

NO PICTURES, NO MEMORY: CAPTURING IMAGE-TAKING BEHAVIOUR ON THE GREAT BARRIER REEF

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ABSTRACT

Photography is an important element of the tourist experience and provides both a method of later reliving the experiences of the journey as well as sharing elements of the journey with others. In the digital age photography has taken on a new dimension with the ability of people to enhance images as well as share them with others via new media such as the internet and blogs. This paper reports on research undertaken into the taking of photographs of the Great Barrier Reef and finds that respondents rate the need for good photographic images as a high priority.

Key words: Photography, digital camera, blogs, Great Barrier Reef

ictures, no memory: capturing image-taking behaviour on the Great Barrier Reef

INTRODUCTION

Travel and photography are strongly interlinked, mass tourism appearing within two years of the invention of photography. The importance of photography in tourism is evident in such statements as: “tourist events are not so much experienced in themselves but rather for their future memory” (Crang, 1997:366); “properly staged images will ensure – no matter how insignificant, boring, or disappointing the actual experience was – that the desired atmosphere will be projected into the future: ‘see for yourself, it really was a good holiday’” (Haldrup and Larsen, 2003:38); and “it seems positively unnatural to travel for pleasure without taking a camera along. Photographs will offer indisputable evidence that the trip was made, that the program was carried out, that fun was had” (Sontag, 1977:9). Indeed the title of this particular paper is taken from a respondent in Haldrup and Larsen’s (2003:38) paper who is recorded as having said “no pictures, no memory almost. Some memories, but they fade very quickly; if you

don't take pictures you forget, so if you take pictures then you go 'ah, I remember this' and then you remember other things that you didn't take pictures of'.

The role of imagery in tourism is widely recognised in the tourism academic literature, particularly since Urry (1990, 1995, 2002) introduced the concept of the tourist gaze and travelling as a visual consumption experience. Accordingly a number of studies have focussed on the role of brochures, travel shows and postcards in creating destination imagery (Fairweather & Swaffield, 2001; Dilley, 1986; Zhou, 1997). Photographic tourism has even been described as a form of niche tourism, with data available on market size, responsible tourism behaviour, and motivations (Palmer & Lester, 2005). However, according to Haldrup and Larsen (2003), tourist studies contributed little to understanding why and how tourists are producing photographic images. They suggest that "the existing literature tends to be of a speculative nature and it portrays tourist photography as a wasteland of pre-programmed shooting of image-driven attractions" (p.24). The aim of this paper is to examine the role that photography plays in the experiences of visitors to Queensland's Great Barrier Reef, building on previous knowledge from the "snap-shot" literature and Prideaux and Coghlan's (2006) study of the shopping behaviour of backpackers in Tropical North Queensland, which identified photographic goods as one of the most sought after class of purchase made whilst on holidays, and second only to groceries. The need for this research arose from discussions with tour operators who recognised that photography has a role in the tourism experience but were uncertain to how they should respond with strategies to enhance the opportunities to undertake photography.

The different subjects of photography

Many tourism sites are specifically designed to provide good photo opportunities (Jansson, 2007), particularly in zoos that try to minimise the prominence of bars and other man-made structures that would otherwise appear in shots (Markwell, 1997). This highlights the awareness from the tourism's supply side of the importance of photography. The role of photography as a tourism souvenir has become pervasive amongst attractions and tours with many wildlife parks, adventure activities (e.g. skydiving, bungee jumping, or horse riding) and tours to the reef and rainforest employing professional photographers to capture the tourist's holiday experience during their visit. The popularity of souvenir photographs is recognised by the supply side of the tourism industry (tour operators) highlights how little is known about the demand side for photography and the types of images that tourists seek, particularly since the widespread adoption of digital photography.

Some studies on tourism photography do explore the demand side of tourism photography. For example, it would appear that landscapes play a very important role as photography subjects because the tourist gaze has traditionally been linked to landscape and sceneries. Up to a quarter of photographs taken by tourists may represent images of landscapes (Haldrup and Larsen, 2003), sometimes more (35% in Markwell's study and 42% for Griffone and Weiler, 1992). Family and friends are often present in photographs, generally posing in a staged manner for future memories of the holiday, though sometimes playing (i.e. not posing) but rarely gazing upon the tourism landscape. The occurrence of family and friends as subjects was recorded in 24% of Markwell's (1997) photo samples and 37% of Griffone and Weiler's (1997) sample of photographs. It could be argued that the popularity of people as subjects is due to photography's role in producing social relations, rather than consuming places (Haldrup & Larsen, 2003). The social cohesion role of photography is therefore widely recognised and very important, particularly for families who use photography to produce personal narratives and memories (Larsen, 2005). Markwell (1997) has shown that photography helps to shape social interactions of the tour group, whereby posed group photographs occurred more frequently at the start of the tour, perhaps to help construct a group identity.

Some features of the trip are completely absent from holiday snaps. Markwell (1997:153) noted that "very few images of the mundane, the domestic or the unattractive were captured by the cameras, thus reinforcing the myth of the perfect (or at least, near-perfect) holiday [and giving] a false impression of the holiday experience as one devoid of domestic activity and routine, aspects of everyday life from which many people are trying to escape when travelling or on holiday". Perhaps because of this, we find that tourism photography has also been heavily criticised within the academic literature. Photography is seen as an aggressive behaviour, taking control (Sontag, 1977), allow the tourist to become active rather than passive: "having a camera transforms a person into something active, a voyeur" (1977:10), whilst at the same time creating an element of distance and separation. Stalker (1988:1) goes so far as to demonstrate the predatory nature of photography through its vocabulary: the camera is "loaded" with film, lenses are attached with a "bayonet" mechanism, and one "shoots" people and places to "capture" their images. Other authors such as Teymur (1993:6) state that photography acts as a "highly selective filter, eliminating, absorbing, transforming whatever goes through it", and "Seeing through the lens provides a respectable excuse for not having to know more, not getting involved" (1993:6).

The importance of imagery in tourism is so strong that statements such as these may be found in the tourism literature: “it was the camera that invented most of the sights we (as tourists) were expected to see”, and “one of the rituals of tourism is ‘doing’ the particular sights already defined by professional photographers...and photographing these sights in the same way as they have already been photographed in the travel literature, preferably with your companions in front of them” (Horne, 1992:112-114). Albers and James (1988) also comment on the apparent need of some tourists to take photographs similar to those found in brochures, and tourist satisfaction itself may depend on the opportunities provided within the tour to return home with photographs similar to or even the same as those contained in the tour brochures and postcards (Markwell, 1997).

Other examples of the manipulation of the reality of travelling are demonstrated by Markwell’s (1997) participant observation, where he noted that many of his participants took photographs of a jungle kitchen hut sporting a satellite dish, yet none of the resulting photographs showed this symbol of modern technology, perhaps because it was not considered appropriate for the setting. He concludes that “This pictorial selectivity serves to reinforce the myth of the perfect holiday in the perfect world, rather than demonstrating the problematics of traveling in the reality of a less-than-perfect world, and thus diminishing the educational value of the photographic collection, and by extension, the educational value of the tour experience as a whole” (1997:150). Creating a traveller reality may even change the entire focus of the trip, as Markwell (1997) suggested in his study that the “pictorial record of the tour for many of the participants resist[ed] the nature-orientation of the tour design and instead creat[ed] a culturally oriented tour”.

Technology, specialisation and distribution methods, and how this changes the travel experience

Portable media and staying in touch are becoming an integral part of the travel kit; cameras, telephones and GPS navigators are advertised in popular magazines, framed by sports, adventure holidays and other recreational scenes, reinforcing the connections between mobility, spatial appropriation and communication (Jansson, 2007). Indeed portable media are becoming much more pervasive in travel, e.g. airport areas assigned to wireless internet use, wireless hotspots and internet cafes. However, the effect of portable media on the experience of travelling has been somewhat ignored (Jansson, 2007), despite the recognition that many journeys are undertaken to sustain social relations (Urry, 2003).

The effects of new media on the travel experience are such that digital photography and video enable tourists to watch their recordings immediately and decide whether to keep them or to delete them and create new images. In addition, as images are exported to a camera they can easily be reworked and rearranged, sound can now be added, and the audio-visual records can be shared instantly via video-phone calls, MMS postcards, and film clips. In this study, we extend the existing knowledge regarding the use of technology to capture, store and share images, and look for correlations between respondent's socio-demographics, involvement with photography and use of technology.

Differences in socio-demographics

It would appear from previous studies that the subject and type of photography may vary according to the characteristics of the travellers. For instance, Chalfen (1987) stresses the importance of photographing first time events, particularly for first time visitors, whilst Markwell (1997) found that gender and university course (i.e. occupation) had a marked effect on landscape versus people as the focus of travel photography. In his study, he noted that social science students were more likely to take photographs of people (37%) than landscapes (21%) compared to natural science students (18% and 43%, respectively). Gender also played a role in Markwell's study where men were more likely to take photographs of landscape (50% of photographs) than people (14%), whilst women had a more even split (31% and 28%, respectively). Haldrup and Larsen (2003), while not explicitly investigating this aspect of photography, also found that the majority of the subjects of their family photographs are men and children, whilst the photographers are mothers and wives, arguable reinforcing the idea that women are more likely to take photographs where family and friends are the main subjects.

Some authors have made distinctions among traveller types based on their use of technology and in particular photography whilst travelling. Kontogreorgopoulos (2003:173) notes the difference between mass ecotourists, adventurers, immersive travellers and backpackers. Adventure travellers "travel with expensive, sophisticated equipment and the focus on photography is a serious matter, as is evident by the photo competitions held by adventure travel companies. More than the other groups, adventure travellers have a strong desire to encounter and capture, in an objectified way, "authentic natives" on film, thereby displaying a strong adherence to the dominant travel discourse and typified scripts". Maoz (2006) describes an "immersive" type of traveller, who tries to not stand out from the locals, by not revealing

expressions of the tourist gaze, nor triggering the local gaze. They therefore try to be on the same level as the locals when it comes to communication technology. Many backpackers display intermediate characteristics by wanting to capture their trip through photographs while simultaneously blending into the local community, by avoiding obvious attempts at photography. Some backpackers may also prefer journaling as an inexpensive but priceless souvenir and a way of avoiding stereotypical tourist photo rituals (Jansson, 2007), whilst using internet cafes for sharing digital photos, emailing and creating travel weblogs.

As we review the role that photography plays in travel and tourism, it is becoming increasingly clear that destinations need to ensure that they have an adequate understanding of the motives that visitors have for taking photos and provide opportunities for visitors to take photos, preferably in the places that have been used in promotional material. Benefits of understanding the photographic needs of their visitors include being able to employ the new digital word-of-mouth distribution system to identify both positive and negative recommendations. Positive recommendations inform marketers about the impact of destination marketing and enable destinations to identify emerging trends as well as declining interest in the destinations product line up. Capturing negative electronic word-of-mouth gives the destination an opportunity to quickly identify problems and implement actions to remedy the problem.

The research reported upon in this paper was undertaken to gain an insight into the photographic habits of visitors to the Great Barrier Reef (GBR) in the north of Queensland, Australia. Findings will then be able to be used by Reef tour boat operators to provide better opportunities for their passengers to take pictures. Specifically, the paper investigates

1. the type of technology used, level of involvement with photography and distribution channels used
2. the types of photographs taken and the importance of commercial souvenir photographs.
3. the motivations for taking photographs.

In addition, and based on the review of the literature, the paper examines some of the characteristics of the respondents and how this affects their photography, paying particular attention to the role of gender, occupation, travel party, motivation (strong adventure motivations) and first time versus repeat visitors.

METHODS AND SAMPLE CHARACTERISTICS:

The sample used in this study represents a subset of the visitor surveys collected from visitors to the GBR as a part of a study of reef tourism. The surveys are distributed by the crews of 10

GBR marine tourism operators from Port Douglas, Cairns, Townsville and Airlie Beach. Data were collected on reef visitors' socio-demographic characteristics, and travel patterns, motivations (using a 12 item Likert-scale), activities, alternative destinations considered and satisfaction (including expectations and best and worst experiences).

The data collected for this study are based on the responses to a series of photography-specific questions inserted into the final page of the surveys distributed in March 2007. The questions cover the type of equipment that respondents brought on their trip, souvenir photograph purchasing behaviour, motivations for taking photographs whilst on holiday, level of involvement in photography through a proxy measure of participating in a photography course, as well as storing and sharing technologies used by respondents.

As the research employed a snap-shot approach it does not allow for an in-depth study of topics to the level found in other studies. Rather it allows the researchers to examine a range of different, but interlinked, topics relating to the reef tourism experience they participated in. Other topics studied in a similar manner include water quality on the GBR, tourist's level of environmental concern and the economic value of the reef. Some limitations of this technique are that it is reliant upon the boat crews to distribute the surveys, raising some issues of randomisation and return rates; and was only distributed to tourists who speak English (as a first or foreign language), thus limiting the scope of cross-cultural comparisons. A major limiting factor was that questions were confined by space-commitments made to the industry so that the survey did not exceed three pages in length. This limitation in particular prevented deeper probing of a range of issues.

The final sample included a total of 243 respondents whose socio-demographic characteristics and travel behaviour are presented in Table 1.

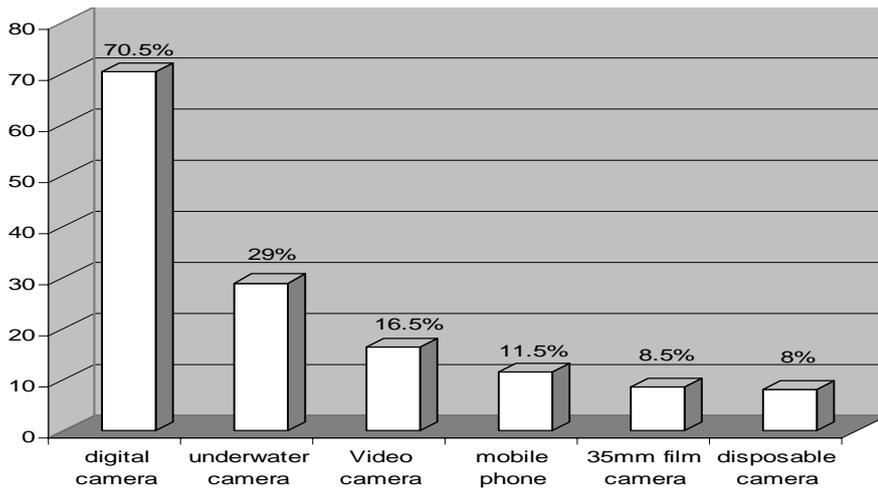
Table 1 The predominant socio-demographic characteristics and travel behaviour of the respondents

Gender:	47.5% male and 52.5% female.
Origin:	38% Australian, 22% from the UK & Ireland, 20% North American and 16.5% European
Age:	7.5% under 20 years old, 34% 20-29 years old, 20% 30-39 years old, 10% 40-49 years old, 10% 50-59 years old, & 17.5% 60 & over.
Occupation:	24.5% professional, 15% students, 12% retired/semi-retired, 8% self-employed
Travel party	39% with partner/spouse, 21% with friends, 15.5% with family/relatives, 12.5% alone, 10% tour group
Accommodation	26.5% hotel, 22.5% backpackers, 18.5% holiday apartment.
1st time visitor	70% first time visitors to the region & 78% first time visitors to the reef.
Motivations (Scale 1=low, 5 =high)	Visit the Great Barrier Reef (4.65), snorkel/dive (4.14), see the natural environment (3.89), rest and relax (3.89)

Characteristics which appeared for less than 10% of respondents have been omitted in this paper, but are available through online reports at www.rrrc.org.au

RESULTS

The most common type of photographic equipment used to capture visual records of the tourist experience was digital cameras with 70.5% of respondents saying that they had brought a digital camera with them (Figure 1). Whilst there were few significant gender differences in the type of technology used, it is interesting to note that men were less likely to have underwater cameras than women but more likely to have film cameras than women (Figure 2). There were also no significant differences between nationalities, age and occupation. Of some interest was the percentage of respondents using mobile phones as a photographic device, particularly among the younger respondents (20-29 year olds). Also of some surprise was the relatively large number of respondents who reported using film based disposable cameras, particularly among male respondents who were more likely to have them than women. A chi-squared to test the strength of this difference revealed that it was statistically significant (Chi-squared = 3.458, $p < 0.05$). The most interesting aspects of these results was the evidence of the rapid abandonment of 35mm print film and the new possibilities made available by the capacity of digital imagery to be shared electronically.



Note: Many respondents had more than one photographic device

Figure 1 The frequency of different types of photographic equipment used.

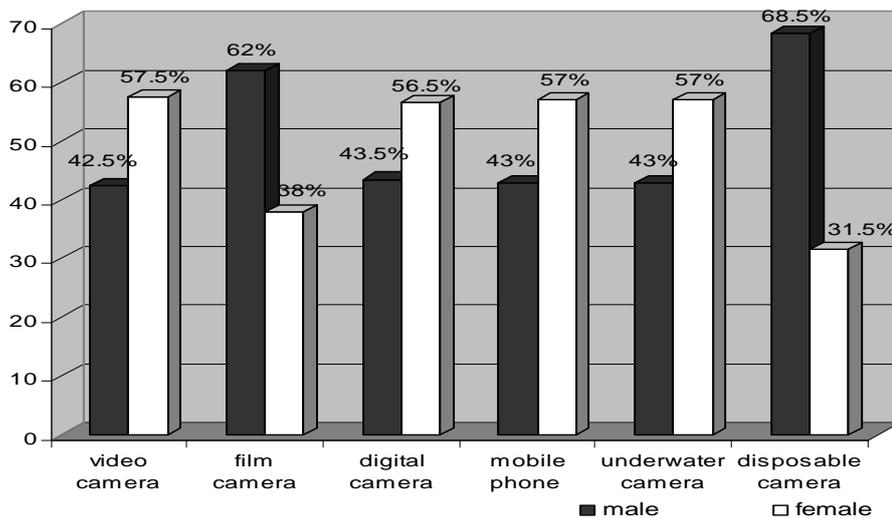


Figure 2 Gender differences in the use of different photographic equipment.

Using participation in a photography course as a crude measure of respondents' level of involvement in photography, we found that while the great majority of respondents (89%) had not taken a photography course in the last five years, a third said that they would like to. Of the group of respondents who had undertaken a course in photography many were women (69%), or 20-29 years old (34.5%) and owners of digital (92%) or underwater cameras (34.5%). In addition, many of these respondents were motivated by adventure-seeking (57.5%), did not buy photographs of themselves at attractions (66.5%), and felt that less than \$15 was a reasonable price for commercial photos (100%).

Analysis of the distribution channels used by respondents to store and share their images showed that the Internet was by far the most popular method for sharing photographs (64.5%) (Table 3). Only 14% of respondents used personal travel blogs and 21.5% had personal web pages. Using a mobile phone was slightly more popular, with 31% of respondents using it as a method of sharing images. The characteristics of respondents who used these means of distribution are shown in Table 2. In general, respondents tended to be younger and many were students. Compared to other groups students indicated that blogs were their preferred method of distribution followed by personal web pages. A slightly higher percentage of men (57.7%) had personal web pages compared to women, whilst more women used blogs (53.5%) and mobile phones to share their images (58%).

Table 2 The characteristics of respondents using the different distribution methods

		Overall results	Personal Web Page	Internet sharing	Mobile phone	Blogs
Gender	Male	47.5	57.7	47.5	42	45.5
	Female	52.5	42.3	52.5	58	54.5
Age	20-29	34	28.5	39	57	57.5
	30-39	20	23	15	12	3
Occupation*	Professional	24.5	27	24	23	24.2
	Student	15	27	19.5	14.5	42.5

*Note: these results should be interpreted with caution due to small sample sizes.

Respondents who had undertaken a photography course were also more likely to use new media as a distribution method for their images (Table 3). Again, the internet was the most frequent means to share their photographs (77%) and mobile phones were less popular (25%).

Table 3 Comparison of general results with those who have undertaken a photography course in the last 5 years.

	Personal Page	Web	Internet sharing	Mobile phone sharing	Blogs
Overall results (N=243)	21.5%		64.5%	31%	14%
Taken course (N=26)*	34.5%		77%	25%	23%

*note that this is a small sample size, and results must be treated with caution.

The types of photographs taken and the importance of attraction souvenir photos.

In common with previous studies, landscapes were one of the most common subjects in tourism photography, followed by other people (Figure 3). Photographs of attractions and general life were much less popular. The frequency of photographic subjects remained constant regardless of age, gender, occupation, travel party, motivation to visit the region and repeat visitation (both to the region and the reef). It is noteworthy in both cases that the frequency of landscape photographs and images of people are much higher than those noted by Markwell (1997) (35% and 24% respectively) and Griffone and Weiler (1992) (42% and 37% respectively), perhaps an artefact of different methodologies used; their studies being based on content analysis of actual holiday snaps whilst this study using self-elicitation of preferred photographic subjects.

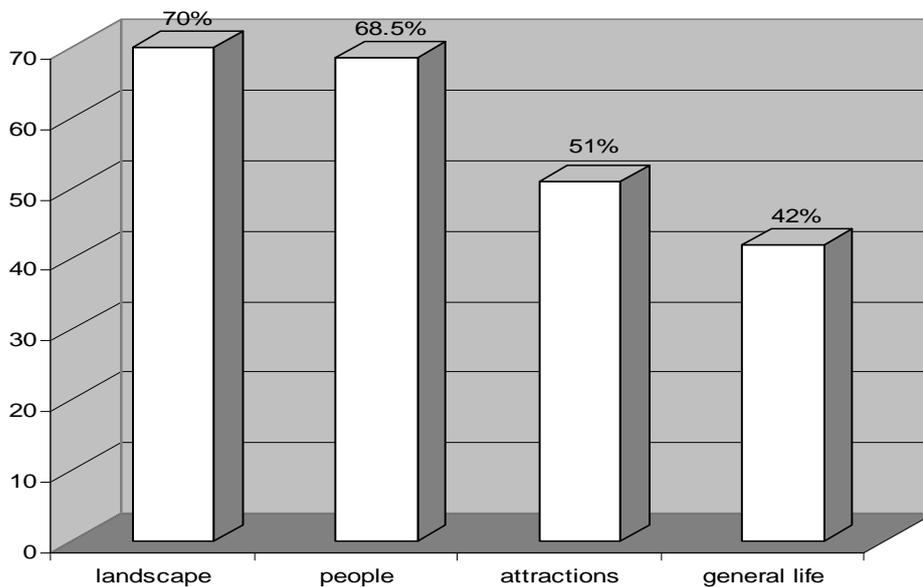


Figure 3 The frequency of landscapes, people, attractions and general life as tourism photography subjects.

Whilst many tourism operators offer photographic souvenirs of tours, purchasing photographs of themselves at attractions was not a popular option for the majority of respondents, with only 29% saying that they had bought one, regardless of whether this was their first visit to the reef or region or not. The most common attractions where tourists had purchased a photograph were on board the vessel (14 respondents), sometimes doing a particular activity, such as snorkelling, travelling in a semi-submersible boat, or in the company of one of the friendly maori wrasse (“Wally”) fish. The only other attractions mentioned were wildlife parks and zoos, again with animals such as koalas (four respondents) and a theme park (one respondent). Two respondents also mentioned the Whitsundays and Bungalow Bay, both sites presumably associated with a reef tour operator.

One of the reasons given for respondents not purchasing photographs of themselves at attractions was that the price was prohibitive. A total of 81% of respondents said that up to \$14 is a reasonable price for a photograph of themselves, whilst half of the respondents in this survey felt that AU\$5-9 is the most that they would pay. The average price of a commercial attraction photographs generally commence at \$15 and may be as high as \$30 in some instances.

By cross-tabulating the reasonable prices for photographs with tourist purchasing behaviour, it becomes apparent that whilst 31% of respondents who felt that less than \$15 is a reasonable price actually bought photos, while 50% of respondents who felt that \$15 or more is reasonable bought photos (note that this is based on a small sample size and statistical testing would be inappropriate) (Table 4).

Table 4 Cross tabulation of purchasing behaviour & reasonable price for souvenir photographs

			Reasonable price		Total
			<\$15	\$15 or over	
Bought a souvenir photograph	No	% of Total (Count)	65% (131)	3.0% (6)	68% (137)
	Yes	% of Total (Count)	29% (58)	3.0% (6)	32% (64)
Total		% of Total (Count)	94.0% (189)	6.0% (12)	100% (201)

Again as the sample size of respondents who bought photographs is small, further conclusions are unreliable, although it would appear that more women (26.5% of total female sample) are likely to want to pay less than men (31% of total male sample) (although both are equally likely to actually purchase photographs). In addition, whilst the age group most likely to pay \$15 or over is the 30-39 year olds, the groups most likely to buy photographs were those aged 20 to 29 years (34.5%) and students (14.5%). This poses an interesting business dilemma of whether to sell to a larger market at a lower price, or to a smaller market at a higher price. Other proportionally large market segments of respondents likely to buy photographs include couples (44.5%) or people travelling with friends (23%)

In a further analysis, the respondents were sorted into adventure travellers and non-adventure travellers, based on their rating for adventure activities as a motivation to visit the region. This

split the group into a total of 134 respondents for whom adventure activities were an important motivation (motivation scores of 4 or 5), and 90 non-adventure seekers (motivation scores of 1 to 3). An analysis of purchasing behaviour shows 68% of those respondents who bought photographs were in the adventure-seeking group, a significantly large proportion of this group (chi-squared = 8.228, $p=0.016$). Further, nearly all (90%) of the respondents who were willing to pay over \$15 were adventure-seekers, again a significant proportion of this group (Chi-squared = 8.343, $p=0.015$).

Motivations for taking photographs.

The respondents were asked to score the following two statements on a likert scale, where 1 means that they strongly disagree and 5 that they strongly agree.

“Photos are an important reminder of my holiday”

“I take photos to show my friends and family”

Both statements were given high average scores, from 4.2 for *“I take photos to show my friends and family”* and 4.34 for *“Photos are an important reminder of my holiday”*, supporting the literature reviewed at the start of this paper on the role that photography plays within travel and tourism. There were some interesting differences in how respondents scored these statements based on their travel party, their status as repeat visitors to the region, their occupation as well as some interesting correlations between their reasons for taking photographs and the type of technology that they used (Table 5). The sample sizes were often relatively small (17 to 26 respondents in some cases) making statistical comparisons inappropriate. There were no changes based on age or gender however.

Table 5 Differences between respondents rating of the two motivational statements based on their travel patterns.

Respondent characteristic		Overall results	Statement 1*		Statement 2**	
			Score 4-5***	Score 1-3	Score 4-5	Score 1-3
Travel	Couple	39%	41%	26%	39.5%	39.5%
Party	Tour group	10.5%	9.5%	15%	8.5%	17%
	Club	1.5%	0.5%	11%	1%	5%
	Family	8%	8.5%	3.5%	8.5%	5%
	Relatives	8%	6.5%	11%	7.5%	10%
Occup.	Self-emp.	8%	8.5%	3.5%	6.5%	14.5%
	Prof,	24.5%	24%	26%	25%	19.5%
	Student	15%	16.5%	7.5%	18%	5%
	retired	12%	11.5%	15%	9.5%	19.5%
1 st time visitor	Yes	78%	82%	55.5%	80%	72.5
	No	22%	18%	45.5%	20%	27.5%

*1= "Photos are an important reminder of my holiday"

***Scores for statements as a motivation

**2= "I take photos to show my friends and family"

1-3 unimportant, 4-5 important

There were also some differences in the type of technology used to take photographs based on respondents' motivational scores.

Table 6 Differences in the type of technology used based on motivational scores.

Type of technology used	Overall results	Statement 1*		Statement 2**	
		Score 4-5	Score 1-3	Score 4-5	Score 1-3
Video camera	16.5%	17.5%	7.5%	15.5%	17%
Film camera	8.5%	7.5%	15%	8.5%	10%
Digital camera	70.5%	72%	52%	72%	58%
Mobile phone	11.5%	9%	29.5%	10%	17%
Underwater camera	35.5%	37.5%	25%	38%	27%
Disposable camera	9.5%	10%	4%	10%	3.5%

*1= "Photos are an important reminder of my holiday"

**2= "I take photos to show my friends and family"

DISCUSSION AND CONCLUSION

The aim of this paper was to identify the photographic habits of visitors to the GBR, recently billed by the World Tourism and Travel Council as 2007's Best Tourism Destination. An understanding of the motives of photography takers is important for marine tour operators particularly in the planning of itineraries and sites to be visited and when deciding if they will offer commercial photographic opportunities for clients. Reef trips are heavily promoted through images of colour, marine fauna and water based experiences. Capturing these experiences and sharing them is important as a means of justifying the expense of the trip and at the same allowing the tourist to share experiences of the trip with family and friends back home.

Earlier it was noted that photography is a form of consumption that allows the user to gaze in a form that can be recorded, transmitted and later relived. Digital cameras have revolutionised photography and to some extent the travel experience, creating new opportunities for gazing and sharing the gaze. Almost instant transmission of holiday photos via mobile cameras or the Internet allows friends and relatives to be kept up to date with the progress of the tour, including the highlights and the disappointments. The results presented here confirm that digital photography and sharing these photographs via the Internet are very popular, leading to new, often amateur imagery of the reef tourism experience becoming widely available to potential and armchair travellers. In this way digital photography has become a form of digital word-of-mouth for the distribution of positive recommendations and disappointments.

In the typical GBR trip profile, where the reef may be several hours trip by boat from shore and the total time available for photo taking at the reef is limited to a few hours, it is important that marine operators provide ample opportunities for photo taking in the time available. In addition, it should be noted that the reef tourism experience is about far more than the reef and in-water activities, and the opportunities for taking photographs begin at the arrival of the boat, already a new experience for many passengers, and throughout the day with changing landscapes (marina, harbour, passing islands, open water, reefscape) as well as in the company of other passengers (approximately 90% of visitors travel in pairs or groups according to other studies by Coghlan and Prideaux) and the crew on board the vessel (again who are one of the main influences of visitor satisfaction according to the same authors). The significance of photo taking in overall trip satisfaction is apparent from the very positive response to the question "*Photos are an important reminder of my holiday*". With the increasing popularity of new media such as YouTube, blogs and personal web pages the role of photography is likely to grow. Operators need to understand the changing role of photography and see it as more than an opportunity to up-sell,

particularly given the results that suggest that many visitors prefer not to purchase photographs at all, and particularly not at current market prices.

Results of this study support Markwell's 1997 views about the importance of the role of photography. Reef experiences certainly afford visitors the opportunity to take photos in settings that are extensively used by commercial photographers although the quality may not be as high. It might be that proactive strategies to enhance the photo taking environment through instructional videos on the outward journey may resonate with some visitors and enhance their experience and increase their satisfaction. This may occur in a formal manner on some of the larger vessels, where the operator or photography contractor lease photographic equipment to tourists, but may also be encouraged in an informal way by the staff, or incorporated into the guidelines for visiting the reef.

This study examined one aspect of the total photo taking experience that respondents experienced during their tour to the Great Barrier Reef region of Queensland. It is apparent that digital photography is enormously popular and is used by respondents to remember their experiences as well as share the experience with others. It is also apparent that digital and web technologies offer consumers a new avenue for word-of-mouth recommendations on their experiences. While not examined in this paper this is an important development and should be researched in greater depth at the earliest possible opportunity.

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