teresa).*

These fears are well-founded. During more than 72 hours of video recording, a study by the WDCS (2005c) documented several occurrences of sudden or threatening behaviour thought to pose a threat to the safety and welfare of visitors and dolphins; particularly biting, butting and lunging. The Travel Foundation (2006) also documents a number of recorded incidents of aggression and conclude that contact sessions be kept to a minimum and be under continuous supervision.

Another major concern is the transmission of diseases (zoonoses) as dolphins carry diseases which can be transmitted to humans and vice versa (The Travel Foundation 2006). Investigations into disease in marine mammals has revealed the existence of a host of viruses, bacteria and parasites known to cause disease in humans (Mazet et al 2004; WDCS 2005a). Marine Connection (2005a) warn that dolphins permanently confined in a tank or sea pen produce huge amounts of sewage

each day (a dolphin weighing 450 pounds generates up to five times more urine and faeces as an average human). Therefore contaminated tank water, spray from the animals' blowholes or kissing them on the mouth can facilitate the entry of micro-organism into a human host. Pathogens widespread in the marine environment include streptococci; pseudomonas, aeromonas, clostridium and mycobacteria. One particular insidious pathogen is pseudomonas pseudomalle which is known to cause respiratory disease in man and marine mammals. The organism also causes serious wound infections which can result in fatal septicemia. Swim with dolphin facilities do not offer any information about such public health risks (Marine Connection 2005a).

It is clear from the discussion above that there are some serious questions as to the suitability of these tourist attractions for humans and dolphins alike. Yet affording dolphins some control over their environment is considered to be an important management policy for both captive and free-ranging dolphins. Clearly this is not the case in captivity where they have no control over the daily presence of human 'visitors' in their enclosures, increased noise, environmental stimuli and disruption of rest. Captive environments have been associated with a variety of behavioural abnormalities such as stereotyped behaviour, consumption of foreign objects particularly by 'nervous' dolphins; self-inflicted trauma (obsessive biting on objects to the point where teeth are worn down); stress-induced vomiting, excessive sexual behaviour and aggression. Moreover submissive behaviours such as retreat and avoidance have been associated with intimidation by other dolphins, especially in captivity where dolphins are forced to remain in contact with more dominant and aggressive animals, and also towards non-aggressive humans. Moreover getting animals to perform is also a significant cause of stress (Frohoff 2004)

Kyngdon *et al.* (2003) found that captive common dolphins in New Zealand increased their use of a refuge area from one-third of the time when no swimmers were in the pool to two thirds of the time when uncontrolled swimmers were present. In addition, they increased their use of the refuge area prior to swimmers entering the pool in apparent anticipation. This indicates that they are either actively avoiding swimmers or reacting to the lack of space when swimmers are present. Their study also provides evidence that indicate dolphins' reluctance to SWD programmes, such as abrupt changes in direction, dolphin charges (i.e. advancing at speed towards a swimmer then swiftly changing direction within a meter of the swimmer) and surfacing more frequently with swimmers than when swimmers weren't present.

Conversely, there have been some useful physiological studies that have investigated stress hormone levels in captive dolphins that participated in dolphin-interaction programmes (Dold *et al* 2000). In addition, two behavioural studies have been conducted. Samuels and Spradlin (1995) who observed behaviour of dolphins in a trainer-controlled environment with a view to the safety of dolphin-interaction programmes. Kyngdon *et al* (2003) investigated behavioural changes exhibited by

captive dolphins before, during and after public swims that were not conducted under trainer control. All these studies conclude that participation in interaction programmes did not, overall, *seem* to compromise the welfare of the dolphins. Trone *et al* (2005) have since undertaken a study into long and short-term behavioural responses to trainer controlled SWD programmes and have also concluded that the dolphin-interaction programmes are not detrimental to their well-being. However they do caution about generalising from their findings as their study was undertaken on only three dolphins that have to interact with humans once per day and outside of this performance can choose whether to interact with tourist crowds or not. Therefore their results are not transferable to the larger prime attractions such as Discovery Cove and Sea World.

An interesting aspect of their study, however, is the discussion on an observed increase in voluntary play behaviours immediately after a dolphin-interaction programme. According to Trone *et al.*, (2005:371): *"it suggests that the dolphins did not perceive human contact aversively, as has been suggested by opponents of dolphin-interaction programmes"* (Cochrane and Callen 1992; Frohoff 2003). They use 'assimilation tendency' to explain why captive dolphins may interact voluntarily with humans. Assimilation tendency is where other species treat humans as conspecifics (Hediger 1964). Trainers and other dolphins that share the same pool may constitute the stable aspect of the captive dolphins' social life. This also supports the contention that captive animal welfare may be improved when animals are provided with ways to control their own environments (Markowitz 1982; Hughes and Duncan 1988). Captive dolphins that have the opportunity to voluntarily interact with visitors may be better able to direct and satiate their need for the social aspect of their nature by allowing humans to fulfill the conspecific roles that replace the wide social network that would be available to them in the open ocean.

All the respondents in this study believed that the dolphins genuinely enjoyed playing and performing and that this was a sign of well-being:

*"The dolphins were happy. If they were unhappy I don't think that they would perform (Laura).*

*"I truly believe that they are getting something from it" (David).*

*"It was almost like a game – it felt like it was playful fun and that they were enjoying it" (Sally).*

*"They were like children playing. I honestly didn't feel that they were distressed. They were quite happy to do it. They were well-maintained and cared for. Not at all treated like circus animals (Sue).*

For two respondents the dolphins play was seen as a way to alleviate their boredom. Levels of boredom were related to perceived intelligence:

*“The more intelligent I think an animal is, the more I think they are prone to boredom and that is what puts me off zoos or other captive displays. You can see that they get incredibly bored and the more intelligent the creature, the worse it is. That is why I wondered about the dolphins and felt a bit sorry for them when they were sent back to their pens as they seemed to genuinely enjoy the performance” (Jill).*

### **Staged performances**

In SWD programmes nature is cultivated and disciplined in the operant conditioning of the training process. Behaviours are isolated, shaped into performance, and linked into sequences for rewarding caresses and food given for correct performance. Non-cooperation results in the withdrawal of these rewards (Desmond 1999). Therefore it is not a true exchange despite the way it is presented in a series of anthropomorphically framed behaviours such as waving and kissing. All behaviours performed in captivity are unnatural behaviours (Frohoff 2004). A wild, healthy dolphin very rarely beaches itself, jumps to hit a ball, sings on command, allows someone to mount its back or allows itself to be kissed or fed. They wave to the audience and kiss swimmers because they are hungry not because they desire human interaction (Marine Connection 2005b). These mammals are intelligent enough to understand this method of training and usually concede defeat rather than go hungry. When ‘newer’ dolphins misbehaved, respondents noticed the withdrawal of food:

*“The next dolphin (to do the trick) was not quite so good because she landed in completely the wrong place and had it actually been a member of the public it would have been far too close. So they weren’t quite trained well enough. She did it but she got told off and she didn’t get a fish” (Anna).*

Both trainers and dolphins alike are under extreme pressure to put on a good show due to it being a commercial enterprise but in many instances respondents felt such tricks to be somewhat distasteful and demeaning. As Laura admitted: *“I was a bit saddened that they knew these tricks”*. The feeling that the *“dolphin was just going through the motions”* (Sue) was communicated by all respondents. The tightly controlled and rehearsed performances left them disappointed, especially as they were seeking a more profound and ‘personal’ interaction:

*“I had imagined what it would be like and the experience I got wasn’t quite what I was expecting – maybe because they were being trained – you felt that it was a bit like a dog doing a trick for a bone. They did swim past you and they did all the things that they were told but they went straight to them for the fish. There was no basic interaction – I thought you would get into the pool and they would swim round you and nosy up - but there was nothing like that – they were literally told to swim past*



*you – you could touch them and then they swam that way – then they went back for the fish and then they would come and do the next thing” (Sally).*

*“They were told what they were going to do and they did it for reward” (Dorothy).*

*“They were trained dogs really – you didn’t really get a sense – well that it was a dolphin. It was just performing” (Mike).*

*“It’s very much like Pavlov’s dogs” (Jill).*

*“You do get a feeling that they are intelligent but it is difficult because they are so highly trained. They are just responding rather than doing what they actually want to” (David).*

The highly staged and controlled nature of the experience left respondents with dissonance.

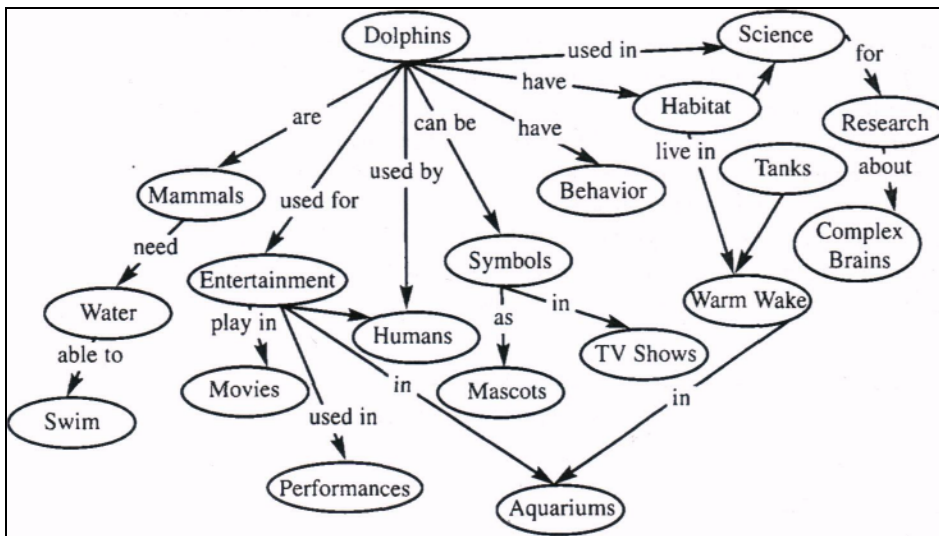
*“I had an experience in my head and it didn’t match it”. If a dolphin connected with you in the wild – it would be wonderful because they want to. Any interaction with an animal in the wild is a heightened experience: completely natural in an untrained way – not just a learned response towards you (Sue).*

These tricks also give an entirely distorted view of the dolphins’ lifestyle and discredit the argument that such shows fuel our appreciation and desire for conservation. Evans (1988) argues that instead, tourists leave with a Disney-like impression of what these creatures represent. In shows, even their natural behaviour is given new and false meaning which build upon previous media images and Disney films.

Fjellman (1992) argues that Disney theme parks articulate the fantasies of the middle-class and teaches people that dreams and experiences are for sale. This is communicated through myths, stories and marketing of their attractions. Moreover, their cartoon animals are typically given human attributes (such as bi-pedal walking; speech and sense of humour). This anthropomorphism does not necessarily prevent their being used by audiences as sources of knowledge about the real animal. Beardsworth and Bryman (2001: 99) refer to this knowledge as “virtual capital” which consumers then bring to performances. It is significant that captive dolphin displays mimic and confirm this view of the animal kingdom in the tricks that they get dolphins to perform. Fjellman (1992) claims that Disney myth-making hides contradictions and that reassuring symbols are presented to maintain the contrived capital (see also Desmond 1999 with reference to the Busch entertainment conglomerate and Sea World).

In their assessment of knowledge, attitudes and behaviour towards charismatic megafauna, Barney et al (2005) found that dolphins are poorly understood by the public at large and that utilitarian attitudes and potentially harmful behaviours are widespread. Figure 1 depicts a typical conceptual map which shows a very general knowledge and understanding of dolphins' attributes.

**Figure 1: General Conception Map for Dolphins**



(Source: Barney *et al.*, 2005: 49)

Whilst it is understood that dolphins are mammals, their respondents seem to subscribe to a kind of utilitarian and anthropocentric perspective focusing on: the use of dolphins as objects of human entertainment, the symbolic value of dolphins, and captive habitats such as tanks and aquaria. There is no indication that either the ecological or evolutionary significance of dolphins is understood, and little evidence of knowledge concerning their behavioral, structural, and/or functional adaptations, except perhaps that dolphins have "complex brains." Furthermore, there is no indication that issues of biodiversity among dolphin species or problems associated with human interventions are recognised. On the positive side, the map reveals few, if any, explicit misconceptions about dolphins. These findings support those of Dimopoulous and Pantis (2003) who discovered that school, home and television do not provide information that is of direct value in the conservation of charismatic species.

### Education and Interpretation

There are three commonly used justifications by the captivity industry to keep whales and dolphins in confinement, namely education, conservation and scientific research. The industry markets itself to people who love dolphins, care about conservation and who are looking for a tangible way to

express their interests. Recent studies suggest that zoo and aquarium visitors are more environmentally concerned than the general public (Adelman *et al* 2000). During dolphin shows trainers do offer some interpretation and educational information about their life in the wild but this tends to be very superficial and is not easily remembered by tourists as educational messages take second place to SWD performances where tricks are the main focus. Any educational experience is lost amongst the glamour and excitement (Frohoff and Packard 1995; Desmond 1999; Barney *et al* 2005). Moreover the complex lives of cetaceans cannot be adequately demonstrated in a swimming pool. This appeared to be confirmed by respondents who could not, on reflection, remember many details of the interpretation:

*"There was a brief talk, but to be honest, I can't remember much about it, I think I was so excited about the prospect of going in the water with the dolphins that I didn't pay that much attention" (Sally).*

*"I do remember there being a talk and a video, but from what I can remember it mostly dwelt on the dolphins' anatomy and where they should and shouldn't touch them" (Mike).*

For some it was an obvious logistical 'fill-in' whilst the dolphins were being prepared:

*"The video just had lots of nice pictures of dolphins. I'm not sure what they were trying to achieve because there wasn't much factual information in it. It was probably to build your anticipation for the main event and giving them time to swap the dolphins over from the previous swim" (Teresa).*

This supports the contention that *"the educational benefits of these interactive programmes are highly questionable. Not only does the public learn little, if anything, about the real life of dolphins, but they actually go home misinformed, thinking that the tricks they saw are representative of how dolphins behave in the wild. Finally, these captive programmes likely perpetuate the problems facing wild dolphins by implying that it is alright to touch and feed dolphins and to treat them like toys or playthings who exist for human amusement"* Frohoff (2003:1).

Marine parks continue to argue that they play an important part in marine mammal research and this is a widely held justification for captivity. This was certainly the perspective given to some respondents:

*"I was under the impression that it was an experimental addition to the park and that the dolphins were part of a research programme" (Laura).*

*“The only time I agree with capturing animals is when they are in danger or it is an endangered species and I think that Discovery Cove do a lot of good for species in that respect - if they were supporting research and conservation then that’s fine (Sonia).*

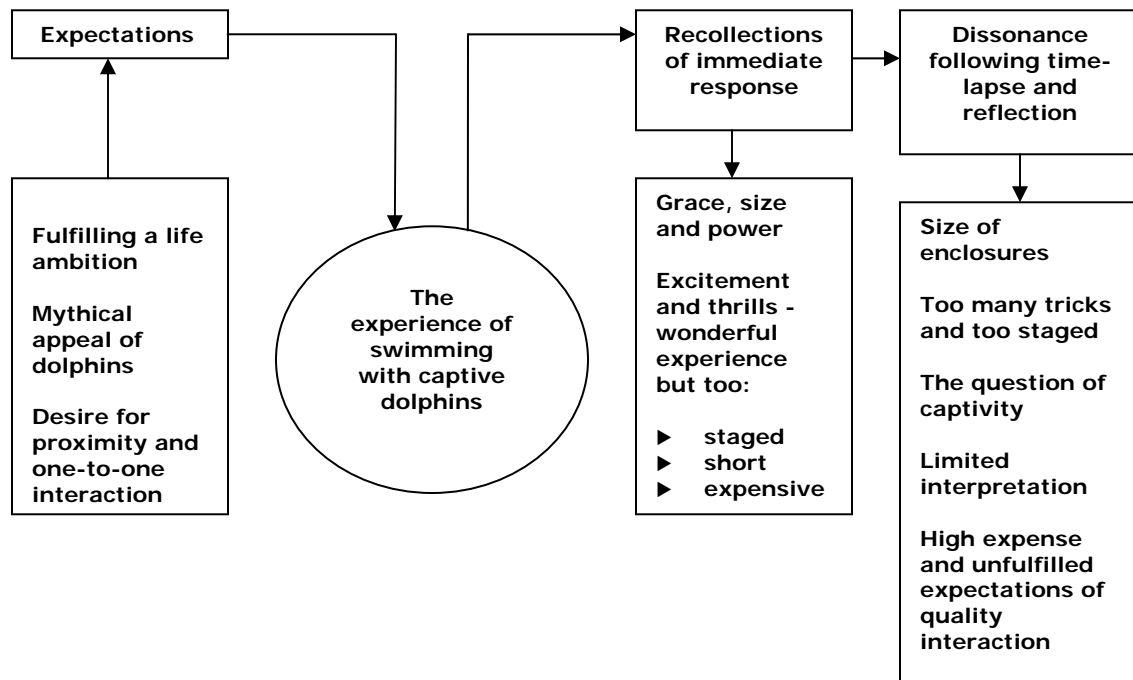
*“They were saying that they live longer in captivity and I did think I would have a huge problem with them being in captivity but it was all very nice – you wouldn’t have believed that it was bang in the middle of Orlando and they do stress a lot of the conservation and environmental message of having the dolphins (Teresa).*

Parks also claim to provide the general public and the scientific community with useful knowledge, but as the WDCCS (2005a) point out the research has very little relevance to the conservation of free-ranging dolphins. Disease studies on captive dolphins have identified what parasites and bacteria are present, however this knowledge has contributed nothing towards preventing or predicting outbreaks of viruses which cause mass mortalities in wild populations. Moreover information on reproduction and sexual maturity has been obtained for some species but these studies cannot be applied to the wild as captive dolphins due to unnatural composition of zoo diets and living in confined spaces over shorter life-spans. This alters their physiology and behaviour. For example, captive dolphins spend up to 80% of their time at the surface of the water seeking scraps of food and attention. This is in direct contrast to wild dolphins who spend 80% of their time below the surface of the water, playing hunting and exploring (WSPA 2005).

## **Conclusions**

At a glance, there are a number of key features highlighted by this research. Figure 2 shows how the expectations differ from the lived experience and the how the recollections of the immediate response differ from the time-lapsed reflection.

**Figure 2: Model of Post Experience Dissonance Following Captive SWD Programmes**



Ultimately, swimming with dolphins in captivity is not a true exchange despite the clever way it is presented. The conditions that make this possible are that wild animals are captured, transported thousands of miles, confined, trained and forced to work for a living. They are *“literally imported into our world, placed in beautiful containers, completely out-of-situ but in order to mask this reality they are presented as willing partners and as equals from whom we have so much to learn* (Desmond 1999:235). The respondents in this study, however, were not so easily convinced and showed a level of concern.

It is in our nature to bond with other living entities (Wilson 1993). Myers ((1998) notes that humans are developmentally inclined towards empathy, the exploitation of animals may generate moral discomfort and cognitive dissonance leading to the adoption of various ambient distancing mechanisms. This was very apparent. Despite the strong desire and intensity of the experience at the time, all respondents had ‘problems’ with seeing such powerful intelligent creatures in captivity: *“I was fairly worried about the captivity and the ‘tricks’ because I love Florida and the children love Disney and all that. But sometimes you do sort of think, well I don’t know, is this right? (Sally).*

Distancing mechanisms tend to mirror the messages conveyed by the captive industry, i.e. that dolphins appear to 'enjoy' the interaction, that they are well looked after and that the attractions do a lot for conservation and research. As this article has highlighted, these may be misconceptions: *"thinking about it all again now in detail, I don't suppose the dolphins benefit at all really."* (Laura).

In all cases SWD were deemed *"ridiculously expensive"* given the brevity, tightly controlled, rehearsed and 'false' nature of the experience. Dolphin tricks, in particular, whilst entertaining and intriguing, evoked some distaste. *"I suppose at the same time as giving me the opportunity of seeing them. It is still slightly sad that every day, all day long they could be doing these tricks when they should still really be in the wild."* (Anna).

One of the attractions of SWD programmes is the notion of having a one-to-one interaction with a fascinating animal. With hindsight respondents realised that there is no such personal interaction and this is a major disappointment. Clearly the experience is not what people expect. However, there is little doubt that humans do derive some considerable benefit and enjoyment from SWD experiences. The question is whether the contact with an animal-other enhances understanding of the animal kingdom or whether such interaction programmes merely reinforce the socially constructed images from popular media. On the surface, these findings suggest that the educational message of captive SWD programmes is not strong and is certainly not remembered in the long-term which makes for a highly utilitarian understanding of marine mammals.

## List of References

Ackerman, D. 2003. 'At-one-ment', in *Between Species*, T. Frohoff, and B. Peterson (Eds). San Francisco: Sierra Club Books. pp41-48.

Adelman, L., Falk, J. H., and James, S. 2000. Assessing the National Aquarium in Baltimore's impact on visitors' conservation, knowledge, attitudes and behaviours. *Curator* **43**: 33-61.

Barney, E. C., Mintzes, J. J., and Yen, C. F. 2005. Assessing knowledge, attitudes and behaviour toward charismatic megafauna: the case of dolphins. *The Journal of Environmental Education* **36**(2): 41-55.

British Broadcasting Association (BBC) 2003. *'Fifty Things to do Before You Die'*. 10. September 2003, 06:30 GMT 07:30 UK. Available from URL: <http://news.bbc.co.uk/1/hi/programmes/breakfast>. (20,000 respondents).

Beardsworth, A. and Bryman, A. 2001. The wild animal in late modernity. *Tourist Studies* **1**(1): 83-104.

Broad, S., and Weiler, B. 1998. *Tigers and Tourists: The Learning Opportunities of Captive Wildlife Exhibits*. Proceedings of the Australian Tourism and Hospitality Research Conference (pp88-105). Sydney, New South Wales: Bureau of Tourism Research, Canberra, Australian Capital Territory.

Broom, D. M. and Johnson, K. G. 1993. *Stress and Animal Welfare*. 2<sup>nd</sup> edn. London: Chapman and Hill,

Bryld, M., and Lykke, N. 2000. *Cosmodolphins: Feminist Cultural Studies of Technology, Animals and the Sacred*. London: Zed.

Bulbeck, C. 2005. *Facing the Wild: Ecotourism, Conservation and Animal Encounters*. London: Earthscan.

CAPS 2005. The Captive Animals' Protection Society. *Boycott Dolphinariums*. Available from. URL: <http://www.captiveanimals.org/aquarium/press.htm>

Chin, C.L.M., Moore, S. A., Wallington, T. J. and Dowling, R. K. 2000. Ecotourism in Bako National Park, Borneo: visitors' perspectives on environmental impacts and their management. *Journal of Sustainable Tourism* **8**(1): 20-35.

CITES 2003. The Convention of International Fair Trade in Endangered Species of Wild Fauna and Flora. URL: [http://www.cites.org/eng/prog/mike\\_etis.shtml](http://www.cites.org/eng/prog/mike_etis.shtml).

Cloke, P. and Perkins, H. C. 2005. Cetacean performance and tourism in Kaikoura, New Zealand. *Environment and Planning D: Society and Space*. **23**: 903-924.

Cochrane, A., and Callen, K. 1992. *Dolphins and Their Power to Heal*. Vermont: Healing Arts Press.

Crang, M. 1997. Picturing practices: research through the tourist gaze. *Progress in Human Geography* **21**: 359-373.

Curtin, S. C. 2006. Swimming with dolphins: a phenomenological exploration of tourist recollections. *International Journal of Tourism Research* (in print).

Davis, D., Banks, S., Birtles, A., Valentine, P. and Cuthill, M. 1997. Whale sharks in Ningaloo Marine Park: managing tourism in an Australian Marine Protected Area. *Tourism Management* 18(5): 259-271.

DeMares, R. and Krycka, K. 1998. Wild animal triggered peak experiences: transpersonal aspects. *The Journal of Transpersonal Psychology* **30**(2): 161-177.

Desmond, J. C. 1999. *Staging Tourism: Bodies on Display from Waikiki to Sea World*. Chicago, IL: University of Chicago Press.

Dierauf, L. A. and Gulland, F. M. D. (Eds) 2001. *CRC Handbook of Marine Mammal Medicine* (2<sup>nd</sup> edition) Boca Raton, FL: CRC Press.

Dimopoulos, D., I., and Pantis, J. D. 2003. Knowledge and attitudes regarding sea turtles in elementary students on Zakynthos, Greece. *The Journal of Environmental Education* **34**: 30-38.

Dodds, M. 2005. *Marine Connection*, London W2. (Personal communication). URL: <http://www.marineconnection.org/>

Dold, C. D., Sweeney, J., Reidarson, T., McBain, J., Monfort, S. 2000. *Circulating Levels of Cortisol and Aldosterone in the Atlantic Bottlenose Dolphin (Tursiops Truncatus): A Comparative Look at Display Animals*. In: Proceedings of the AAZV/IAAAM Joint Conference, p494.



- Evans, P. G. H. 1988. *The Natural History of Whales and Dolphins*. London: Helm Publications.
- Fjellman, S. 1992. *Vinyl Leaves: Walt Disney World and America*. Boulder: Westview Press.
- Foxhall, G. R., Goldsmith, R. E., and Brown, S. 1998. *Consumer Psychology for Marketing*. (2<sup>nd</sup> Edition). Oxford: Thomson Learning.
- Franklin, A. 1999. *Animals and Modern Cultures: A Sociology of Human-Animal Relations in Modernity*. London: Sage Publications.
- Frohoff, T. G. 2003. The Kindred Wild. In Toni Frohoff and Brenda Peterson, *Between Species: A Celebration of the Dolphin-Human Bond*. San Francisco: Sierra Club Books.
- Frohoff, T. G. 2004. Stress in Dolphins. *Encyclopedia of Animal Behaviour*. Westport, Connecticut: Greenwood Press: 1158-1164.
- Frohoff, T. G. and Packard, J. M. 1995. Human interactions with free-ranging and captive bottlenose dolphins. *Anthrozoos* **8**(1): 44-53.
- Hanes, A. 2001. Granby Zoo's Dolphin Plan Makes Waves with Activists. *The Gazette*, Montreal, 29 May A10.
- Hediger, H. 1964. *Wild Animals in Captivity*. New York: Dover Publications.
- Higham, J. E. S. 1998. Tourists and albatrosses: the dynamics of tourism at the Northern Royal Albatross Colony, Taiaroa Head, New Zealand. *Tourism Management* **19**(6): 521-531.
- Horne, D. 1992. *The Intelligent Tourist*. McMahons Point: Margaret Gee
- Hughes, P. 2001. Animals, values and tourism – structural shifts in UK dolphin tourism provision. *Tourism Management*. **22**: 321-329.
- Hughes, B. O., and Duncan, I. J. H., 1988. The notion of ethological 'need': models of motivation and animal welfare. *Animal Behaviour* **36**: 1696-1707.
- Johnson, W. 1990. *The Rose-Tinted Menagerie*. London: Heretic.

Kestin, S. 2004a. *Not a Perfect Picture*. Part 1: Park Life. Available online from URL: <http://www.sun-sentinel.com/news/sfl-dolphins-parks>. Date Accessed 13.04.2005.

Kestin, S. 2004b. *History of risks surrounds captures of water park marine animals*. Part 4: Animal Supply. Available online from URL: <http://www.sun-sentinel.com/news/sfl-dolphins-captures>. Date Accessed 13.04.2005.

Kestin, S. 2004c. *Sickness and Death Can Plague Marine Mammals at Parks*. Part 2: Causes of Death) Available online from URL: <http://www.sun-sentinel.com/news/sfl-dolphins-conditions>. Date Accessed 13.04.2005.

Kirtland, J. and Stringer, S. 1995. Ocean or zoological habitat: the dolphins' choice. *Soundings* **20** (2): 5-6 and 19-20.

Kyngdon, D. J., Minot, E. O. and Stafford, K. J. 2003. Behavioural responses of captive common dolphins, *Delphinus delphis* to a 'Swim-with-Dolphin' programme. *Applied Animal Behaviour Sciences* **81**(2): 163-170.

Lockyer, C. 1990. Review of incidents involving wild, sociable dolphins worldwide. In *The Bottlenose Dolphin* by S Leatherwood and R. R. Reeves (Eds). San Diego: Academic Press: pp 337-353.

Luck, M. 2006. Personal Communication. Michael Lück, Associate Professor, School of Hospitality and Tourism, Faculty of Applied Humanities, AUT University, Auckland, New Zealand

Marine Connection. 2005a. *Swimming with Dolphins: Shame El Sheikh*. Online document available from URL: <http://www.marineconnection.org>. Accessed 14.08.2005.

Marine Connection. 2005b. *The UK A Captive Dolphin and Whale Free Zone*. Online document available from URL: <http://www.marineconnection.org/campaigns/captivity>. Accessed 19.08.2005.

Marine Connection. 2005c. *So You Want to Swim With Dolphins?* Online document available from URL: <http://www.marineconnection.org/campaigns/captivity>. Accessed 22.06.2005.

Markowitz, H. 1982. *Behavioural Enrichment in the Zoo*. New York: Van Nostrand Reinhold.

Mazet, J. A. K., Hunt, T. D., and Ziccardi, M. H. 2004. *Assessment Of The Risk Of Zoonotic Disease Transmission To Marine Mammal Workers And The Public: Survey Of Occupational Risks*. Final Report Research Agreement Number K005486-01. Prepared for: United States Marine Mammal Commission. Davis: Wildlife Health Center School of Veterinary Medicine University of California.

McBain, J. F. 1999. Cetaceans in Captivity: A Discussion of Welfare. *Journal of the American Veterinary Medical Association* **214**: 1170-1174.

MORI (1996) cited WDCS 2005a. Arguments against Captivity. Available from URL: <http://www.wdcs.org/dan/publishing.nsf/allweb>. Date Accessed: 12/04/2005.

Morris, R. J. and, Lockyer, C. 1988. Twenty-two months in the life of a juvenile wild Bottlenose Dolphin. *Aquatic Mammals* **14**(2): 49-62.

Moustakas, C. 1994. *Phenomenological research methods*. Thousand Oaks. CA: Sage.

Muloin, S. 1998. Wildlife tourism: the psychological benefits of whale watching. *Pacific Tourism Review* **2**: 199-213.

Myers, O. E. Jr. 1998. *Children and Animals*. Boulder, CO: Westview Press.

Nollman, J. 1987. *Animal Dreaming: the Art and Science of Interspecies Communication*. New York: Bantam.

Orams, M. B. 1997. Historical accounts of human-dolphin interaction and recent developments in wild dolphin based tourism in Australasia. *Tourism Management* **18**(5): 317-25

Orams, M. B. 2004. Why dolphins may get ulcers: considering the impacts of cetacean-based tourism in New Zealand. *Tourism in Marine Environments* **1**(1): 17-28.

Orams, M. B. 2006. Personal Communication. Mark Orams, Coastal-Marine Research Group, Massey University, North Shore, New Zealand.

Patton, M. Q. 1990. *Qualitative evaluation and research methods (2nd edition)*. Newbury Park, CA: Sage Publications.

Relph, E. 1981. 'Phenomenology', In Harvey, Milton, E. and Holly, Brian P. (Eds) *Themes in Geographical Thought*. London: Croom Helm: 99-114.

Rose, N. A., Farinato, R., and Sherwin, S. 2006. The Case Against Captivity. Produced for the World Society for the Protection of Animals (UK) and the Humane Society of the United States.

Samuels, A. and Spradlin, T. R. 1995. Quantitative behavioural study of bottlenose dolphins in swim-with-dolphin programs in the United States. *Marine Mammal Science* **11**(4): 520-544.

Schanzel, H. A., and McIntosh, A. J. 2000. An insight into the personal and emotive context of wildlife viewing at the Penguin Place, Otago Peninsula, New Zealand. *Journal of Sustainable Tourism* **8**(1): 36-53.

Small, R. and DeMaster, D. P. 1995a. Survival of five species of captive marine mammals. *Marine Mammal Science* **11**: 209-226.

Small, R. and DeMaster, D. P. 1995b. Acclimation to captivity: A quantitative estimate based on survival of bottlenose dolphins and California sea lions. *Marine Mammal Science* **11**: 510-519.

Stephan, H., Frahm, H., and Baron, G. 1981. New and revised data on volumes of brain structures in insectivores and primates. *Folia Primatologica* **35**: 1-29

Suvantola, J. 2002. *Tourist's Experience of Place*. Aldershot: Ashgate Publishing Limited.

The Travel Foundation 2006. *Guide to Good Practice for Captive Wild Animals*. Available From: [http://www.thetravelfoundation.org.uk/tools\\_training\\_guidelines.asp](http://www.thetravelfoundation.org.uk/tools_training_guidelines.asp)

The Whale Foundation 2005. *Is it Cool to see Dolphins at the Zoo?* Available from URL: [http://www.whalefoundation.org.uk/Frame\\_pdf/Captivity\\_facts.do](http://www.whalefoundation.org.uk/Frame_pdf/Captivity_facts.do). Accessed 15/05/2005.

Thomson, C. A., and Geraci, J. R. 1986. Cortisol, Aldosterone and Leucocytes in the Stress Response of Bottlenose Dolphins (*Tursiops Truncatus*). *Canadian Journal of Fisheries and Aquatic Sciences* **43**: 1010-1016.

Thomsons (TUI) 2005. *Top 10 'Must do' Things* Thomsons' In-flight Brochure.

Trone, M., Kuczaj, S., and Solangi, M. 2005. Does Participation in Dolphin-Human Interaction Programs Affect Bottlenose Dolphin Behaviour? *Applied Animal Behaviour Science* **93**: 363-374.

Wang, N. 1999. Rethinking authenticity in tourism experience. *Annals of Tourism Research* **26**(2): 349-370.

Waples, K. A. and Gales, N. J. 2002. Evaluating and minimizing social stress in the care of captive Bottlenose Dolphins. *Zoo Biology* **21**: 5-26.

Whale and Dolphin Conservation Society. 2005a. *Arguments Against Captivity*. Online document at URL: <http://www.wdcs.org/dan/publishing>. (Accessed on 12.04.2005).

Whale and Dolphin Conservation Society. 2005b. *Swimming With Dolphins: What you Need to Know*. Online document at URL: <http://www.wdcs.org/dan/publishing>. (Accessed on 16.04.2005).

Whale and Dolphin Conservation Society. 2005c. *What lies behind the dolphin's smile? The case against dolphin feeding and petting pools*. Online document at URL: <http://www.wdcs.org/dan/publishing>. (Accessed on 12.04.2005).

Webb, N. G. 1978. Boat towing by a Bottlenose Dolphin. *Carnivore* **1**(1): 122-129.

Webb, N. L. and Drummond, P. D. 2001. The effect of swimming with dolphins on human well-being and anxiety. *Anthrozoos* **14** (2): 81-85.

Wilson, E. O. 1993. Biophilia and the conservation ethic. In S. R. Kellert and E. O. Wilson (eds.) *The Biophilia Hypothesis*, 13-41. Washington, DC: Island Press.

Woodley, T. H., Hannah, J. L., and Lavigne, D. M. 1997. A Comparison of Survival Rates for Captive and Free-Ranging Bottlenose Dolphins (*Tursiops truncatus*), Killer Whales (*Orcinus orca*) and Beluga Whales (*Delphinapterus leucas*) IMMA Technical Report 97-02. Ontario, Canada: International Marine Mammal Association.

WSPA 2005. *What's Wrong with Swimming with Dolphins?* World Society for the Protection Of Animals. Available from URL: <http://www.wspa-usa.org/pages272>. Accessed 10/08/2005

Zilber, M., 1998. *Open 24 Hours*. In: Proceedings of the International Marine Animal Trainers Association 26<sup>th</sup> Annual Conference. The Algarve, Portugal, November 1998.