Chapter 2
Leisure Visitor's Responses to Natural History Dioramas

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2.1 Reflections

Why do people make a visit to a house with a natural history museum attached in Southern England? How do they interpret what they see? Are memories evoked through viewing the scenes in the dioramas? This chapter examines peoples' reasons regarding a visit to a museum, and their responses do indeed vary (Falk 2009). Visitors assume one or several identities during the course of a visit (Doering and Pekarik 1996), yet museums with artefacts can elicit memories too. Museums, and other locations such as zoos and galleries, are seeking to adapt to the challenges that an ageing populations presents, but also to the opportunities which are presented for authentic related narratives. Such emerging opportunities are discussed in the collected writings of specialised authorities in 'The Caring Museums' (Robertson 2015).

The study of museums of Natural History is considered particularly critical because visitors seem to acquire much of their knowledge on the world around them (Monhardt and Monhardt 2006). The museum visitors may take advantage of the rich context of the museum and use it to develop more processed reasoning. Gilbert et al. (1985) claim that the learning experience in a non-formal setting, compared to a formal setting, has different characteristics. Various researchers (Fleer 1994; Allen 2004; Tunnicliffe 1995; Fenichel and Schweingruber 2009) claim that this research area seems particularly fertile, both pedagogically and methodologically. Moreover, the present research focused on natural history museums and their dioramas and the interventions which bring the visitors together with the museum environment and usually have very encouraging results by recalling

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memories and previous experiences in the cognitive and emotional resources of visitors (Hooper-Greenhill 1994; Hofstein and Rosenfield 1996; Tunnicliffe et al. 1997; Tunnicliffe and Reiss 1999; Mathewson 2001; Anderson et al. 2003; Griffin 2004; Martin 2004; Eshach 2006, 2007; Packer 2008; Alexander 2008; Rix and McSorley 2010).

We were interested in the rationale and responses of the widely differing visitors identifiable through age, particularly those of leisure visitors who chose to make a visit to Quex Park and the Powell-Cotton Museum (Kent, England), which exhibits natural history dioramas of Africa and India. The visitors ranged from teenagers, who visited by themselves and/or with their peers and/or families, to older couples, family groups and pensioners.

Reminiscence work in museums has been shown to have beneficial effects for visitors of older years. Such reminiscences often interest younger visitors too. Wellbeing of the population is discussed more and more and the social role of the museums is a subject in which there is increasing interest and recognition (Griffin 1998). When intergenerational groups visit together each visitor has varied relevant knowledge and memories with which to interpret the items being viewed. Older adults often take such an opportunity to explain in didactic manner the theory to younger people. This phenomenon is frequently observed in science centres at exhibits showing particular physical concepts. Adults have been observed 'text echoing' (McManus 1988), which is reading aloud the text to the rest of their group, an activity in which chaperone and teachers take part when leading school groups. Thus, we hypothesised that younger visitors would be very factual in their short replies and have few memories that were evoked but that older visitors, as had been found in museums (Tunnicliffe 1995), particularly those bringing grandchildren had rich memories with which they were interpreting the animals and scenes on display. For example, grandparents with two pre-secondary school-aged children viewing a polar bear included in an exhibit in the Natural History Museum London asked their children whether they remember the stories their parents told of the bear that they had seen on a cruise to the Arctic. A mother told her sons, at an exit to an exhibit of Australian wild life in a museum in the UK, about how their great grandfather had worked his passage to Australia seeking gold in the Kalgoorlie region and how she had seen so many wallabies when she herself had visited Australia.

Museums are a place where visitors can reflect. They may reflect on the subject being presented to them; they may reflect on its impact made relevant to them. Alternatively, they may reflect on the past memories the stimulus elicits. Perhaps museum exhibits can bring back information, either learnt in school or during their lifetime, which have since been forgotten.

2.2 The Natural History Museum and its Visitors

Natural history museums are frameworks for learning natural sciences in the field (Paris et al. 1998; Rix and McSorley 2010; Tran 2007). Their visitors participate either on constructive or individual activities which are implemented through the interest and selection of participants (Ramey-Gassert 1997; Henderson and Atencio 2007). In recent decades, several theories were developed in order to clarify the relationship between the museum and its visitors. The information in the messages transmitted can lead the visitor to feel comfortable and either encourage a desire to return or prevent a possible future visit (Diamond 1991, 2000).

The positive experience of a visit to a museum and the habits formed during the visit are encouraging, especially for pre-schoolers, to return to the museum as adult visitors. Bell et al. (2009) state that environments such as natural history museums provide visitors with enthusiasm and positive emotional reactions. There are clear indications that participants are concerned with both the content of science and their own thinking about science. The visit to a natural history museum may reinforce what visitors already know (Falk and Storksdieck 2009) and, with the variety of understanding of these visitors, some know quite a bit more than others (Falk and Dierking 2000). Allen (2004) argues that in environments such as museums of natural history, cognitive and emotional progress and learning may become a pleasure for visitors of different ages. Piscitelli and Anderson (2001) and Anderson et al. (1997) examined the learning of young children at museums through multiple levels that include socio-cultural education, knowledge, learning style, motivation and collaborative learning. Hence, Piscitelli and Anderson (2001) concluded that the most important memories of children from museum visits were about exhibits in this museum on display. Surveys showed that planned experiences and visiting museums in scenarios where children actively participate and/or acted through planned activities can enhance and contribute more to the process of learning. The shared experiences between age groups may lead to the establishment of training programmes mainly for museums of natural sciences (Miglietta et al. 2008; DeWitt and Storksdieck 2008; Groundwater-Smith and Kelly 2010).

2.3 Visitors' Agenda

Visitors usually enter a museum with some ideas of what they want to see. Moussouri (1997) and Falk et al. (1998) identify five factors as determining the family museum agenda. According to our research studies some of the factors are applied to the visitors' agenda as well. So, Fig. 2.1 presents a representation of Moussouri (1997) but focuses on the visitor's agenda. The first factor is the visitor's profile. Knowledge about a visitor's background, age and gender allows us to deduce their motivation for visiting the museum. The socio-cultural patterns refer to the functions a particular museum is perceived to serve in the social life of their visitors. The personal

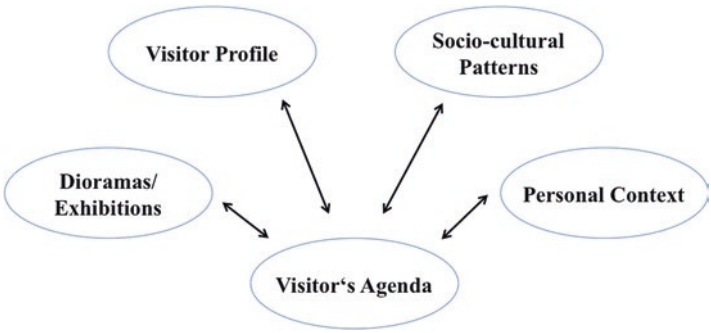

Fig. 2.1 Factors determining the family museum agenda

context of the visit here is being used, as Moussouri (1997) points out, to try to explain the expectations of the visitor. Finally, she points out that the Dioramas/exhibitions involve the subject that is being presented in the museum, its physical characteristics and the media of communication used.

Natural history museums are usually large institutions which were created during the nineteenth century and varied depending on the focus of the available collections and the scientific knowledge explained (Mironer 1996; De Clercq 2005; Adams 2007; Langebek 2011). This type of museum did not take into account the requirements of the general public but advanced the science dogmatically only to a specialized public (Hein 1998). In recent decades, a trend of these natural history museums is to restructure their material to make communication more effective and to establish privileged relations with the formal education sector (schools and universities) to (re)-plan their education policy (Piscitelli et al. 2003; Diamond 2000; Friedman 2010).

A visit to a museum of natural history is an experience having both educational and leisure aspects (Tunnicliffe and Scheersoi 2011; Patrick and Tunnicliffe 2013). The experience offers visitors unique opportunities (Falk and Dierking 2000; Piscitelli and Anderson 2001; Schmitt-Scheersoi et al. 2002; Dewitt and Hohenstein 2010). These museums are excellent sources of cognitive experiences that complement and/or enrich the agenda of each visitor (Kelly and Fitzgerald 2011). Thus, the visit experience in a natural history museum may provide both adults and children visitors with the opportunity to become more observant and develop their curiosity. Visitors have reported that natural history museums helped them to observe things in the outer world that they had previously ignored (Griffin 2004; Patrick and Tunnicliffe 2013).

2.4 The Galleries of the Powell–Cotton Museum

In the study reported here we were interested in the responses of visitors who came to the Powell-Cotton Museum at Quex Park (Kent, England). This English gentleman's residence has been in the ownership of the same family since the 1550s. The present regency style house was built and completed in 1813 after the original building was knocked down. This house was enlarged in 1883 by the father of the founder of the natural history museum to accommodate his growing family. The house has formal gardens and is in a 250-acre park. The Powell-Cotton Natural History Museum, whose strap line is: "Where the past meets the present to change the future" (Powell-Cotton Museum 2016), was built by Major Percy Powell-Cotton "a pioneer in the use of the diorama to display mounted animals against backdrops of their natural habitats" to house the specimens of animals from Africa and India that he collected and, after being taxidermically treated, brought back to this part of England (Powell-Cotton Museum 2016). He wanted to show the local people, in the days before mass media, the diversity of living organisms and indeed various habitats to which the animals were adapted. Indeed, older local residents talked to his granddaughter, now living at Quex Park with her family, about their memories of witnessing the arrival of the mounted specimens brought down by road from London from the par excellence, taxidermist, Rowland Ward. The arrival was signaled by the ringing of the church bell. Compared with the local endemic wildlife of subdued hues, these exotic colorful animals, particularly the giraffe, lions and zebra were a wondrous invasion of colour to the locals, who lined the streets to witness the arrival of the latest animals (S. Johnson, personal communication, March 26, 2015). The natural history museum has 3 galleries including a variety of species.

Gallery 1 (Fig. 2.2) is displaying the animals of north and west Africa and India. Today, this is the first gallery visitors see on entering the museum but it was actually the last gallery built by Percy Powell-Cotton himself, being competed in 1939 the year before his death. The large diorama to the left, known as 'The Watering Hole', represents many species from across northern Nigeria and Chad. The central diorama showcases the amazing diversity of Africa's primates and the different landscapes they live in. The diorama to the back right of the gallery depicts animals

Fig. 2.2 The Dioramas in the Primate Gallery (Gallery 1). Copyright Nikhilesh Havel. (Reproduced courtesy of the Trustees of the Powell-Cotton Museum)

from the Indian state of Madya Pradesh (which translates as 'Central Province'). The final diorama, to the right of the gallery, incorporates a variety of landscapes and animal habitats. The far left represents the more lush woodlands around the Mkuze River, in northern KwaZulu-Natal, South Africa. The central part of the diorama, formed of a high rocky crag, represents the Ethiopian Highlands, an area where land levels rarely fall below 1500 meters. The Mountain Nyala displayed here, are only found in this region and have become a rare and endangered species. Finally, the desert habitat at the front of the case showcases the diversity of species found in the Sahara Desert (Powell-Cotton Museum 2015a).

Gallery 2 (Fig. 2.3) called 'The Pavilion' was the first gallery designed and built by Percy Powell-Cotton and the starting point for his relationship with the taxidermist Rowland Ward, who helped build and design the museum's famous natural history dioramas. The gallery was completed in 1905 and the large Himalayan diorama is now considered the oldest untouched diorama of its type in any museum around the world. The diorama depicts the Himalayan landscape at dawn. The painted scenery looks down on the Baltoro Glacier, which is found today in the Gilgit-Baltistan region of Pakistan. Dioramas such as this were a new and innovative

Fig. 2.3 The Kashmir Diorama in Gallery 2. Copyright Nikhilesh Havel. (Reproduced courtesy of the Trustees of the Powell-Cotton Museum)

Fig. 2.4 Angola Diorama in Gallery 3. Copyright Nikhilesh Havel. (Reproduced courtesy of the Trustees of the Powell-Cotton Museum)

way of displaying natural history in the late nineteenth and early twentieth centuries and very few dioramas of this quality or age are still standing in museums worldwide (Powell-Cotton Museum 2015b).

Gallery 3 (Fig. 2.4) was the second gallery to be built, added on to the 'Pavilion' in 1909. The dioramas in this gallery focus on species from equatorial Africa and the plains at the edge of these forested areas. The central diorama represents a lion and a buffalo, locked in battle. The large diorama of animals from equatorial Africa include one of the most impressive specimens - the large bull elephant to the left of the case. In the same case is a truly rare sight – a group of Northern White rhino (*Ceratotherium simum cottoni).* The side wall diorama is of an Angolan scene (Powell-Cotton Museum 2015c).

2.5 Methodology

We focused our work on the responses of visitors of all ages: formal school groups visiting as part of their curricula studies and informal visitors. We wondered whether the response of non-educationally focused visitors was similar across the age groups or whether there were differences. Our interest arouses from informal conversations with visitors and in particular noticing that Powell-Cotton had a number of senior visitors (possibly aged over 50). Seniors and retirees were quite frequent visitors at that time partly because tea dances were run in the mid afternoon in the winter months. Accordingly, we decided to design and collect voluntary responses to a questionnaire. One of the volunteers of Quex Park offered to ask visitors at some weekends if they would fill in a questionnaire. More often she used the questionnaire as a template and verbally asked the questions, as we had noticed a number visitors reluctant to write answers after their visit. However, piles of blank questionnaires were also left at the entrance of the museum and some completed sheets were

handed in. Such data could usefully be further analysed, looking for clusters of interest. This became apparent in our reread of the summary of responses.

We based the content of the questionnaire on topics that occurred to us after having listened to a range of visitors and their comments. In some instances, we carried out open-ended interviews with visitors, which are not reported here, where anecdotal memories and associations with other events in their previous life were often a focus of their comments. One example was the retired lady who had been a midwife in Southern Rhodesia (now Zimbabwe), saying one of the dioramas (Fig. 2.4) particularly reminded her of the bush in the area where she had worked. Another gentleman, actually looking at ceramics in another gallery of the museum en route to look round the House, said his visits to the dioramas had not particularly interested him. However, he then went on to talk about serving in the British Army in Afghanistan and other parts of the world and how the animals in the desert-like dioramas had reminded him of these countries.

We compiled a summary and table of the responses and then analysed the content of the main headings columns as well as adding the demographic questions.

The questions were, *age range*, *gender* and *gallery.* Then the visitors were asked, verbally or through the written questionnaire, various questions regarding their interpretation with the dioramas of Powell-Cotton Museum. More specifically:

Please describe the dioramas you are looking at.
Can you see a story? What is it?
How do these dioramas make you feel?
Do these dioramas bring back any memories?

We are very conscious that unlike spontaneous dialogue and remarks said out loud, structured questions, albeit open-ended, does encourage the respondent into a topic about which they may well not have themselves thought. Although, the responses are elicited after the visitors have looked at the exhibits, they are very likely to have been influenced by the visitors' own knowledge and interpretation of what they have seen (Table 2.1).

2.6 Results

When visitors look at exhibits, especially dioramas, varied types of conversations are present, which locate, identify, describe and interpret the content. Visitors attended the Powell-Cotton Museum on different days and conversation units and responses were collected via the questionnaires of the dioramas in the galleries 1, 2 and 3. These research units were analysed in this research.

Females were the largest number of respondent (47), followed numerically by males (30) and others who didn't indicate on the sheet (Fig. 2.5). A total of 80 questionnaires were collected in.

Figure 2.6 indicates the age range of the authors of collected questionnaires. 44 of adult visitors responding were over 40 years of age.

The majority of questionnaires were completed referring to Gallery 1, the first gallery to be encountered once visitors had entered the Powell-Cotton Museum (Fig. 2.7).

The second question was about the 'story' of the diorama. Seven visitors did not respond. Table 2.2 of respondents' comments to the question asking what was "the story" in the diorama, were mostly focused on the dioramas in gallery one, namely a long African diorama, a compilation of primates on the end wall and several smaller dioramas, of India, one featuring a tiger in the foreground and a bear further back and one a desert with rocks.

Table 2.3 presents the way the dioramas make the visitors feel. Visitors have positive and negative feeling while they are looking at the dioramas.

Table 2.4 presents the responses of the visitors regarding their memories. The majority of respondents had memories evoked by looking at the dioramas. Of the 17 respondents who described it, 10 were in the under 29 years, all but 2 under 19 whilst 4 were in the older age groups. Three were female in 40–49-age range.

2.7 Discussion

Several responses lamented the killing of the animal for display but did not comment on the cultural context and different attitudes of the times when the specimens were collected. The motivation of Powell-Cotton in the days of little overseas travel, except for the wealthy, and no media was to bring such information to most people unable to travel and see the biodiversity of other countries for themselves. Such information was presented in the museum.

Analysis by read–reread technique of these data show that the responses from younger visitors were very factual and revealed few memories. Conversely the older

Fig. 2.5 The distribution of gender responding to questionnaire

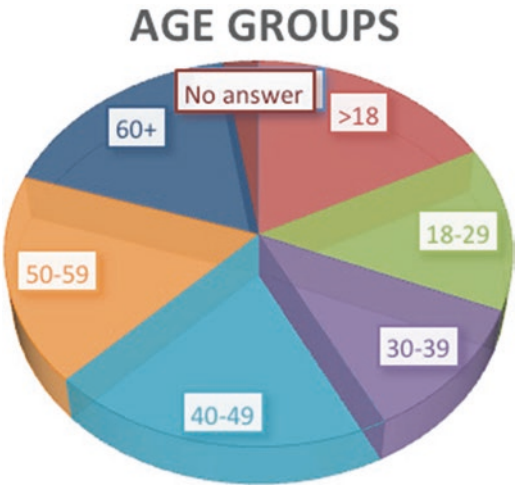

Fig. 2.6 The distribution of age responding to questionnaire

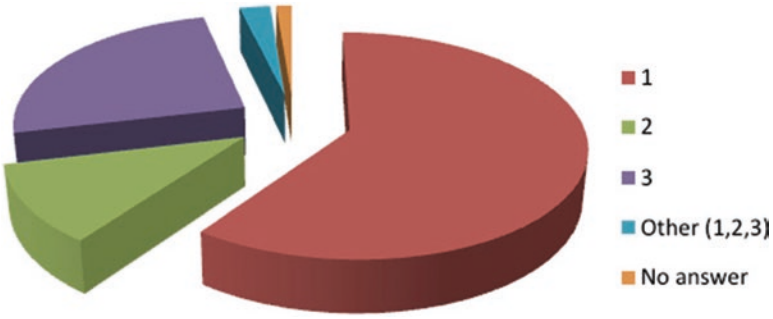

Fig. 2.7 The distribution of the preferred Gallery

visitors had rich memories to associate with the natural history dioramas, either from personal experience or from wildlife documentaries seen on the media. Quex and the Powell-Cotton Museum have visitors from the locality, from further away on holiday in the locality and some who had visited before in childhood and were making a return.

The appreciation of the skill of the taxidermist views voiced by some visitors and the realistic appearance of the scenes with the animals' 'as if they' would pop out', 'made me want to touch them' testifies to the skill of not only Powell-Cotton in choosing the specimens and making notes on their habitat but also on the skill of the taxidermists, whose art can create this realism or absolutely spoil the illusion.

We believe that dioramas, particular those with a historical legacy, having been constructed in different times when the viewing of exotic animals, habitats and geography were unavailable to the vast majority, can also provide insights for visitors in geographical and geological aspects of the environment. Such is an area much neglected. The American Museums of New York (AMNH) do study

Table 2.1 Responses to the request: "Please describe the dioramas you are looking at"

Categories	Number of responses	Example of comments
Mentions animals (specific every day or scientific name).	28	'I am looking at giraffe, zebra and other grazing animals.', 'Primates'
Mentions geographical location	10	'Animals in Africa', 'Kashmir scene'
A natural environment	6	'Animals in a natural habitat' 'desiccated environment'
Describes geographical features	4	'Mountains and ranges', 'desert'
A Ecosystem/habitat e.g. rainforest, jungle setting	8	'A savannah scene', 'Tiger in rainforest growling at unseen'
Descriptive	12	'Large number of species', 'lots, 'Big animals'
Type of display	3	'Well many heads'
Affective comments	9	'Amazing display', 'beautiful', 'harsh'
Endangered status/conservation	2	Endangered tigers

Table 2.2 Reponses to the question: "Can you see a story? What is it?"

Categories	Number of response	Examples of comments
Descriptive predominantly behaviour	21	'Antelopes climbing up rock face', 'Tiger wandering off', 'animals looking for food'
Adaptation to environment	3	'How colours of coats of animals, Reflects the colours of their surroundings'
Anthropomorphic comments	11	'A rhino's party!', 'They want to be left alone in peace', 'symbolic of hunting'
Affective comments	3	'Sad these animals were hunted…'
Biological ideas e.g. predator prey, circle of life	11	'The predator/prey relationship of the natural world "Startled deer looking for a predator'
		'relationship between predator and prey' 'Nature is diverse' 'survival'
Tells a story, not expanded	2	
Political	1	'Could be interpreted in different way (Kashmir diorama G.2) Hostilities between Russia, India, Scotland'.
Other	9	'Pictures of African life' 'full of a variety of; potential scenes'
Conservation of species		
Habitat/geography	4	'Low and highland, Scotland, Russia, India', 'jungle'

meteorology as well as the changes in habitats featured in their dioramas (Holmes 2009). Climate change effects and the changes in endemic ecology should also be studied.

Natural history museums carry out a considerable amount of research and their collections are extremely valuable particularly to scientists, yet little of this work is

Table 2.3 Responses to the question: "How do these dioramas make you feel?"

Categories	Number of responses	Examples of comments
Affective comments		
a) Negative emotions	18	'Sad these animals were hunted', 'Creeps me out', 'Some of the creatures are scary'
b) Positive emotions	15	'Made me smile', 'in awe', 'Appreciation of why the animals had to die,' 'I always find it fascinating.'
Biological conservation	5	'Appreciate now they are endangered', 'These animals are disappearing', 'Some of these animals are threatened with extinction'.
Skill of the makers	6	'Incredible skill of the taxidermists', 'Glad they have been so well preserved', 'incredibly slick taxidermy makes a wonderful centre piece'
		'Privilege to see such skilful work.'
Reflective	4	'Their existence (the taxidermic animals) discards the need to keep collecting', 'Intrigued how came back from Africa', 'How clever nature is'.
Realist	6	'Amazingly real' like that animals are about to pop out' (at you)'; 'How real they seem', 'Background noises'.

Table 2.4 Responses to the question: "Do these dioramas bring back any memories?"

Categories	Number of responses	Examples of comments
Repeat visit to this museum		
a) As adults	1	'Yes, I have been several times, I love it'
b) Visits as child	10	'When I first came to the museum about 20 years go', 'Visiting as children when I was here when I was 1'.
Lived/visited Africa	11	'Yes, of South Africa, smells and noises', 'having breakfast with an elephant came back', 'Memories'.
Viewing media	8	'What I have watched in wildlife documentaries', 'The TV', 'Lion King (Film)', 'Jungle book, Baloo'
Visits to Zoo/ safari parks	10	'Much better than zoos, you can see each animal in close up, it's brilliant', 'London Zoo', 'Longleat' (a safari park).
Seeing animal in the wild	2	'Hogs in Poland'
Biological ideas	3	'The changing coats of animals response to different seasons'
Other	4	'wrestling with my brother'

shared with visitors. If museums and their dioramas are engaged to aid in outreach, enhancing the public understanding of crucial biological issues, as well providing an enjoyable and aesthetically pleasing experience, this outreach role could be considered further. Some of the visitors in this small pilot study looking at dioramas were relating the diorama contents to the status of the species depicted in the present

day and more information could be provided to heighten awareness of the issues amongst other visitors.

However, visitors are not a distinct single entity in terms of interest, rationale for visits or knowledge of the scientific issues that are presented. Hence, one size of interpretation does not 'fit all', and the challenge of museums is to provide a mediating focus to these different visitor genres and identities, a challenge indeed of the twenty-first century.

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