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On: 12 March 2013, At: 13:31

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Annals of Leisure Research

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/ranz20>

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To cite this article: Carlie Wiener (2013): Friendly or dangerous waters? Understanding dolphin swim tourism encounters, *Annals of Leisure Research*, 16:1, 55-71

To link to this article: <http://dx.doi.org/10.1080/11745398.2013.768155>

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Friendly or dangerous waters? Understanding dolphin swim tourism encounters

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An upsurge in dolphin tourism has occurred over the past thirty years, including a steady increase of operations focused on swim activities. Apprehension over the rise in dolphin swim tourism on a global scale has led to few studies examining the social impacts of this activity. Contemporary issues pertaining to dolphin swim tourism will be discussed by using existing literature to present an overview of dolphin swim experiences, and review and contrast the differences in human-dolphin exchanges. Prior literature reviews on swim with dolphin research have been completed (Samuels and Spradlin 1995, Scheer 2010); however, they fail to include work on human perceptions of these experiences, and do not focus on the social implications of human-dolphin connections. This paper will update the literature including some of the research from the past ten years emphasizing tourist perceptions of dolphin swim activities.

Keywords: dolphin; marine tourism; swim-with; tourist perceptions; gaze

Who comes to watch who here? Is there, somewhere in the sunless abyss of the canyon, a place that offers human-shaped toys and memorabilia? Does a clicking voice gush 'human encounters this way, see homo sapiens in the wild' – Derek Grzelewski, 2002

Introduction

The origin of tourism as a social phenomenon is important to present-day research on human-animal relations. In the past three decades the study of tourism has spanned the social sciences including sociology, anthropology, geography, political science, and economics (Cohen 2008). This diversification of tourism studies has resulted in a larger scope of research, with expansion of particular niche tourism categories such as wildlife-based tourism. Social science contributions to nature-based travel began in the 1940s with Aldo Leopold's work on environmental ethics and wilderness conservation (Duffus and Dearden 1990). Urry (1990) explains that participation in tourism is a socially-organized behaviour influenced by society, historical periods, and communal groups. Clearly, the connection between culture, social perception, and tourism is undeniable. Long-standing interactions with animal species have been culturally engrained, with many political and social circumstances contributing to the shaping of present-day wildlife tourism. While the 'social experience' plays a considerable role in tourism studies, the geography or place in which these activities occur is also critical (Gren and Huijbens 2012). The parallel development of wildlife tourism and environmental politics has created a platform

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for public interest in specific animals and locations, including many marine mammals and habitats.

Marine wildlife tourism is designed to provide a unique experience by making possible close interactions with aquatic fauna in specific geographic locations. Within marine wildlife tourism, encounters with cetaceans (whales and dolphins) have been particularly prevalent. The recent popularity of interactive dolphin swims has led to the expansion of businesses that incorporate in-water ‘swimming’ experiences. The processes by which these locations are constructed are reliant not only on economic development, but also on the cetaceans themselves (Cloke and Perkins 2005). Human fascination with dolphins reflects a long and variable relationship that has been shaped by cultural, social, and scientific perspectives.

Prior to interest in marine wildlife tourism, a long-standing history of spectator encounters with captive cetaceans occurred. The New York Aquarium was the first place where dolphins were displayed in 1913, followed by the Marine Studios in Florida in 1938 (Hughes 2001). Subsequently, the film release of *Flipper* in 1963 increased the popularity of marine mammals furthering interest in human-dolphin contact ranging from lone, sociable cetaceans to commercial swim-with-dolphin tours (Burnett 2010, Constantine 2001). This paper will use existing literature to present an overview of dolphin swim tourism, by looking at animal encounters documented by academic papers, and by extrapolating the existing trends and social meanings produced through these experiences. Exploring social science writings on dolphin tourism will help to place the topic within the broader tourism and leisure literatures. Summation of dolphin-themed writing will demonstrate the current knowledge in dolphin tourism work and consider the direction that research should be taken in the future.

Methodology

A comprehensive literature review of academic papers that were published over a period of 16 years spanning from 1995 to 2011 was completed to identify research related to dolphin swim tourism. Papers were divided into natural and social science research and then reviewed by theme and content. Trends were identified and compiled which are reflected in this paper. Figure 1 offers a summary of dolphin swim research locations frequently identified in the literature. Most notably, the

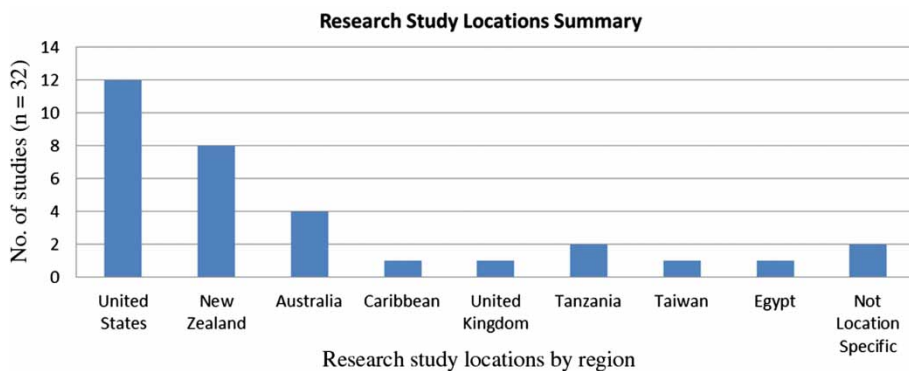


Figure 1. Dolphin tourism natural and social research study locations (n = 32).

United States (38%) and New Zealand (25%) have been the source of the majority of dolphin tourism studies ($n = 32$).

Themes were extrapolated from the literature, exploring the different types of dolphin tourism; emphasis was placed on tourist interactions with dolphins, tourist perceptions and motivations, visitor preferences, and the sensory experience of dolphin swims.

Existing research has frequently discussed dolphin tourism without specifically characterizing the activity. From this literature search, a definition for dolphin tourism was constructed as any recreational or commercial dolphin watching, feeding, or swimming activity conducted in either a natural or captive environment. 'Dolphin' as a term was also defined and employed as a way to address cetaceans most commonly involved in 'dolphin tourism', and excludes 'whale watching', which typically emphasizes larger-sized marine mammals. As a result, 'dolphins' were considered to be a large group inclusive of toothed, small cetacean species (under 10 feet in length), in both natural and built environments. Dolphin tourism can vary dramatically depending on the type of activity pursued; there are individual differences between feeding, swimming, and watching options (Bulbeck 2005). The majority of dolphin swim programmes involve coastal dolphin species; however, there are a few exceptions where swimming in open ocean occurs.

Dolphin tourism is a highly valued activity for participants and others who rely on it for their livelihood. This literature review lays a foundation for criteria that have been ascribed to previous dolphin tourism research in the social sciences. Analysis of omissions in the research will be discussed and the direction that should be taken in future studies will be considered. It is important to understand the previous literature as it relates to dolphin swim tourists and their behaviours, allowing for comparison of current experiences to previous literature.

Dolphin tourism

What constitutes a dolphin encounter?

Several studies look at human-dolphin interactions during wild swims to consider what constitutes successful dolphin contact for the participant. Newsome *et al.* (2005) describe the proximity of dolphin encounters along a continuum from direct physical contact to viewing only, depending on characteristics and status of species, the environmental situation, and the animal's sense of control. Scheer (2010, p. 445) defines a successful dolphin encounter as a 'swim with one or more cetaceans within 20 meters for 15 seconds or longer'. Interactive behaviours are further defined by the 'initiation of one plus cetacean directed towards a swimmer within the two to twenty meter range' (Scheer 2010, p. 445). Other research uses different characteristics such as length of swim time (Amante-Helweg 1996) or proximity (Constantine 2001) to define human-dolphin interactions. The most widely used definition considers a successful swim attempt when one dolphin is within five metres of a swimmer (Constantine 2001, Constantine and Baker 1997).

Captive dolphin interactions

Three types of interactions are available in captive dolphin facilities including feeding, swimming, and dolphin-assisted therapy, although opportunities continue to

grow in order to capitalize on market interest (e.g. dolphin trainer for a day, dolphin t-shirt painting) (Curtin 2006). Figure 2 demonstrates a typical captive enclosure with three bottlenose dolphins in an aquarium in Spain. Captive marine environments including aquaria, oceanaria, dolphinarium, and open-water sea pens are believed to be an excellent way to bring marine species to the attention of the public, thereby supporting education and conservation (Ballantyne *et al.* 2007). Scholars such as Amante-Helweg (1996), Bulbeck (2005), and Saltzer (2001) reinforce that direct contact creates a more meaningful experience leading to a stronger conservation ethic; however, to say that all facilities provide equally enriching experiences is quite a generalization.

Other scholars refute claims of the aquarium as an institution of education and conservation: in one study, Lück and Jiang (2007) explore the handling of marine mammals, rejecting the way aquaria market captive experiences. Problems with dolphin feeding pools have also been noted, as exemplified by a study which showed significant risk to the dolphins from crowding, noise, and constant stress (Frohoff 2003). Captive dolphin swims differ from feeding pools, comprising of sessions that have up to 12 people spending 20–40 minutes standing where dolphins directly interact with participants by petting, kissing, or towing swimmers (Curtin 2006).

Captive environments democratize access to large and exotic species, allowing the general public more exposure to marine mammals (Bulbeck 2005; Desmond 1999, Urry 1990). The ‘wild’ experience differs in that it is often sold to a higher-end market requiring more planning, knowledge, and finances; however, increasing shifts to wild interactions have been noted (Hughes 2001). Even in wild environments, habituation of dolphins from human actions of feeding and swimming occurs, as demonstrated by the renowned Panama City dolphin, Beggar. Famous for accepting handouts like fish and hot dogs, Beggar died prematurely in September 2012 (Nohlgren 2012). In a 2010 study, Beggar was followed and over 3600 human interactions were observed including 169 attempts to feed him 520 different food items (Watson, 2012; Cunningham-Smith *et al.* 2006).

Socially constructed ideas of dolphins as altruistic, happy friends deeply affect the way humans orient their behaviour towards this species. The problem lies in the misconceptions that these false characteristics produce. Numerous examples of dolphin swim encounters have resulted in injury, life-threatening behaviour, and even death (Desmond 1999, Orams 1997, Samuels and Spradlin 1995). Unprovoked



Figure 2. Typical concrete viewing tanks found in dolphinarium (C. Wiener).

attacks are rare but do occur, as demonstrated by a violent assault from an aggressive short-finned pilot whale off the coast of Hawaii (Shane *et al.* 1993). Dangerous encounters have occurred in controlled and captive dolphin swim settings as well. Smith *et al.* (2008) show that rates of dangerous contact are heightened when wait times before feedings are extended in captivity. Notwithstanding that these risks exist, there is a noticeable lack of comment on human perceptions of such threats in the literature.

Wild dolphin swim interactions

Media featuring the social nature of wild dolphins has led people to view and swim with these animals (Lemieux 2009). Local communities witnessing the demand for interaction began taking people out in exchange for money, leading to the formation of wild dolphin tour businesses (Hughes 2001). The construction of wild dolphin 'experiences' eventually developed into big business leading to greater requests for marine mammal interactions in natural environments. Moray Firth in Scotland is a notable example of this process (Hughes 2001). Wild dolphin swim activities are also dependent on performance, and contribute to the formation of place-based human approaches to wild dolphin environments. For example, locations like Shark Bay, Australia or Kaikoura, New Zealand now predominantly revolve around dolphin tourism, shifting how locals and tourists value these locations.

Hu *et al.* (2009) validate increased interest in tourists who want to swim with wild dolphins based on a large jump in internet search hits about dolphin swims in Hawaii from 2250 in 2002 to 31,400 in 2007. This has also been demonstrated in the annual gross income from Hawaiian wildlife-viewing operations, which jumped from US\$163,480 in 1999 to US\$1,955,181 in 2006 (NOAA Fisheries 2007). Hawaii has become a hotspot for 'wild dolphin swim experiences' due to the predictable Hawaiian spinner dolphin (*Stenella longirostris*) population; yet, it is just one example of the many growing hotspots for dolphin tourism. Studies like Hu *et al.* (2009) highlight the economic value of dolphin tourism by understanding how consumers value dolphin excursions. This area of research has wide implications for exploring the user groups and demands of the dolphin tourism industry that goes beyond short-term profit maximization. Surprisingly, Hu *et al.* (2009) are currently one of the few studies to conduct an economic analysis of dolphin tourism.

In wild interactions, both the human participant and the dolphin are provided with more freedom; however, sharing the experience with a large group of humans can take away from the naturalness of the experience (Besio *et al.* 2008). Crowding people surrounding dolphin pods can detract from the activity at hand. Less structured swims inherent in wild, open-ocean programmes, develop more uncertainty in how operators and participants should behave raising questions such as 'how close one should get to a dolphin?' (Garrod 2008). This is markedly important for participants who have little knowledge of or contact with any type of animal and, therefore, have little experience upon which to base their decision making (Garrod 2008). The multiplicity of etiquette practised by operators is a major concern considering the growth of marine mammal tourism, specifically wild dolphin swim programmes in developing countries around the world. Not all wild dolphin swims are created equally, and therefore experiences will vary depending on location, dolphin species, and individual companies.

Global expansion of dolphin tourism

The exponential growth of dolphin tourism over the past 20 years has been exemplified by countries such as Australia, which target over 70 marine species as part of their thriving tourism industries (Birtles *et al.* 2001, Scheer, 2010). Historically, Australia and New Zealand have been the two countries offering the greatest variety in dolphin tourism opportunities. New Zealand's management system through the state conservation agency (Department of Conservation) allows wild dolphin swims, while Australia boasts three controlled wild dolphin feeding programmes: Monkey Mia at Shark Bay; Tangalooma on Moreton Island; and Burnbury. Monkey Mia is an example of a stricter management and enforcement dolphin feeding programme, with no touching or swimming allowed (Cater and Cater 2007). Details of Australian dolphin tourism are important to consider as they are primary examples of government-driven management and infrastructure.

Certain countries have prospered more than others in the popularization of their marine tourism markets based on the development of surrounding cetacean populations. A growing reliance on marine tourism, like dolphin swims, exists in many developing countries as a tool to elevate their local economies (Cater and Cater 2007). Taiwan, for instance, is a country that is shifting from major whaling and dolphin slaughter to marine tourism as a politically-friendly way to generate income (Chen 2011). In Zanzibar, the villagers from Kizimakzi have replaced the local Indo-Pacific bottlenose dolphin hunt with swimming activities becoming a major contributor to the local economy (Christiansen *et al.* 2010). Other communities have had a more difficult time transitioning from whaling to marine tourism.

Once infrastructure (often a boat and a sign is all that is needed) for dolphin tourism arises, word of mouth quickly spreads and the number of tour operators jumps from one to many. An example of this occurred in Samadhi, Egypt, where a pod of spinner dolphins went from being a side attraction to bringing up to 800 people a day just to see the dolphins (Notarbartolo-di-sciara *et al.* 2009). When the infrastructure cannot support the number of visitors and no long-term planning or management is implemented, tourism becomes an immediate problem. Issues surrounding human conflict include:

- debates over rights to natural resources (e.g. ownership of shoreline);
- damage to public property (e.g. loss of fishing grounds due to marine tourism boats);
- historical and cultural relations with resources (e.g. native ancestry of certain marine species);
- compatibility of user interests (e.g. kayak user displacement due to other boats). (Cater and Cater 2007)

In order to manage stakeholder relations, marine tourism policy is extremely important and requires research to understand how to mitigate both short and long-term effects of harassment and disturbance, and to monitor rule implication and enforcement (Martinez and Orams 2009). Understanding tourist perceptions also helps to inform policy and management regarding participant choices and attitudes towards marine tourism activities.

Tourist perceptions and motivations

Tourist perception and motivation is an important component of any form of tourism and helps to reinforce travellers' expression of self. Environmental concern has been shown to be a strong predictor of consumer purchases including activities selected while on vacation (Mobley *et al.* 2010). What is common to all wildlife tourists is an affinity for the outdoors, one that mostly has been developed early in life. Bixler *et al.* (2002) validate this, showing evidence for childhood exposure to nature as essential in influencing environmental leisure choices and recreation activities in the outdoors. Interestingly, this early exposure has little bearing on environmental activism, an argument often used to justify the positive effects of marine and other forms of wildlife tourism (Bixler *et al.* 2002). Lee (2011) demonstrates additional attributes that impact environmentally responsible behaviour among tourists, including place attachment, recreation involvement, and conservation commitment.

In 1976, a famous study developed by Kellert created nine orientations towards animals that reflect human attitudes and behaviours (Kellert 1984). These categories are helpful for exploring the many ways people perceive and deal with animals; however, they do not capture the blurred distinctions that exist within individuals. Studies such as Kellert (1984), Lee (2011), Mobley *et al.* (2010), and Bixler *et al.* (2002) identify attributes that may influence environmental choices while on travel but do not take into consideration the effects that these 'ecotourism' choices have on the environment itself. The human passion and interest towards dolphins, for example, are what drive many people to inadvertently exploit them through dolphin tourism.

Prideaux *et al.* (2012) conducted surveys on rainforest visitors to identify the level of threat perceived while participating in forest tourism activities. Results showed that participants considered their influence to pose a moderate risk to the ecological integrity of the forest, highlighting the irony of their decision to participate in these activities (Prideaux *et al.* 2012). Another example specific to dolphin swim encounters was demonstrated by Wiener *et al.* (2009) when dolphin swim tourists in Hawaii verbalized extreme disappointment if they did not participate in up-close activities during wild dolphin encounter trips, even when operators said that it would not be in the best interests of the animals. Finkler and Higham (2004) identify this as 'the whale watcher's paradox': the desire to get as close as possible to the animals, while recognizing at the same time that this may have a negative impact on the species. Finkler and Higham's (2004) study of whale-watching tourists in the San Juan Islands verifies the dissonance people experience between wanting to protect cetaceans and a willingness to view them in a sometimes unhealthy environment. The question of how attitudes influence our behaviour towards animals is a central theme in the research on human-animal interactions. The complexity of tourist perception and decision making needs to be further addressed and cannot be simply compartmentalized into different boxes. Many people fit into more than one category and have varying influences on individual commitment and stewardship to the natural world.

Visitor preference

Incentives for participation in activities are not static and wildlife tourists differ in their values, levels of specialization, and desired wildlife experiences (Moscardo 2000,

Semeniuk *et al.* 2009). Many factors contribute to the enjoyment of the dolphin tourism experience. Cater and Cater (2007, p. 143) emphasize individual identity; they explain that the selection of recreation activities is used as a way of ‘distinguishing oneself from the “average tourist”’. This attempt to differentiate oneself justifies the high demand for off-the-track experiences with distinct species (Cater and Cater 2007). Understanding visitor preferences and motivations in dolphin tourism is important to decision making regarding permitted activities, and levels and types of interactions. By understanding choices that people make, managers can better tailor their outreach to specific groups and anticipate user conflicts or capacity issues.

The framing of marine tourism is vital to the participants’ experience; even factors outside the activity influence enjoyment, such as the weather, sea sickness, crowding, and the number of animals viewed (Newsome *et al.* 2005). Other aspects such as species selection also provide critical information regarding tourist preference. Newsome *et al.* (2005) explain that participants’ attraction to certain species is dependent on particular attributes like mental ability, similarity to humans, aesthetic appeal, and ability to form attachments. Popular accounts of human bonding with dolphins are an important catalyst; advertising, mediated portrayals, and word of mouth help promote these experiences (Newsome *et al.* 2005). Dolphin performance itself influences expectations based on the access to wild dolphins during an encounter and the proximity of the interaction. Significant targets of connection include the ability to make eye contact, getting within touching distance, and a physical exchange through patting, stroking, or riding a dolphin (Knight 2009).

The dolphin swim experience

Sensual experiences of dolphin swims

Cloke and Perkins (2005) use actor network theory to explore the mediation of dolphins in the development of tourism experiences. They emphasize the excitement associated with anticipation of first contact with a dolphin, the ability to collect photographic images, and the intimacy of direct interactions in dolphin swim events (Cloke and Perkins 2005). Other considerations not explored by Cloke and Perkins include feeling the aquatic environment and the equipment needed to swim in it. Swimmers require a snorkel and mask to be able to breathe and see underwater, and fins to hold pace with the dolphins. Entering the ocean requires the aid of technologies to keep up with what cetaceans do naturally, but how do these additions change the encounter (Merchant 2011)? Merchant (2011) and Cater (2008) address this gap using sensual phenomenology by emphasizing the intricacies of tourists lived experiences via the senses.

Even though Merchant (2011) does not directly address dolphin swim tourism, her account of the lived ocean experience is applicable here. The unique feeling that occurs when swimming is an important part of the wild dolphin swim experience. Merchant (2011) explores this body-landscape connection using affective engagements with the underwater world, allowing for investigation of this environment. More work is needed to explore the way dolphin swim participants use the ocean and the sensuous encounters involved with cetacean interactions. Many dolphin swim participants have highlighted the physical importance of this event from physically touching a dolphin, looking directly into their eyes, and feeling sonar across their

body (Davis 1997, Desmond 1999, Ocean 1997, Smolker 2001, Taylor 2003). These claims have yet to be documented and explored within an academic context, leaving a noticeable gap in the sensual phenomenology research associated with dolphin swim interactions.

Swimming in a wet and foreign environment can be enough of a new experience on its own (Cater 2008). Aside from the feeling of being in water, dolphin swim participants emphasize the emotions felt following their interactions with dolphins (Lemieux 2009). Common participant reactions include increased energy both during and following the swim, reports of becoming happier, feeling amplification of the senses, later dreaming about dolphins, and entering a contemplative or meditative state (Lemieux 2009, Ocean 1997). Swimmers note the importance of proximity in a dolphin swim encounter as indicated by Knight (2009) above.

Dolphin eyes and the tourist gaze

Swimmers report a stronger emotional connection when they feel acknowledged by a participating dolphin. Making eye contact is considered to be one of the most profound experiences for individuals in wild and captive dolphin swims (Curtin 2006). Addressing both the literal and metaphoric visual intake of dolphins during swim experiences, Urry's (1990) tourist gaze concept lends perspective to underlying consumptive behaviours. Urry (1990) accounts for pre-existing images, which he believes are deeply embedded into human culture, shaping expectations of what people anticipate from an encounter. Advertising people frolicking, kissing, and playing with dolphins reinforces the public's desire to participate in these activities. The gaze itself divides into two forms requiring an experience of authenticity – the romantic (a personal relationship with the object of the gaze), and the collective (presence of a large number of other people engaged in the gaze) – both of which are present in dolphin swim tourism (Urry 1990). Urry (1990) contemplates the tourist experience through an already existing frame created by representations found in media and elsewhere. Many examples illustrate this, such as the 1963 motion picture *Flipper* and the following resurgence of aquaria visitation, or the rise in Australia's snorkel tourism following the release of *Finding Nemo* in 2003 (Hahm 2004). Popular accounts of human bonding and attachment to wildlife have been important catalysts in dolphin swim tourism, increasing specialization in the industry as more people become comfortable with the activity.

The tourist gaze not only applies to how the participant views dolphins, but in the way in which this interaction is visually captured. The photographic image during dolphin encounters is so important that it can actively construct the swimmer's perception of the event. For many, the gaze is not just between humans and dolphins, but humans and the camera as well (Berger 1980, Urry 1990). Tourists can become fixated on the objective of capturing photos, resulting in a loss of interest once the moment is captured on film (Smolker 2001). Most people do not really engage in meeting with the dolphin, as they witness it from behind the camera (Cloke and Perkins 2005, Smolker 2001). As demonstrated in Figure 3, a photograph visually represents the 'ideal moment' in a dolphin interaction. Warkentin (2007) highlights pictures as key objects, serving as confirmation of participation to be shared with family and friends. Dolphin swim companies play on this by offering to take photos or video so that the experience is guaranteed to be captured.



Figure 3. An example of the 'ideal moment' targeted for photograph in a dolphin feeding experience (C.Wiener).

Scholars such as Ryan (1997) and Urry (1990) have written a multitude of papers on the photographic construction of tourism; however, the question of how a dolphin can reciprocate the gaze during these pictured encounters is missing from the literature. More research needs to take into account the cognitive functioning of the dolphins themselves during human encounters. Unfortunately, cetacean behaviours are often misinterpreted because of false assumptions that dolphins are happy due to their upturned curve in the rostrum, or a twinkle in the eye (Desmond 1999, Lemieux 2009, Smolker 2001). Some dolphin species are easily challenged by direct eye contact and perceive this behaviour as threatening (Smolker 2001).

How meaning is generated for a dolphin and a human differs greatly due to their individual environment, or *umwelt*. Deely (2001) sees the *umwelt* as a mechanism for humans to understand the individual experiences of other beings within a larger physical environment; however, the reading of animal signs is also blurred by human-centred viewpoints. When assigning meaning to animal behaviour it is important to remember that individual interpretation of these signs can colour the human perspective (Besio *et al.* 2008). Misinterpretation is common because it contradicts the desired human experience of mutual enjoyment from the exchange. Emphasis in the literature on dolphin swim encounters often misses a critical piece of this relationship by ignoring the animal's experience. Human participants have no problem when they are responsible for the gaze direction, but feel uneasy without knowing how they are being observed. Derrida and Wills (2002) account for this form of witnessing in their famous piece *The Animal That Therefore I Am*. Calarco (2008, p. 124)

comments on Derrida's observation of the visual relationship between humans and animals:

What Derrida is describing is not an encounter with the gaze of 'an animal' (in general), but finding oneself being seen by the uncanny gaze of a particular animal, a cat, this little female cat that, even though it is domesticated and all too familiar, nonetheless retains the capacity for challenging that familiarity.

Although Derrida references a domesticated cat, the experience is not overly different from accounts of human swimmers who have encountered eye contact with dolphins (Calarco 2008). The involvement of both human and animal in an interaction is powerful, creating vulnerability and expression for both participants (Calarco 2008). Derrida discusses the literal and metaphorical nakedness he feels from an animal's gaze. The fact that humans are willing to emotionally and physically connect to a non-human subject is influenced by an ingrained power dynamic, with less judgement and intimidation felt in the presence of animals. According to Derrida and Wills (2002), nudity in this sense is not of being literally naked, but exposing one's inner and true feelings to the world. The dolphin stare in a swim experience is critical to the human-dolphin connection. White (2003, p. 74) describes his feelings when a dolphin returns his gaze during a swim encounter.

What happened when that dolphin looked at me? The gaze stripped me of all presumption. But it was more, the dolphin 'regarded' me. I have never seen such complexity, humor and recognition in the eyes of any creature other than humans, and rarely enough in those. Inside that sleek gray dolphin body was a person. No doubt about it: a self-aware, evaluating, conscious, thinking, playful and accepting person.

The eyes of dolphins during these interactions are represented as important social cues used to infer mental states; however, just because there is an implied understanding of behaviour does not mean the dolphins are ascribing the same meaning to their actions (Keeley 2002).

Touch and connection

Every year, more than 50,000 people seek out touch experiences with dolphins, wanting to participate by using their bodies (Olmert 2009). Cater and Cater (2007) attribute the desire to physically engage with dolphins to the fact that humans do not connect directly with the natural world as much as they used to. The embodied experience of being physically in a dolphin's environment creates a close connection with nature, producing an emotional response in the participant (Besio *et al.* 2008). Ocean (1997, p. 78) describes the physicality of her incident swimming with the dolphins:

A dolphin moved to my left and we swam eye to eye. This seemed very significant, as if a long-lasting friendship was being honored. Together we would bend and dive shallowly, roll and swim belly to belly, returning together at the surface.

When humans swim with dolphins a bond is often felt by sharing the same environment. This intimacy has become an important part of the swim experience (Clope and Perkins 2005).

The need for contact

Contact is an important part of dolphin tourism both in captive and wild settings, as demonstrated in Figure 4. The method in which marine mammal interactions take place affects the overall perspective of the experience. For example, the viewpoint from a boat above the ocean will produce a different encounter from someone who is in a pool or watching from land. Cater and Cater (2007) reason that the need to get ‘up close and personal’ stems from a desire for connection. Humans can achieve a sense of control through the manipulation of wildlife by touching and feeding, although this can become extremely dangerous when the animals lose interest. Newsome *et al.* (2005) document tourists trying to elicit responses by shouting, throwing objects, and chasing wildlife because the animals ignore them. Saltzer (2001) surveyed marine tourism participants and found more than 50% identify contact with animals as necessary for a positive experience. Another survey by Bulbeck (2005) suggests that visitors to wildlife encounter sites do not consider their interaction to count when animals ignore them; however, if physical contact is made then people are satisfied.

Sensory engagement is also important to cetaceans. Dolphins are very sensitive to touch and how they initiate contact. Cetaceans communicate with their bodies using flukes, pectoral fins, teeth, and rostrums to demonstrate pleasure, warning, and affection (Dudzinski and Frohoff 2008). Dolphin swim participants may be communicating something unintentionally through their body language which could be misinterpreted by the dolphins. For example, the excitement and allure of the interaction can lead to an adrenaline rush in human swimmers, causing chasing behaviours. In order to emulate dolphins in their swimming conduct, many companies encourage participants to use ‘dolphin position’, avoiding aggression or misinterpreted body language. Hands at the swimmer’s sides or clasped behind backs, legs kicking slowly with deep strokes, head in the water, breathing slowly and relaxed movement is the suggested method (Dudzinski and Frohoff 2008).



Figure 4. The need for physical contact is central to the dolphin-human interaction (S. Stanley).

Recommendations for further study and management

Those who partake in dolphin tourism are an interesting sub-set of marine tourists and may differ from other types of travellers in their frequency of involvement, knowledge level, and goals. This is an area requiring further exploration in the literature characterizing the behaviours and interests of dolphin tourism participants. Social science studies of human perceptions in dolphin tourism are a relatively recent area of study. More human dimensions work is needed in understanding the experiences people seek through wildlife viewing: in particular, what distinguishes tourists who pursue participation in captive dolphin swim activities versus wild dolphin swims? Dolphin tourism is a complex and multidisciplinary area of study that requires analysis and cultural considerations. The meanings produced through the tourism experience are essential to understanding the role of wildlife in the social construction of nature. As perceptions change with time, it is these shifting opinions that help to explore the place of marine wildlife in modern society.

The context of personal experience is a pertinent theme to explore when considering human dolphin relationships. The importance of how space influences contact in dolphin swims needs to be addressed using sensual phenomenology. Unfortunately, the majority of existing literature such as Lemieux (2009) and Ocean (1997) approaches these concepts through personal accounts and experiential recollections, leaving a hole within the academic research. Other issues of importance include determining the motivations behind wild dolphin tourism and the emotional gratification that participants receive. Issues pertaining to why people want to swim with dolphins, the conservation values produced and the perspectives of humans following dolphin swim activities are all important areas requiring further research. Scholars such as Ballantyne *et al.* (2007), Lück and Jiang (2007), Moscardo (2000), and Saltzer (2001) request more work on learning in wildlife tourism settings, emphasizing the influence of dolphin swims on people's relationships with the natural world or actions towards marine conservation.

Understanding the dolphin tourism market is another source of information needed to make predictions about future expansion of operations and demands of potential tourists. The collection of primary economic and tourist demographic data is necessary, including the price and services offered by each operator and potential number of participants (Hu *et al.* 2009). Hu *et al.* (2009) emphasize the need for tourist data to facilitate demand analysis and determine the relationship between price and services in consumers' decisions to join excursions.

Further research looking at the effects of dolphin tourism on communities, tourists, and dolphin populations on a global scale is also needed, providing criteria for standardization of management regulations and economies. It is important to consider both biological and social sciences to develop an integrated analysis of the problems related to dolphin tourism. Additional study from in the water is also needed, as little is known about wild dolphin interfaces once tourists are below the surface. Management requires guidance from research to understand how to mitigate both short and long-term effects, and to monitor rule implication and enforcement (Martinez and Orams 2009). Unfortunately, most of the research has been insufficient, and demand for dolphin tourism is pushing the industry beyond the limits of what the current data can justify (Bejder and Samuels 2003). Table 1 summarizes the recommendations for further research extrapolated from the review of the literature.

Table 1. Summary of future social science research needs pertaining to dolphin tourism.

Future social science research needs
(1) Participant perceptions and interactions of dolphins tourism in both captive and wild environments
(2) Sensual phenomenology work related to dolphin swim experiences
(3) Economic and market analysis of emergent dolphin tourism regions
(4) Perceptions of impacts associated with dolphin swim activities and how to best manage these
(5) Community-based perspectives and oral historical work in relation to dolphin tourism
(6) Investigation of participant conservation attitudes and efforts developed from dolphin tourism
(7) Integration of biological and social sciences across all marine tourism research
(8) In-water examination of the relationships between humans and dolphins during interactions

Conclusion

Emphasis on human-dolphin relationships has driven the popularity of both wild and captive swims in the tourism sector. This yearning to ‘swim with dolphins’ has developed hotbeds of tourism activity globally, transforming marine environments into popular destinations. Studies of tourist perceptions and human relations in dolphin tourism are a relatively recent area of research. Much of the literature surrounding dolphin swim tourism has been based on short-term, biological studies documenting the effects of human presence on dolphin behaviour. This paper represents a collection of other research that has drawn on the human experience in these dolphin encounters. Over time, human interpretations of cetaceans have reflected shifts in dominant societal perceptions. Whether people view dolphins as an idealized being in the wild, or as a performer in a captive facility, it is ultimately the individual experience that develops unique constructions of the species. Presenting the existing literatures relating to dolphin tourism has hopefully allowed for a better understanding of the human dimensions research including tourist perceptions and motivations, the global economic growth of dolphin tourism, and the sensory component of animal encounters. Dolphin swim tourism encapsulates a complicated and varied human response to animals and the range of relationships that people have with dolphins. This industry will likely not decrease but if critical examination of participants’ behaviours towards dolphins continues then an attempt to improve protection and management can be made.

Acknowledgements

I would like to thank my committee members Dr Paul Wilkinson, Dr Leesa Fawcett, Dr William Found, and Dr David Johnston for their continued support and efforts towards my research. Special thanks to Shelley Wiener and Elia Herman for their helpful suggestions on this manuscript. Funding for this research has been provided by the Social Sciences and Humanities Research Council (SSHRC) Canada, York University, and Dolphin Quest. I would also like to acknowledge the anonymous reviewers for their constructive comments and helpful feedback.

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