Family Learning and Museum Interpretation

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I Katharine Conway Alston confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Abstract

Learning in museums is not merely a process of the assimilation of knowledge but one of meaning making in which both the museum and the visitor play a part. This thesis looks at how meanings are constructed as a process of co-creation in the museum by family learners. I look critically at how self-guided family visitors learn in museums in free-choice learning settings.

In this research, an ethnographic, naturalist enquiry, I seek to understand family learning in museums through a series of case studies in different cultural institutions such as the Horniman museum and HMS Belfast. I seek to establish how family learning happens, in terms of meaning making, and how museums best enable it to happen with a particular focus on museum interpretation.

Throughout this research, my thinking and professional experience have developed as I have moved from being a family visitor, to volunteering, to gaining work as a museum educator. The bearing this has had on this research is acknowledged and it has served to create a framework for heuristic practice, around which I have developed ideas.

Exploring a wide-rage of literature on family learning, I often draw on research in art galleries concerning families as I have found it relevant to my field of inquiry. The theory of knowledge that underlies my thinking is one of constructivism, where meanings are actively constructed in the dialogue between the family and museum.

In this thesis I examine the place of information in museum interpretation and argue that it can also equip families to learn, scaffolding the experience, creating conditions for learning.

I uncover ways in which museum interpretation, as well as being a means by which information is presented to visitors, could also attend to visitor skills, facilitating engagement by providing opportunities and entry points for visitors to access objects.

Impact Statement

Learning in museums is not merely a process of the assimilation of knowledge but one of meaning making in which both the museum and the visitor play a part. This thesis looks at how meanings are constructed as a process of co-creation in the museum by family learners in free-choice learning settings as opposed to programmed activity. I seek to establish how family learning happens, in terms of meaning making, and how museums best enable it to happen with a particular focus on museum interpretation. More is known about formal learning in museums, particularly about how school children learn, than how families learn. There is a real need to understand family learning in its own right, to remove it from the organising structures and assumptions of formal learning. The question this research seeks to answer is: how does museum interpretation support family learning?

The significance of this research is in developing criteria for successful family learning, of identifying optimal conditions for museum interpretation so families are able to learn. I propose that museum interpretation, as well as providing information, can scaffold the learning experience through equipping families to learn by attending to their skills for museum learning.

This research was carried out using case study methodology and a grounded theory approach, seeking to understand the experience of family learning through an open-ended naturalistic enquiry from the perspective of the families themselves.

Positioning the family to be a particular community of practice learning in a museum setting, this research contributes to a wider debate, developing a shared understanding of family learning for both academics and museum learning professionals. This research has wider benefits for national and international museums hoping to include their access and inclusion agendas and engage with new family audiences. I have disseminated this research on the MA Museums and galleries in Education: Responsive Museums module, Inclusion and Outreach in Practice at IOE, UCL 2016-2018.

My research methods will contribute to a broader field of audience research, with families as a focus. A copy of my thesis is to be put in the library at the IWM Institute, https://www.iwm.org.uk/iwm-institute, 'a hub to explore and experiment with new ways of deepening public understanding of war and conflict through research, public

programming and digital innovation'. I will also be sharing my research findings and methodology with PhD students in the IWM Institute.

This research has greatly impacted my own practice and I have been able to disseminate the findings to museum professionals in a work context. The conclusions from this research have informed my contribution to peer support groups I am involved in: Self-Led Learning Group and Museum Reading Group. These research findings have underpinned and shaped projects I have been involved in: a large scale family research project at IWM 2017, (working with external partners I helped develop the research remit and disseminated findings to IWM's learning department), and a brainstorm for the redevelopment of the V&A Museum of Childhood 2018 ('to help shape and develop vision and thinking, to inspire children, young people and families of all ages'). I plan to publish my research and will target The Journal of Education in Museums produced by GEM (Group for Education in Museums).

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Chapter 1: Introduction

Conceptualising Family Learning in Cultural Organisations (Museums and Galleries)

What is family learning in museums? As a parent, it is something I cannot plan for. My control stops at simply planning to visit but in choosing to visit I am aware that learning may happen (Packer & Ballantyne, 2002). When visiting museums and galleries with my own family before I began this research, I knew that learning was happening but I did not know how or why. This research has enabled me to formulate the questions I was beginning to ask in a search to better understand effective family learning.

For the purposes of this thesis, when I use the word *museum* it is interchangeable with *galleries*. I am referring to both museums and art galleries unless I say otherwise.

Family Learning

It has proved impossible to find one agreed definition of family learning in museums. "Learning is a complex, multifaceted phenomenon and this fact makes it difficult for researchers to agree on a common definition of it" (Hooper-Greenhill & Moussouri, 2001). In the museum context, the term family learning is generally used to cover the family offer for children and adults to learn together, from programmed sessions led by museum staff to resources for self-led activities such as multimedia guides. The literature tends to describe it by its characteristics and approach (Borun, 2008; Borun et al, 1998; Dierking, 2016; Meade, 2009). Through upcoming research it is expected that a shared understanding will emerge, shifting the debate beyond definitions to understanding the nuances and subtleties of family learning (Ellenbogen, Luke & Dierking, 2007). Family learning is distinct in terms of museum learning in that it involves an intergenerational group of learners. That is not to say that it is the only distinct group of learners to a museum. As a group, learning for the family in museums is socially and culturally constructed through the behaviour of the family as a specific community of practice (Ellenbogen, Luke & Dierking, 2007; Falk & Dierking, 2000; Wenger, 1998).

The term family learning is not just used in the museum sector as a pre-defined learning group. In the UK, in a broader education remit, it is linked to family learning programmes where children and adults learn together primarily concerned with literacy and numeracy skills (Cara & Brookes, 2012). Addressing explicit learning outcomes,

these programmes aim to benefit the parents' literacy and numeracy skills, and their ability to help their child develop those skills. In 2012 the Department for Business, Innovation and Skills produced a review outlining the wider benefits of family learning in the UK as a specific type of learning, *Evidence for the Wider Benefits of Family Learning: A Scoping Review* (Cara & Brookes, 2012). Family learning addressing literacy and numeracy was found to provide more than the benefits of learning those core skills. The wider benefits include:

- *To fulfil a desire for further study*
- *Improved self confidence*
- *Improved family relationships*
- *Improved communication and interpersonal skills*
- *Fun and enjoyment*

(Cara & Brookes, 2012)

Data on the wider benefits for children were not gathered, but parents cite "increased ability to manage their children's behaviour, communicate with them and support their learning at home effectively" (Cara & Brookes, 2012: 10). In providing family learning programmes that address core skills, there are recognised wider benefits for the different family members involved, both adults and children.

Museum Learning

Learning in the museum includes "the acquisition of skills, the development of judgement, and the formation of attitudes and values" (Hooper-Greenhill, 2007: 34). Learning is also seen to be about change, "a cumulative transformation of mental structures, a transformation in which the individual actively makes sense of the world on the basis of prior knowledge and understanding" (Falk & Dierking, 2000: 27). Whilst I concur with this, do we understand how the museum facilitates learning for the family group?

In museum programming, the differences between formal and informal learning appear relatively straightforward. Generally speaking, formal learning is planned for schools during term time and informal learning is organised for families at weekends and during the holidays. This research looks at how family visitors learn in terms of meaning making outside of organised programmes, however with one exception. A workshop at the National Maritime Museum, Greenwich (NMM), is used to look at effective

conditions for learning. This focus on family learning therefore positions this study into one of exploring informal learning.

Anna Cutler, Director of Learning at Tate since 2010, and before that Head of Learning, Tate Modern, from the perspective of Tate, stresses the differences between formal and informal learning, she reminds us that "a school is *not* a gallery" (2010, film). However it is her experience that a greater understanding of formal (school) learning is used as a measure for the informal learning experience (family, adult, community). Much of her work in informal learning has been measured against a more traditional model of transmission (of knowledge) and assessment (of the learner). "What one cannot help but notice is the way in which the organising structures of formal learning are often applied to the informal" (Cutler, 2010, film).

There is a real need to understand family learning in museums, to understand it in its own right, to remove it from the organising structures and assumptions of formal learning (Cutler, 2010). A lack of understanding of informal learning is putting it at risk; it can be seen as less important. I address this in chapter six, and champion family learning throughout.

From my times visiting museums with my family, I became intrigued with our learning experience, particularly in settings outside of programmed family events. It was my own experience of family learning that prompted this research. I am interested in the learning that happens in unplanned activity in the museum, in what happens when we *get on with it* by ourselves, in what Falk and Dierking, leading figures in free-choice learning and research in museums, based in the USA, call, "free-choice" learning (2000: 13). I look at the self-guided family (appendix 1). This research looks at the learning that happens in museums when families are free to choose where, when and what to look at. I look at how families learn and participate in a *matter-of-course* gallery visit. Although some case studies I use are set in programmed activities, i.e. using a museum trail, I suggest that within these the families are said to be self-guided. The expression *matter-of-course* is used advisedly, to describe learning that happens in the museum wherever the family appears to find themselves, particularly in galleries where museum interpretation has not been designed explicitly with the family in mind.

Learning in museums is not a straightforward process of the assimilation of knowledge by the visitor, but one of active meaning making, as in constructivist learning theory (Hein, 1998). Constructivism does not refer to a specific pedagogy but is a philosophical perspective about the nature of knowledge, with a particular focus on

meaning making. From a social perspective (Vygotsky, 1834: 1986), the concept of constructivism considers meanings to be made through interaction. Individuals make meaning through their interactions with each other and the environment (Wikipedia, a). This position on epistemology underpins both my research methodology and my view on museum learning which is discussed in more detail in chapter three. As both the museum (the environment) and the visitor play a part in the construction of meaning, I look at how meanings are constructed in the museum by family learners, during unmediated visits. However, I appreciate that all experience is mediated in some way, whether through museum interpretation or the family themselves.

What is a Family?

Museums have varying ideas of what constitutes a family. This is evidenced by the range and type of offers available to families in museums, such as workshops, story-telling, trails and handling sessions. The *family* offer often has its own tab on museum websites, clearly providing for the family, but how do they define the family? Despite not explicitly defining the family, much of what museums do and what they have to offer sends clear messages about who they think the family is. What the museum thinks a family comprises of is often revealed through their idea of a *family ticket* and the age at which children are required to pay adult prices, often at age sixteen (for example Imperial War Museums, HMS Belfast (appendix 2). A quick glance at many family activities in museums shows that much of what is on offer is aimed at children of specific age groups (Victoria and Albert Museum (V&A) offering backpacks for 5-12 year olds, and the Science Museum, London, dividing families into three age groups; under 5s, 6-11 and 12-16 years).

Falk and Dierking (2000) provide a widely accepted definition of what constitutes a family, "an intergenerational group of adults and children who self-define themselves as a family (in other words, all members are not necessarily biologically related)" (2000: 110). This idea of self-defining families continues to be used and has been adopted by others (Moran, 2009). It is generally acknowledged, either explicitly in museum learning literature (Borun, 2008; Meade, 2009; Sterry & Beaumont, 2005; Wolf & Wood, 2012), or implicitly by the museum family learning offer (V&A, NMM, Imperial War Museums (IWM)) that family groups are made up of children and adults, that is they are intergenerational. At the Crocker Art Museum, Sacramento, California, USA, family learning is seen as life-long and involving all ages. "Family learning occurs over one's whole lifetime" (Crocker Art Museum, 2014: 5). This suggests that perhaps the idea of

the family learning group does not have to include children (under eighteens). While this idea is not explored in this research, it is something I relate to as I now visit museums with adult children. Older intergenerational groups may still benefit from further understanding of family learning as "by serving families well museums also serve other audiences well" (Crocker Art Museum, 2014: 6). This feeds into my motivation for engaging with the experience of family learning, and I suggest is what makes my research valuable, providing findings about family learning.

My Family Experience

In my experience the *families* banner often addresses children. This is supported by Karen Raney, editor of The International Journal of Visual Art and Gallery Education, "it is a curious fact that museum and gallery education tends to cater separately for adults and children" (2010: 2). Family learning experiences can often ignore the needs of the intergenerational group, only catering for the children. Many cultural institutions have good strategies for involving children. If they engage children, meet their needs and entertain them, they attract a family audience but do they then provide for this intergenerational group? Before I began this research in 2009 I found that very few museums and galleries provided an experience that actively and intentionally encouraged adults to *join in* with the same activity. Occasionally I have found it possible to join in children's activities, but sometimes adults have had positively no involvement at all, we have been left to watch from the sidelines. (Six years later, I do not find that this is the case so much, with genuine all-age activities on offer at the NMM and Imperial War Museum, London (IWM London), for example.)

Pringle (2010) discusses the difficulties in providing effective family learning where, in teaching situations, teachers can find it difficult to effectively meet the needs of both children and parents. "There is a danger that adult visitors are not considered users of the museum's education facilities in the way children are and consequently disregarded for their requirements and neglected for their needs. Similarly gallery self-guides tend to provide activities for children, and nothing for adults, or reading material which is exclusively directed at adults" (Pringle, 2010: 9). In some cases the idea of intergenerational learning needs to be re-thought by both museum and families to include everyone in the group.

Whether with programmed activities or self-guided trails, museums can be guilty of providing *family activities* that only attend to the children in a family group. At *Castell Henllys*, an Iron Age fort in Pembrokeshire (2008) (appendix 3), our family experience

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was just that. We were not allowed to join in, despite paying a higher entrance fee than the children. What had we paid for? Every member of our family could have been genuinely involved, particularly as the activities involved learning about the different roles of an iron-age family and was advertised as a family learning activity.

The opposite can also be true, adults sometimes purposefully avoid engaging with family activities, seeing them as something for children. This might be to do with confidence and experience, leaving parents hesitant to get involved (Wolf & Wood, 2012). At school children are used to being in different learning situations, whether that be working in groups or applying their knowledge to a task individually. The Discovery For All (Discovery) session at the Horniman Museum and Gardens (Horniman) is an object handling session for all visitors, largely targeted at families. When delivering the introductory talk for this, I ask questions about objects and it is usually children who answer; often adults do not. Most of these children, generally of a primary school age, put their hands up to answer as they might do at school. This school-type behaviour is not my expectation.

Flexi-Schooling

As well as being frequent family visitors to museums, what particularly prompted this research was the opportunity I had to flexi-school (appendix 4) my daughter in 2009, then aged nine. Flexi Schooling is an arrangement between the school and home where children attend school part time. Each week we would visit a museum, gallery or historic venue. This experience threw up many questions about how we were learning together, what we were learning together and how the institution enabled this. Gathering my thoughts and articulating my experiences, and having been invited to share them with the Design Museum (2009), I made plans to formally start this research, setting out to answer my questions, gaining an understanding of how families learn together that can be applied to museum learning strategies.

A critical instance for me was a visit with my daughter to Downe House, Downe, Kent, UK (2009), the home of Charles Darwin. It was then that I realised that I had (unarticulated) expectations of the learning experience. I had assumed that she would respond as I had done and our learning (from the same starting point) would correspond. However, she responded to Charles Darwin's family and Victorian life, ignoring his scientific work, whereas I had assumed that we would be learning about his scientific work. It may be that many family visitors can relate to this experience. This led me to understand that we do not notice the same things, let alone learn the same

things. As an active participant in the learning situation as well as researcher (undertaking participant observation) this is problematic; family learning is not straightforward.

Motivations for visiting museums with my family

Purposive Leisure

The free-choice leaning offered in museums is closely linked to visitors' intrinsic motivation (Packer and Ballantyne, 2002). However Shaw and Dawson (2010), researchers in leisure science, argue that is not simply a case of intrinsic motivation but one of *purposive leisure.* The term purposive leisure is used to conceptualise the idea that parents organise and facilitate shared family experiences with particular goals in mind, with learning being perceived as a beneficial outcome (Shaw and Dawson, 2010).

Establishing my motivation, I view visiting museums as purposive leisure, perceiving them as places to learn. Parents, myself included, value purposive leisure "because it is a site for transmitting values, interests and a sense of family" (Harrington, 2005: 1). Of specific importance to me is the idea of valuing learning, particularly learning for fun where there is no set agenda (Packer, 2006). Learning for fun is a motivational construct where the "process of learning is just as – or even more – important to visitors than the product" (Packer, 2006: 341). The National Curriculum (appendix 5) taught in UK schools, and the testing (appendix 6) it demands, is seen by some to be restrictive for both teachers and pupils (Lipsett, 2008). Although I encourage my children to do their *best* in the state education system, I have discussed with them that school learning is a particular way of learning. I have concerns that there is a pressure on schools to teach to exams and agree with Amanda Spielman, Chief Inspector, Office for Standards in Education, OFSTED, 2017, who suggests that exams can replace teaching rather than being used to measure it. She said that "it is the substance of education that ultimately creates and changes life chances, not grade stickers from exams" (Amanda Spielman's speech at the Association of Schools and College leaders' conference 2017). This is not a criticism of schools or teachers, merely an observation of the systems in place to measure schools' and students' achievement. I have sought to broaden my children's idea of what learning can be and instil a desire to learn for its own sake. For me museums are an obvious place to do this because of the opportunities they provide for my children to choose what to

engage with and how, and for the breadth of subject material. Consequently I value visiting art museums equally to social history and science museums, for example. As a former art teacher, 1990-2003, I often adopt an art teaching approach to museum learning, taking sketchbooks to record what we see. This was particularly true when my children were younger, of primary school age. This is not the case now. However, in choosing to visit museums with my family, I have not prioritised any particular overall type. In terms of Spielman's (2017) idea of *life chances* above, my understanding corresponds to the idea of *authentic experience* (Linko, 2003) below.

Child Centred Learning

My thoughts on teaching and learning concur with the values at the heart of the Reggio Emilia model (Learning and Teaching Scotland, 2006; Summer and Summer, 2014**)**. The Reggio Emilia model is a socio-constructivist one influenced by Lev Vygotsky, with a belief "that children (and adults) co-construct their theories and knowledge through the relationships that they build with other people and the surrounding environment" (Teaching and Learning Scotland, 2006: 1). The opportunity to learn extends to the educator as well as the child. The idea of learning together and that we can learn from each other in reciprocal relationships, whatever our age, has always been important to me. Like the Reggio Emilia model, I place a high value on the learning process rather than the outcome. That is not to say that I do not value outcomes, but acknowledge that many are difficult to evidence yet still important, like the chance to "gain multiple perspectives and a higher level of understanding" (Teaching and Learning Scotland, 2006: 10). The opportunity to learn with no fixed agenda without the need for testing is a primary motivating factor for taking my children to museums.

Authentic Experience

Both purposive leisure and child-centred learning are seen as motivations for family visits to museums, as is the idea of *authentic experience* as described by Linko (2003). In taking my children to museums I am seeking an *authentic experience*, which is summed up by Maria Linko (2003), University of Helsinki, as "a subjective sensation which necessarily has an emotional component, …only realised in brief moments" (2003: 66-67). It is about finding oneself as an individual, making one's life meaningful. A*uthentic experience* can be seen as a motivation for family learning.

I took my daughter to museums as part of our flexi-schooling programme as I believe that museums are not only spaces to learn but also provide opportunities for

meaningful experience. John Falk puts forward that taking one's family to an educational place for enjoyment and to learn things is an identity-related motivation, providing the opportunity to "engage in a meaningful social experience with someone whom you care about in an educationally supportive environment" (2009: 64). Acknowledging that not every parent who visits museums with their family is primarily there to be a facilitator, he does propose that being a *facilitator* (Falk, 2009) is a motivation (discussed in chapter two), a reason why families visit museums.

For me flexi-schooling was a deliberate attempt to promote and explore learning outside of the school structure. At the time visiting museums was a way of spending meaningful time with my daughter, of spending time together. The drivers for this were that she had not had much attention from me following the arrival of younger twin siblings (2003) and that she was not especially happy at school due to poorly managed class behaviour. I was seeking an *authentic experience* (Linko, 2003), which I felt the museum could provide in the form of the family learning experience, as well as providing opportunities for learning outside the classroom (Malone, 2008).

This same motivation for seeking *authentic experience* extends to all the instances of family learning cited in this research; however I appreciate that my motivations are not the same for all families. Linko (2003) suggests that seeing art in museums falls into three main types of experience, which I discuss below. She uses the term *experience* here to differentiate between experiencing, a subjective sensation, and receiving art. She uses the term *experience* to emphasise the personal impact art may have on the viewer and the term *receive* to reflect the idea of consuming knowledge about art.

The three main ways art is experienced are through:

- *Self-realisation*
- *Construction of identity*
- *The impact of the social environment*

1. Self-realisation: Linko (2003) says that the emotional impact of experiencing art can be understood from an autobiographical context. Memories and prior experience, that is lived experience, shape our experience of art, where we understand through applying the experience to ourselves (see chapter two, Gadamer, 2013). Strong emotional experiences are times of self-realisation (Linko, 2003) where we relate art to our own lives.

2. Construction of identity: In contemporary culture "modern society demands a personally constructed identity from its citizens" (Linko, 2003: 71) and experiencing art can be a means for the construction of personal identity. The experience of looking at art can involve a process of self-perception, the internal process of finding one's self (Linko, 2003). In looking at artwork we can therefore perhaps understand ourselves more fully.

3. Impact of the social environment: "a *successful* contact with an art object may produce a strong experience, which can be described as a momentary feeling of authenticity" (Linko, 2003: 72). Linko (2003) tells us that some people visit museums in a search for emotional experiences. *Authentic experiences* in art museums are subjective, contextualised in personal experience. Linko found that "when people told about their memorable experiences they never described them by using specialist terms and expressions, the tone of description was emotional and utterly subjective" (2003: 74). The experience is rooted in our cultural understanding of ourselves and the world (see chapter two, Gadamer, 2013).

As an *authentic experience*, a type of experience that I personally seek from family learning in museums is *construction of identity*. I would like my children to see themselves as capable learners and appreciate that the practice of learning is not simply confined to the classroom. I situate learning in everyday life, "we are always learning, sometimes whether we intend to or not" (Vorhauser-Smith, 2011). I particularly think that it is important that my children do not define themselves solely by their formal educational achievement, whatever their grades. I see visiting museums as opportunities to do something meaningful together, times of self-realisation and for constructing their identity as learners, positioning learning as an integral part of social practice in everyday experience, a potential aspect of all activity (Lave & Wenger, 1991), discussed later in chapter two. I see this happening tacitly, these assumptions are implicit in the experience, not something we discuss explicitly. These motivations also apply to me, museums provide me with meaningful experiences (Linko, 2003). The *impact of the social environment* of the museum as an *authentic experience* is also important to me, not only for my own family, but as it is the means through which I seek to understand the family learning experience, from the perspective of the participants themselves.

Museum Space

I also want to show my children that learning can be fun (Cara & Brookes, 2012; Packer, 2006) and use museum visits to spend time with my family. I see museums as providing valuable places to learn together as a family (Harrington, 2005). As Pringle (2010) and Alex Drago (2014), Explorer manager, Historic Royal Palaces, UK, have reminded us, the museum is not a school, yet they are seen as learning institutions (Drago, 2014). Learning in museums has been "characterised by the one-way delivery of information from teacher to student, …the museum-as-expert impart[ing] specialist technical information to the visitor who passively receives" (Drago, 2014: 19). "Museum pedagogy is structured through the narratives produced through the displays and also through the style in which these narratives are presented" (Hooper-Greenhill, 2000: 124). Exhibitions and displays as spaces in museums make up part of the educational experience of the museum. Other educational experiences might include workshops for example.

I acknowledge that not all museum visitors see museums as valuable places to learn. Discussing the architecture and spaces of museums, Elaine Heumann Gurian, an American museum consultant, tells us that "the grand museums assert monumentality and present themselves as revered but not necessarily comfortable icons" (2006: 117). These grand museums impress the "typical affluent educated museum-goer" (Heumann Gurian, 2006: 117) yet this grand architecture can serve to exclude "people from minority, immigrant, school drop-out, and working-class groups" (Heumann Gurian, 2006: 116). Architecture can be a barrier preventing people from visiting museums. This is known as *threshold fear*, "the constraints people feel that prevent them from participating in activities meant for them" (Heumann Gurian, 2006: 115). She puts forward that threshold fear concerns perceived impediments, these may real or imaginary. However it could be said that all fear is real. I would suggest that what visitors feel is very real to them. For example if they worry about *showing their ignorance* (see chapter four in the Horniman) they probably feel ignorant at that particular moment. This may be something to do with the exhibition space, how museum pedagogy is conveyed (Black, 2005), how the style of the structured narratives of the objects on display can trigger fears (Hooper-Greenhill, 2000). Not everybody feels confident in museum learning experiences. The way in which objects are displayed carries messages (Hooper-Greenhill, 2000) and the visual cultures of display can serve to alienate some people. Heumann Gurian puts forward that there has been a "disjuncture between museums' programmatic interest in inclusion and the

architectural program of space development" (2000: 115), and barriers must be removed to make the museums space intentionally more welcoming.

The opportunity to learn in the museums space is a motivation for me, to learn in an environment that I can share with my children. However, I have known threshold fear, particularly with physical spaces, being made to feel unwelcome by the layout of museums with young children and double buggies. However, I believe that in being frequent museum goers, and dare I say it *educated museum goers* (Heumann Gurian, 2006) we have developed the necessary cultural capital (Bourdieu, 2010) for us to feel included. Cultural capital references the idea that people can have the perceived social assets, accumulated social and cultural knowledge, that grants them status in museums. Status that relates to the social relations occurring in a museum visit, which can take the form of knowing how to behave, a feeling of entitlement and belonging. An example of this can be found in chapter 2.

In discussing the above motivations, they are personal to me and my family situation. I acknowledge that not every parent who brings children to a museum is there primarily to be a facilitator (see chapter two, Falk, 2009) and my own position reflects one of many reasons families visit museums.

My Position as Researcher

The purpose of this research is to better understand effective family learning in museums. Applying learning theory at each stage of the process, I have been able to develop an understanding of how learning takes place. From my initial family learning experience in the museum, I turned to the literature to make sense of the situation. I have taken an autoethnographic approach immersing myself in the field of family learning, where, with the passing of time, I have encountered new situations and new writing that have shaped and influenced each stage of the research as I have gone along (Cohen, Manion and Morrison, 2011). My personal experience, my professional work and my reading have been interlinked with each illuminating the other. The bearing my position has had on my research, is acknowledged and it has served to create a framework for heuristic practice, around which I have developed ideas.

This research process has been an interplay between practice and meaning. I recognise that all research is value bound, and my thinking has been informed from the perspective of the different roles, both professional and personal, that I have found myself in during its course. With this research into family learning has come the

opportunity to begin and develop a career in museum learning. I began this research as a family visitor with twelve years of schools teaching experience. I then became a volunteer in the learning department at the Horniman in their Engage Volunteer Programme (appendix 7). Following this I gained a freelance role as an Explainer in the Discovery session (appendix 8) in the Horniman. Later I became a freelance educator (fee-paid learning) in both the formal and informal programmes at IWM London. In October 2015 I secured part-time employment in the Digital Learning Team at IWM London and as of January 2017, I am a Producer in the Public Engagement and Learning department at IWM London, working with schools and families. I was also part of a team put together by the Learning and Interpretation team at the NMM to evaluate their informal learning programme in 2012- I was responsible for families. I am a keen advocate for families visiting museums and as such I am an independent museum blogger (appendix 9). In this role, I have taken over @TateKids Twitter account where I ran a Twitter Tour documenting our family visit to the Barbara Hepworth exhibition, 2015.

The differing roles I have had have not only given me insight into family learning from the visitor and professional perspective, but have provided experiences in the field of museum learning in which I have been able to test and make sense of the literature, making connections between experience and what I have read.

Insider Outsider Research

"Researchers often position themselves as either insiders or outsiders" (Breen, 2007). My differing roles, as parent and museum educator, have meant that I have had both insider and outsider status. There are both positive and negative aspects of insider and outsider status. At times I have been so close to what is going on that I have had to examine whether there was enough distance to see a wider perspective and challenge my own biases. Being an insider I might unduly influence instances of family learning. However more positively, as a member of my family learning group, I have had privileged access to instances of family learning. I have attempted not to make assumptions that my motivations and experiences of family learning reflect those of other families. "Although a researcher's knowledge is always based on his or her positionality, as qualitative researchers we have an appreciation for the fluidity and multilayered complexity of human experience" (Dwyer & Buckle, 2009: 60). Whilst I identify with other families on some level as learners in museums, I appreciate the

participants' many points of view in this study and I have sought to understand family learning from their perspectives.

A Personal Approach

This study began as a personal investigation and has a deep-seated personal experience element to it, which I feel I should justify, as without it there would be no study. Margot Ely (1991) was an early important source of ideas for me because she acknowledges that qualitative research can be highly personal. This is an issue of contention for some museum researchers, as I discovered from a conversation with a museum evaluation consultant (2015). "It [qualitative research] is an intensely recursive, personal process, and while this may be the hallmark of all sound research, it is crucial to every aspect of the qualitative way of looking at life" (Ely, 1991: 1). The highly personal element to this study is fundamental, a key characteristic that both drives it and informed its conception. As a family learner investigating family learning, I have taken an *emic* approach to this research, concerned with "subjectivities rather than objective knowledge. …where the concern is to catch the subjective meanings placed on situations by participants" (Cohen, Manion and Morrison, 2011: 221). Ely (1991) has been important in developing my thinking, providing me with a highly personal approach to research. No qualitative researcher is impartial, but sees the world from a particular perspective (Maykut and Morehouse, 1994). My personal experience involves both being a professional and part of a family learning in the museum. The knower and known do not function independently. "Qualitative implies a direct concern with experience as it is *lived* or *felt* or *undergone*. Qualitative research, then, has the aim of understanding experience as nearly as possible as its participants feel or live it" (Ely, 1991: 4-5).

"No naturalistic researcher begins without questions, but these can be and should be as broad as *what is going on here?* For most of us, the questions shift, specify, and change from the very beginning in a cyclical process as the field logs grow, are thought about, analysed and provide further direction for the study" (Ely, 1991: 31). Before the formal process of research began, that is before even considering a PhD as a means to answering questions that had begun to formulate, I was looking to understanding the social situation in which I found myself. From this place of not knowing, I began to see the social situation as the *field*, becoming aware of and exploring how my family was learning, becoming aware of my assumptions and understanding. A naturalistic inquiry

had begun. I use naturalistic enquiry as synonymous with constructivist meaning making (Hein, 1998) which I discuss in chapter three, methodology.

Ely puts forward the argument that qualitative research, naturalistic inquiry and ethnographic methodologies "are roughly synonymous" (1991: 2). They have "commonalities that link them together – a network of underlying principles and philosophical beliefs that constitute a paradigm or world view" (Ely, 1991: 2). The terms are interlinked and Ely (1991) presents them as comparable research methods. "Those who work within the naturalistic paradigm operate from a set of axioms that hold realities to be multiple and shifting, that take for granted a simultaneous mutual shaping of knower and known, and that see all inquiry, including the empirical, as being inevitably value-bound" (Ely, 1991: 2). It is from this position of working within a naturalistic paradigm that I approach my study. Within this paradigm, personal experience in the field cannot be separated from the literature concerning it, as each is involved in the shaping of knowledge, understanding and meaning.

In the literature review I have attempted to connect to a broader literature on learning in museums, to see where theory converges with my own experience and that of the participants in this study; to examine how and where current literature has been relevant. To find connections which will help to make sense of an intergenerational social learning experience and begin to uncover the specifics of the nature of family learning in terms of meaning making.

"The process of narrowing focus means asking questions, developing in-process answers and asking questions again, and understanding that ...both questions and answers must be discovered in the social situation being studied" (Ely, 1991: 55-56). Ely refers to this approach to qualitative research as a cycle. "This cycle, this dance, is at the heart of qualitative research" (Ely, 1991: 56).

This research has been a heuristic process. Hence this thesis is presented chronologically charting my thinking in each stage of the study, connecting themes in the literature and data with ongoing data analysis. Ely (1991) writes about the process of ongoing data analysis right from the onset where the results of analysis inform the next steps and theories begin to emerge. In this research analysis is not simply summative but ongoing, part of the process of designing the study.

In chapter two I explore current literature on family learning, drawing largely on research in art galleries concerning families as I have found it the most relevant to my field of inquiry because of its concerns with the nature of learning as meaning making.

Cutler (2013) discusses meaning making in terms of *answers*. She tells us that there are no right and wrong answers when looking at art as "it's all about ideas" (Cutler, 2013). Whilst I agree with visitors responding to art with ideas, right and wrong answers depend on the questions asked. I suggest that some questions demand correct answers. She tells us that it is important that visitors are able to ask questions for themselves. I agree with this latter assertion, however my concern would be whether visitors are able to reach answers using available museum interpretation. What does the museum do to engender questions and answers? With a constructivist theory of knowledge (Hein, 1998), all answers can be seen to be valid. However, there can be a danger of taking meaning making to extremes with an *anything goes* approach (Meszaros, 2006). The idea of no *right and wrong answers* appears to abandon the visitor to their own thoughts and ideas, of letting them think what they want. I ask how the museum can facilitate learning, allowing for individual meaning making, and validate visitors' meanings? I argue that there is a place for the idea of right and wrong using Gadamer's (2013) understanding of interpretation, and phenomenological hermeneutics (Esser-Hall, 2000) where multiple meanings are accepted and created through a discursive process of visitor interpretation.

I divide the idea of *answers* into two different concepts; answers in terms of *knowledge* (information) and *responses* (individual responses). These ideas are used in later chapters to further explore the idea of meaning making and the role the museum plays in facilitating it, particularly through their approach to interpretation. It can be argued that *experience* in the art gallery (Serota, 2000) and in some ways the *physical materiality* of objects (Dudley, 2012) have been favoured over contextual information.

 Pringle (2010) sets out her *ideal pedagogic scenario* and looks at two family learning programmes "to ascertain the extent to which this 'ideal' scenario exists within the Families Learning Programme at Tate Modern" (2010: 12). She addresses three areas of concern*; creative learning, family learning* and *gallery learning*. She makes connections across all three to research carried out in two family programmes; *Start* and *Small Steps in a Big Space*. These programmes are both aimed at families ranging in age from birth to twelve years. "The family programme at Tate Modern builds on

established good practice and although not articulated explicitly, creative learning has been integral to the pedagogic approaches adopted here" (Pringle, 2010: 15).

U.S. visitor studies researchers Adams, Luke and Ancelet's (2010) (appendix 10) research into family learning takes the form of a literature review to test their assumptions about family learning in interactive spaces in the art gallery. They discuss family learning in terms of connections putting forward the idea of *cognitive connections*, particularly *knowledge and skills* in terms of learning outcomes. In line with a constructivist theory of learning (Hein, 1998), they acknowledge that meanings are constructed in the connections that visitors make in museums. They also found that the connections they identified from their research; *relationship (building), knowledge and skills* and *attitudes and perception,* also identified as family motivations for visiting.

Sensory learning is discussed in terms of haptic learning (Spence, 2007), where object handling is presumed to appeal to a broad audience, perhaps to non-museum goers, which might therefore be seen to attract more families.

Visitors can participate in museum learning in a number of ways. It is argued that participation can be driven by the idea of spectatorship (Bishop, 2013) rather than seeing museums as spaces for cultural reflection. The idea of participation can also be seen to be motivated by emotional experiences (Fleming, 2014). Moreover Falk (2009) puts forward that participation is driven by visitor motivation and seeks to categorise the visitor by their motivation, presenting us with five visitor roles that represent the majority (not all) of visitor motivations.

Part two of the literature review use my own experiences to shed light on the literature. As personal experience has converged with theory, my own experiences of visiting museums and galleries have helped to make meaning from current literature and broaden my understanding of the field.

The idea of actively participating with objects that cannot be touched is addressed through Hein's (1998) ideas of *active participation* and *social interaction.* The principles behind activity trails are explored to develop a *minds-on* approach, associated with the idea of *active learning* (Hein, 1998). The principles of many activity trails, usually designed with the family visitor in mind, could be used to develop a minds-on interpretative approach to display. From a constructivist view of learning "active participation of the learner is required" (Hein, 1998: 34). Families learn through social interaction and for the most part this is through conversation (Ellenbogen, Luke &

Dierking, 2007; Falk & Dierking, 2000). "Much of the way humans make sense of the world is through social interaction with others, through distributed meaning making" (Falk and Dierking, 2000: 38).

Black's (2005) concept of the museum welcoming visitors as equal partners in creating meaning, where museum interpretation is a means to an end rather than an end in itself, supports the idea of a minds on approach to museum interpretation. I make connections between the literature and my family experience: one at the Royal Academy of Arts (RA), *Byzantium* exhibition (2009) and another at the V&A (2009) in the Silver Gallery with reference to the concepts of *interpretation* and inclusion (Black 2005). Interpretation as well as being what the museum does to make its collections accessible to the visitor, is an educative practice (Black, 2005) where meanings are revealed rather than transferred. *Inclusion* is discussed in terms of intellectual inclusion (Black, 2005), a means by which museum interpretation can serve to include and exclude the visitor.

Another family visit to the RA, visiting the *Earth* exhibition (2010), is considered in relation to Falk and Dierking's (1992) contexts for learning; *physical, social* and *personal*. The social context of the family group can impact learning. These contexts provide the setting in which to discuss *feeling comfortable* (Hooper-Greenhill, 1994), parents as facilitators, dialogue and the part visitor perspectives and interests play in family learning.

The family can be seen as a *community of practice* (Wenger, 1998) and learning in the museum as social participation, where scaffolding (Vygotsky, 1978) plays an important role in family learning as a social experience, particularly in terms of museum interpretation.

Learning in the museum can be seen as a process of *guided, shared interpretation* (Burnham & Kai-Kee, 2011), a model of learning in which both museum and visitor are able to contribute to the process of meaning making, where multiple views of objects are expected. However it is seen as the museum's responsibility to make this happen.

While labels play a part in the family learning experience, Robert Storr, Dean of the School of Fine Arts at Yale University, USA (2006), is concerned that labels are a distraction when looking at art. They are seen to *get in the way*.

In chapter three the methods, methodology and theoretical perspectives underpinning this research are discussed. A pragmatic approach in seeking to understand the

experience of family learning through an open-ended naturalistic enquiry, looking at the meaning behind participant behaviour (Hein, 1998) has been adopted. The theory of knowledge that underlies my thinking is one of constructivism (Hein, 1998). This not only informs my understanding of research but is also where I stand in relation to learning from objects in museums. Meanings are contingent, revealing not how something is, but how we make sense of the world (Hein, 1998). I draw on social constructionism (Andrews, 2012; Berger & Luckmann, 1966) and use the theoretical perspective *symbolic interactionism* (Crotty 1998) to frame my thinking, where people are said to interpret the world based on the meanings things have for them rather than intrinsic meanings existing in things themselves. Visitors respond to objects according to prior knowledge, using the provisional meanings they already have.

Case study methodology (Bell, 1999) has been used to look at family learning in the Discovery session in the Horniman. Personal experience has underpinned this research. Working as an Explainer (see chapter four) in the Discovery session provided the opportunity to focus on my initial questions about learning in the museum as a family, narrowing them down to focus on visitor meaning making and the role the museum interpretation plays in this. In qualitative research, questions arise from life experiences (Ely, 1991), as did this study. An *opportunistic* approach (Cohen, Manion and Morrison, 2011) to sampling has been used, inviting family visitors to be research participants during their visit to Discovery. My own family have been used as research participants, in the context of an emic perspective (Cohen, Manion & Morrison, 2011).

A grounded theory approach (Cohen, Manion and Morrison, 2011) allowed me to look at the criteria for successful family learning as it emerged, and both an autoethnographic (Denshire, 2013; Trahar, 2009) and ethnographic (Kelley, 2014) stance allowed for a study of *what* was happening. My role at the centre of this research has been fundamental to the study, and I discuss my position, acknowledging that all enquiry is value-bound (Hein, 1998). *Narrative inquiry* (Trahar, 2009) has provided a means to address autobiographical issues in my research. As a participant observer, observations and informal interviews were carried out, looking critically at the experience of family learning (Cohen, Manion and Morrison, 2011).

Chapter four introduces the Discovery session at the Horniman, the primary case study. Discovery is a free drop-in object handling session in the Hands-on Base (HOB). My role there was as an Explainer, one of three, facilitating the session. However, visitors essentially manage themselves looking at objects. Observations and interviews

were carried out with families attending Discovery sessions, those who had self-selected to visit, a form of opportunistic sampling. Museum staff who worked in the Discovery session were interviewed, addressing questions concerning meaning making and the Horniman's position in facilitating this. Textual information, such as museum interpretation in the HOB, training manuals and policy documents were examined.

The Horniman's ethos and approach to interpretation is discussed in relation to visitor prior knowledge (Falk and Dierking, 2000) and Vygotsky's (1978, 1986) notion of *scaffolding*. The HOB has a *light* approach to interpretation which manifests itself by an absence of labels. Discovery provides a particular setting where the impact of information is removed, allowing an exploration of the role of museum interpretation through examining what family visitors appear to need to learn. The absence of information (text and labels) in the HOB puts visitors and Explainers in the same position as a community of practice (Falk and Dierking, 2000; Wenger 1998), one of asking questions. But how are these questions answered? In not wanting to restrict meaning making (individual responses), the Horniman aims to give visitors full control over their own learning. However, this approach appears to be reliant on presupposed cultural knowledge (Monti & Keene, 2013). I suggest that basic information is important using the idea of simply being able to identify an object. Nina Simon's (Executive Director of the Santa Cruz Museum of Art & History) (2010) idea of participatory learning is used to argue that scaffolded experiences give visitors greater control.

A discussion on the function of labels (Storr, 2006) can be used to make connections between his ideas and the absence of labels in the HOB at the Horniman, where in both cases the process of meaning making relies on visitor prior knowledge rather than what the museum has to say. It can be argued that correct answers (Cutler, 2013) can enable family learning.

In chapter five a family visit to HMS Belfast Museum provides the setting for a case study examining how museum interpretation can provide opportunities and entry points for visitors to access objects. The theory of *flow* (Csikszentmihalyi and Robinson, 1990) is used to look at the conditions in which meaning making happens, drawing on the conditions for, and characteristics of *flow*, using them for looking in a non-art setting. Knowledge cannot be divorced from circumstances (Hein 1998) and as such visitor skills are examined in the context in which they are used.

The role of the object in bringing about *flow* is that of *provocation* and *opportunity* (Csikszentmihalyi and Robinson, 1990). The visitor must perceive opportunities to find

a point of entry into the object. Entry points are found in the balance between visitor skills and challenges of objects, and in many ways this is what the crux of this research is about. Essentially I am looking at how museums create settings in which visitors are able to find ways into objects and make connections, making meaning from them and creating understanding. In his 1957 book, *Interpreting Our Heritage*, Freeman Tilden, one of the first heritage interpretation theorists, asserts that the chief aim of interpretation is provocation, not instruction. Both the visitor and the museum have a bearing on the meaning making process.

In chapter six, the conclusion, returning to the literature about learning and engagement in the art gallery I conclude that meaning making is a process of interpretation connecting to the idea that "it is thought and reflection that makes us see" (Burnham & Kai-Kee, 2011: viii).

Exploring conditions family learning, a case study at the NMM is used to identify criteria for successful participation. Simon's (2010) discussion on participation, visitor contributions, seeing meaning making as a type of visitor participation, provides the context for an exploration of the features of participatory activities at NMM can be applied to effective family learning.

This chapter also explores the idea of the museum being a place to learn skills for learning through modelling those skills (Simon, 2010). Guy Claxton's, (2008), (Director of Development of the research initiative on Culture and Learning in Organisations (CLIO), Graduate School of Education, University of Bristol), idea of cultivating learning dispositions provides us with a means to develop skills to confront the challenges that objects present. Csikszentmihalyi and Robinson's (1990) notion of *informed experience*, the idea of developing the skills for seeing and understanding through being exposed to them, supports the idea of developing learning skills through using them. I put forward a case for museums to not only consider what and how information is presented to visitors, but to also consider how they might help visitors become better learners through *exposure* (Csikszentmihalyi and Robinson, 1990).

Rebecca Herz (2015), director of the Peoria PlayHouse Children's Museum and writer of the blog *Museum Questions*, suggests that *understanding* as a skill, is also a learning outcome in museums. She supports this idea with research that shows that some museum educators from the UK and the US privilege understanding over knowledge.

This research study looks at the role museums play in facilitating visitor understanding, optimising the conditions for visitor learning. It provides a critique of some core assumptions about museum learning and of standard museum practice in many UK museums and an attempt to indicate good practice. I outline ways in which museums may provide interpretation for the family visitor which provides not only information but also creates opportunities for visitors to develop their skills for learning in the museum.

Chapter 2: Literature Review

This literature review highlights criteria for effective family learning. The focus is on family learning as a free-choice activity (see below), where there are no specific, planned for, learning outcomes. American researchers, Falk and Dierking (2000) talk about "free-choice learning", learning that visitors freely choose to do. "Free-choice learning tends to be nonlinear, is personally motivated, and involves considerable choice on the part of the learner as to what to learn, as well as where and when to participate in learning" (Falk & Dierking, 2000: 13). They tell us "that this type of free-choice learning is not restricted to museums, but it is in museums that we currently best understand it" (Falk & Dierking, 2000: 13). Self guided families can be said to be free-choice learners as their experience is motivated by personal interests rather than, like much of schools learning, the need to demonstrate the learning of key facts through testing. My focus on museum learning is on how visitors construct meaning, how ideas and understanding are formed. This is not to say that I see knowledge simply in terms of acquiring information. Learning is broader than content knowledge (Ellenbogen, Luke & Dierking, 2007). It is more than acquiring a knowledge base; learning is seen as a process of transformation (Falk & Dierking, 2000) of change (Hooper-Greenhill & Moussouri, 2001) and the development of judgement, skills, attitudes and values (Hooper-Greenhill, 2007). This idea of learning is not restricted to either informal learning as a free-choice activity, nor formal, school-type learning in the museum (Hooper-Greenhill & Moussouri, 2001).

This literature review sets out to examine current museum learning theory in relation to family learning, looking at what has been written about family learning alongside more general museum learning theory, about which much more has been written. Underpinning the literature I use is the idea of constructivist learning (Hein, 1991, 1998; Hooper-Greenhill & Moussouri, 2001), in line with current museum learning theory which primarily concerns itself with constructing meaning rather than seeing learners as absorbers of knowledge.

At the end of the twentieth century Eilean Hooper-Greenhill and Theano Moussouri, UK museum researchers, carried out a review of a decade of researching learning in museums and galleries, *Researching Learning in Museums and Galleries 1990-1999: A Bibliographic Review* (2001). They found that most research came from the USA, carried out in science museums and was based on positivist methodologies which test pre-existing hypotheses. They call for more research using a constructivist approach

and "open-ended studies that ask the simple question: What is happening here?" (Hooper-Greenhill & Moussouri, 2001: 28). Another pertinent finding is that in a great number of studies "the definition of what counts as 'learning' or 'meaning making' is implicit rather than explicit" (Hooper-Greenhill & Moussouri, 2001: 29). Through my research I hope to better understand effective family learning, undertaking a naturalistic inquiry looking at what *is happening*, making the processes of meaning-making explicit from the perspective of the family participants. "There is a growing agreement that family learning is best examined from the perspective of the family and the larger learning infrastructure" (Ellenbogen, Luke & Dierking, 2007: 25).

My Position: From Visitor, to Volunteer, to Museum Educator

Photo 1: Hands on Base, Horniman Museum

This literature review was begun before I started volunteering at the Horniman (2011), it continued to be written throughout the process of volunteering and developing a

career working in museum learning (see chapter one). Along with applying myself to the literature, the journey from visitor to volunteer to paid work has had a lasting and dynamic impact on my position as researcher, and how I see family learning in museums. Throughout the process, I have gained greater insight. My ideas and understanding have developed accordingly, as I have become more immersed in the sphere of both family and the wider sphere of museum learning.

This chapter is in two parts. Part one is a review of current literature produced by researchers in the field of museum learning, specifically in relation to the art gallery. A review of the literature produced by Anna Cutler (2013) and Emily Pringle (2010), both for Tate, and a literature review written by Adams, Luke and Ancelet (2010) regarding interactive spaces in US art museums. In seeking out literature on family learning, the research and literature I have found most helpful has predominantly come from the domain of the art gallery. It concerns itself with learning in the visual arts. This literature review looks at what is being said about meaning-making, and ways in which museums facilitate visitor interpretation.

Part one of this chapter explores

- ***Right and wrong answers***, all visitors as learners, visitors at the centre of their own learning, as discussed by Anna Cutler (2010, 2013). I argue that there is a place for right and wrong in a relativist approach to learning in the museum, using Gadamer's (2013) understanding of interpretation and the idea of phenomenological hermeneutics (Esser-Hall, 2000).
- A preference for experience over contextual information; in the art gallery (Serota, 2000), and to promote encounters with the physical materiality of objects (Dudley, 2012(a)).
- An ***ideal pedagogic scenario*** for family learning, in Emily Pringle (2010). *Creative learning, family learning* and *gallery learning* at Tate Modern.
- A literature review undertaken by Adams, Luke and Ancelet (2010) into **family learning in interactive galleries** in art museums. This examines a specific type of family learning experience but from this I draw out key issues for the subject of family learning in museums in general.
- **Sensory learning**: a short discussion on haptic learning (Candlin, 2007).
- **Participation**: a look at how audience participation has perhaps been limited by the idea of *spectatorship* (Bishop, 2013), or is driven by the desire for emotional

experiences (Fleming, 2014) or even understood in terms of visitor motivation (Falk, 2009).

In part two of this chapter the literature review continues with an exploration of current museum learning theory, this time demonstrated through experiences of family learning through which I develop understanding and refine my focus. This corresponds with the emic approach (Cohen, Manion and Morrison, 2011) to my research into learning in museums discussed in the previous chapter. Three cases of family learning provide the means to examine the ideas behind family trails: the idea of learning as an *equal* at the RA and the V&A, and a look at contexts for family learning during a family visit to an ecologically themed art exhibition at the Royal Academy. As such what follows is divided into sections in which different approaches to museum learning are discussed, illustrated with examples of museum practice that facilitated family learning.

- **A Minds-On Approach to Family Learning**: This section explores the role of *active participation* and *social interaction* (Hein, 1998) discussing the part they play in hands-on activities offered at many museums, in particular the family trail (activity trail). Strategies used in hands-on activities can be applied to museum interpretation, they can generate participation and interaction with objects in galleries that cannot be touched, as discussed drawing on the experience of using an activity trail at the V&A.

- **Welcome them as Equals**: This section looks at *interpretation*, discussing Black's (2005) *interpretive approach* to learning and *inclusion* using a visit to *Byzantium 330-1453* at the RA. The idea of interpretation as an educational activity (Black, 2005) is introduced, where meanings depend on a process of visitor interpretation. With this in mind, inclusion is discussed in terms of intellectual access and the barriers that may hinder or promote access to museum collections.

- **A visit to the Earth: Art of a Changing World Exhibition at the Royal Academy (2010):** Here the *personal, social* and *physical* contexts (Falk & Dierking, 1992) for learning are explored. This is done in the context of another RA visit to *Earth: Art of a changing world* exhibition (2010). Falk and Dierking (1992) tell us that these three contexts have been neglected by museum learning theories and indeed museums. The *physical* context is linked back to the museum's interpretive approach, particularly to information in the form of text, discussing the role it plays during our family visit. The role of physical space in making visitors feel comfortable is briefly acknowledged. Hooper-

Greenhill (1994) tells us that this is an important factor in visitor learning. Looking at the *social* context, the role of dialogue as a vehicle to create meanings and as a tool for scaffolding is discussed. The *personal* context, provides the context for individual meaning making, visitor centred learning, and the idea that learning happens in the context of visitor perspectives, interests and prior knowledge. These all come back to the idea of interpretation and the need for museums to adopt an interpretive approach to learning (Black, 2005).

- **Communities of Practice:** This section looks at the family as a community of practice (Wenger, 1998), and the idea of learning a social phenomena, being lived experience. The concept of scaffolding (Vygotsky, 1978) supports this.

- Burnham and Kai-Kee's (2011) concept of **guided, shared interpretation** is used to explore the idea of learning in the museum which requires both the visitor and museum to contribute to the process, however it is seen as the museums' responsibility to make this happen.

- **Labels**: While labels, museum interpretation, play a part in the museum learning experience. They are seen by some to be a distraction, despite a desire for museums to facilitate visitor encounters with objects (Storr, 2006).

Part One

In part one a number of points about learning in the gallery are discussed with the aim of applying them more specifically to the idea of family learning, that is, learning in an intergenerational group. This contributed to the generation of questions on which to base my research.

"We are keen for people to recognise that there is no right or wrong answer to art, it's all about ideas." (Cutler, 2013)

This statement above by Anna Cutler (2013), although seemingly inclusive in sanctioning all visitor answers (meanings), is problematic in being so open-ended. I was drawn to this discussion because of its ambiguity, the idea of no right and wrong. Having begun to consider meaning making, I was asking questions about whether visitors were happy with just their own ideas about objects and Cutler (2013) implies that they should be. Cutler's approach can be seen to be inclusive and accepting of all visitors' ideas about art, however I argue that there are some right and wrong answers which play a necessary part in facilitating visitor meaning making in both the gallery

and the museum. I argue that the absence of right and wrong answers can limit visitor learning.

Tate is committed to research in galleries, including research into museum learning. This research is publicly available on their website. "Tate is a leading centre for research in visual art, collection care, learning and museum studies" (http://www.tate.org.uk/research). Since 2011, Tate has been carrying out research into its own learning practice, *Transforming Tate Learning* project (Pringle, 2017). Cutler produced a short film, *Learning with Tate* (2013) on the Tate website which used here as a key commentary on museum learning.

Current theory about learning in museums that concerns meaning making places the visitor at the centre of their learning experience. Learning in terms of meaning making fits with Constructivist learning theory (Hein, 1998), which I discuss more fully in the next chapter. Current theory about learning in museums is very much about visitors making personal connections (Adams, Luke and Ancelet, 2010). A generally accepted definition for museum learning is: "Learning is a process of active engagement with experience. It is what people do when they want to make sense of the world. It may involve the development or deepening of skills, knowledge, understanding, values, ideas and feelings. Effective learning leads to change, development and the desire to learn more" (Arts Council website). This is the basis for the Generic Learning Outcomes (GLOs) (appendix 11) process of evaluation used in many museums.

From Cutler's (2013) statement above it could be argued that she wishes visitors to know that when looking at art there no right or wrong answer but ideas are important. She suggests that artworks can be perceived as the viewer wishes, there are no correct conclusions to draw from the experience. This is consistent with some post-modern theory of learning, with the learner at the centre of their own learning and meaning constructed in the minds of the learners (Hein, 1998). Tate is keen that "people are able to ask questions for themselves about art" (Cutler, 2013). It could be argued that the *answers* that Cutler (2013) refers to are answers to questions that the visitor set for themselves, putting the visitor is in control of both the questions they ask and the answers. This is problematic, especially when used for museum objects where a lot is known and there are right answers to be had. I use this idea of *right and wrong answers* to look at meaning making in the non-art gallery when visitors may hope to reach reliable conclusions, but can at times be disappointed. (By reliable conclusions, I mean that individuals can reach conclusions that can be supported by, and perhaps

weighed against, information that is both to hand and is assumed to be correct, whilst acknowledging that there may be no one truth to tell about a particular object in a museum.) I have seen this in the Discovery session at the Horniman where I am often asked questions such as *what is it?* which every so often I am not able to answer. In these cases the identity of an object therefore remains unknown. This is discussed in more detail with reference to a *Shabti* in chapter four. If visitors ask questions, I would argue that they want reliable conclusions (Burnham and Kai-Kee, 2011).

Relativism

From a relativist position the ideas of *right* and *wrong* do not stand as absolute truths but are seen as such according to a given framework, they depend on one's point of view. Relativism allows for all perspectives to have equal weight and as such it is seen as an open-minded and tolerant way of seeing things. Relativism is seen as inclusive as all ideas are accepted; they have subjective value which lies in how they are perceived by the individual. However it is criticised for being uncritically permissive (Wikipedia, b). From a relativist position there are no absolute truths, rather subjective values which depend on individual perception and ideas. The idea of *right* and *wrong* is subjective, determined by the individual and how they see things, informed by their experiences and prior understanding.

From a relativist perspective learning is seen as a subjective activity where conclusions are considered to be true from the perspective of the subject, the individual in whose minds the knowledge exists. Subjectivity is used to describe "that which influences, informs, and biases people's judgements about truth or reality" (Wikipedia, c), such as their past experiences, expectations and perceptions.

In saying that there are no right and wrong answers when thinking about art, Cutler (2013) appears to take a relativist perspective where knowing something to be correct or not depends upon the viewer's point of view. It could be argued that all answers are in a sense correct as they are valid in the eyes of the individual who beholds them. If there is no truth beyond an individual's belief that something is true, then an individual cannot hold their own beliefs to be false or mistaken.

My research concerns meaning making which can be seen as a relativist activity, a process of interpretation. Hans-Georg Gadamer (2013), philosopher of hermeneutics, says that understanding and interpretation are bound up with each other, "understanding always includes interpretation" (Gadamer, 2013: 417). Traditionally

hermeneutics is concerned with the idea of understanding text, however I am using the idea to look at the process of interpretation as meaning making. Gadamer (2013) says that meaning is fully realised, *concretised*, in interpretation.

Interpretation is "a process of assimilation, making one's own understanding explicit through applying it to ourselves" (Gadamer, 2013: 416). Understanding is therefore prejudiced by how we see the world and is always relative to our particular frame of reference. Understanding is always influenced by what we already know. Pre-supposed understanding is subjective and is always in play in the process of interpretation (Gadamer, 2013). "To interpret means precisely to bring one's own preconceptions into play so that the text's meaning can be really made to speak for us" (Gadamer, 2013: 415). Preconceptions are not necessarily articulated, or even obvious, and as a result much of our understanding comes across as normative, validated through being seen as a *normal* way of seeing things. Gadamer tells us that understanding is dominated by concepts and prejudices of the age we live in resulting from "a highly developed social system which accepts the validity of norms that cannot be scientifically demonstrated but that have developed historically" (2013: 578). So our preconceptions are rooted in dominant ways of thinking which influence how we understand and make meaning, which according to Gadamer are rooted in the dominant concepts of our age. As he strongly puts, "to escape from one's own concepts in interpretation is not only impossible but manifestly absurd" (2013: 415). As such Gadamer tells as that "there cannot, therefore be any single interpretation that is correct in itself" (2013: 415), as understanding comes about through interpretation. People understand things in different ways.

Of relevance to this thesis is Gadamer's (2013) model of understanding as conversational dialogue. Understanding and interpretation are bound up with each other, as such it is not an historical reconstruction, nor is it an act of recreation of meaning. Gadamer (2013) argues that dialogue is fundamental to understanding.

In trying to understand a situation we cannot stand outside of it, we can only attempt to understand it from the position we find ourselves in. Tradition and prejudice limit our understanding. Gadamer (2013) presents us with the idea of horizons, particular standpoints, positions in which we are situated, beyond which it is impossible to see. He uses the concept of *horizon* to put forward the idea that from our standpoint we are able to see everything within the horizon, not limited to whether within the horizon things are near or far away. Everything we are able to see is within our horizon.

However, we can never have a truly fixed horizon, horizons are "something into which we move and that moves with us. Horizons change for a person who is moving" (Gadamer, 2013: 315). Understanding is prejudiced by a "horizon of a particular present" (Gadamer, 2013: 316), yet this is not fixed. "The horizon of the present is continually in the process of being formed because we are continually having to test all our prejudices. An important part of this testing occurs in encountering the past and in understanding the tradition from which we come" (Gadamer, 2013: 317). Essentially understanding is determined by the prejudices we bring into play.

Gadamer tells us that the horizon of the present cannot be formed without the horizon of the past, without tradition. The horizon of the past, an historical horizon, is "a moving horizon out of which life always lives and which determines it as heritage and tradition" (Gadamer, 2013: 315). The idea of tradition, born out in an historical horizon, influences understanding. We see the present under the influence of the past.

Understanding is the fusion of horizons, and the process of fusion is continually happening. In the process of understanding there is a tension between the past and the present, between tradition and prejudice. Gadamer (2013) proposes "that the fusion of horizons that takes place in understanding is actually the achievement of language" (2013: 386), hence understanding is said to occur through dialogue. Dialogue in which all past and present, tradition and prejudice, all play a part.

The idea of understanding being prejudiced by preconceptions is potentially problematic for learning in museums, if taken to extremes (Meszaros, 2006), where any and every meaning could be unquestioningly accepted. The idea of visitors accepting their own understanding as correct, and meanings seen to be relative, poses problems for how museums present contextual information which can also be seen to be an interpretation. Whose interpretation is correct?

I address this using Gabriele Esser-Hall's (2000), (a researcher in art and design education), idea of phenomenological hermeneutics. She uses the idea of phenomenological hermeneutics to look at teaching and learning (art theory) in a hermeneutical space, in an interpretive space, which acknowledges "an awareness of the fact that there are distinctions between readings [understandings]" (2000: 294). She supports the idea of learning as a process of interpretation, allowing for and encouraging multiple meanings, corresponding with the idea of subjectivity. She sees subjectivity as having potential and strength in being able to offer an inclusive approach

to teaching which supports self-determined understanding where all meanings are valued, saying that meanings are not fixed, they change over time and are "ever in the process of becoming" (Esser-Hall, 2000: 289). With this approach both teachers and learners are able to accept the others' understanding, and through dialogue and discussion are able to generate meaning on equal terms, recognising individual interpretation. "Phenomenological hermeneutics offers new possibilities as the realisation of educational aims is based on a logical and discursive process where both parties can have an equal share. Its inclusive approach encourages interpretation on many different levels, it acknowledges the interdependent nature of metaphorical thinking and doing, and it emphasises the multiplicity of meaning" (Esser-Hall, 2000: 292). In creating an inclusive space where teacher and learner accept the others' understanding, this, like Cutler (2013) also seems to be informed by relativism.

Applying Esser-Hall's (2000) approach to museum learning, meaning making can be seen as an interdependent and inclusive process, positioning the learner as having an equal share of the discursive practice of meaning making. Meanings are interdependent. Learning becomes an interpretive activity in which both the museum and the visitor play a part. Learning is seen as inclusive where both parties are able to contribute to the conversation in which learning takes place (Burnham & Kai-Kee 2011), in a place of mutual debate, each bringing with them their own understanding.

Contextual information, in the form of museum interpretation, can therefore be seen to have a place in an interdependent process of meaning making. Esser-Hall's (2000) idea of interdependent meaning making offers an approach in which there is a place for right and wrong answers, yet still see meaning making as a discursive process of interpretation where visitors reach their own conclusions.

Photo 2: Pufferfish, Hands on Base, Horniman Museum
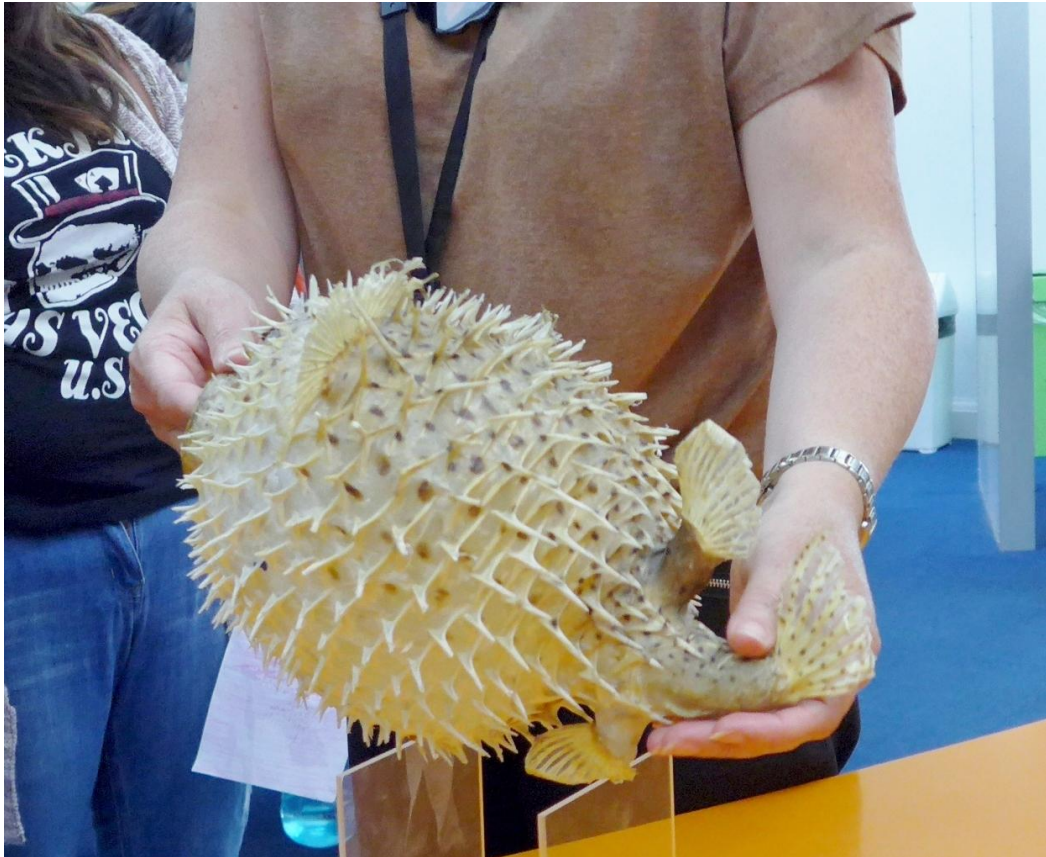
The Role of Information in Visitor Interpretation

Considering the idea of *no right and wrong answers*, my question would be about cultural or natural history artefacts, about which specific information exists, specific *right and wrong answers*. For example, a squirrel essentially needs to be identified as a squirrel, a drum as a drum, pufferfish as a fish and so on. For these objects some answers are right and some are wrong, although what they mean to the individual visitor may vary completely. Working at the Horniman I often chat to visitors about the pufferfish and get it out to handle. We have talked about the pufferfish as a natural history specimen and also as a hat. I have had conversations about their spikes and treading on spikes of the weaver fish in the British Isles and about eating pufferfish in Japan. I have been asked, *who catches them, how do you cook them, why do they puff up?* Many individual meanings about the pufferfish can be made, dependent on the interests of individual visitors. However there are also facts. Where do they live? How big do they grow? What do they eat? The answers to these particular questions are

distinct to the pufferfish and not necessarily open to interpretation. The meanings that visitors made concerning the pufferfish necessitate some right and wrong answers.

Although people can engage with objects in a number of ways, drawing personal conclusions, there are facts pertaining to objects (from anthropological, natural history and musical instrument collections for example) which can be said to be correct. This can be different to engaging with art where responses can be very personal and at times even difficult to articulate. (I am not saying that personal responses are not to be had towards objects as well). Objects in art galleries also have right and wrong answers. For example, knowing that many of C.R.W. Nevinson's (appendix 12) paintings were produced during the First World War, and that he served as a medic on the front line, could enable visitors to make connections to what they know of the First World War. It would be wrong to attribute the paintings to a different conflict.

Cutler (2013) prioritises ideas over right or wrong answers. This is fine as an opening move in the experience, but visitors may need to go beyond this, able to construct informed meaning. Cutler (2013) may not be specifically talking about information about objects, she does however, suggest that learning happens through responding to art. Cutler (2013) is not specifically referencing family learning but engagement with art by all types of visitors.

Burnham and Kai-Kee write about the experience of engaging with art as one of *interpretation*, a process of trying to make sense of art, demanding an "interplay of information and interpretation" (2011: 115). Here, answers in terms of information are needed, whether they are provided by the museum or the visitor themselves, and the information we use in developing *ideas* is "determined by what we decide is and is not important" (Burnham and Kai-Kee, 2011: 115). Burnham and Kai-Kee suggest that in the art gallery these facts may come from art history, visual information (looking at line, shape, colour and composition etc) and, "the information we bring to artworks from our daily lives" (2011: 115). Engagement is a process of interpretation in which information plays a part, including visitor prior knowledge (Falk & Dierking, 2000; Roschelle, 1995).

Cutler tells us that "at Tate we understand learning to be about the profound process of change. What we're trying to do is to see what happens when you bring art to people and people to art, to explore what those changes can be. …What do people say about it? What are their views? How do we give people opportunities to explain them?" (2013). Jeremy Roschelle, co-director, Centre for Technology in Learning, Stanford Research Institute (SRI), sees learning as conceptual change occurring through

"recontextualising, re-prioritising or refining" (1995: 10). It is Tate's intentions that visitors develop opinion, therefore change views and ideas as part of the learning experience. Right and wrong answers are part of this learning process, the process of engaging with art, as partially suggested by Burnham and Kai-Kee (2011) above. Information is also part of the process of developing opinions, views and ideas. Visitors not only need to know that there are *answers,* but also need to know whether the answers they reach are correct or not. This fits with what I mean by *reliable conclusions*, discussed above. The process of interpretation, informed meaning making, can require and involve information (Burnham and Kai-Kee, 2011). If information is made available to visitors, it can be used to verify and support their ideas and opinions, contributing to the learning process, helping to verify the conclusions they reach. *Answers* can act to scaffold the learning experience (see below). At the core of my research is a desire to better understand how museums engage families with learning, and in chapter four I discuss *answers* in terms of information and how they fit into the process of meaning making, particularly at the Horniman in the HOB where there is minimal museum interpretation, where a form of open-ended learning mitigates against the desire for information.

Cutler's (2013) *answers* could be thought of as *responses*. Museums could consider how to communicate *answers* (information) in such a way as to promote visitor meaning making, acting as a springboard for personal responses. Information in museums, as one visitor told me, "should allow us to learn" (conversation in the Horniman with adult visitor, May 2010). The idea of no right and wrong is then applied, not to the facts, but to visitor ideas and personal responses. I draw on this writing about learning in the art gallery where the thinking is primarily about visitor engagement and the development of ideas, rather than getting it *right* or *wrong*, and apply this to thinking about how visitors successfully engage with, and respond to, objects in museums other than art museums. Consideration needs to be given to looking at how visitors can engage and formulate ideas with regard to objects about which it is also necessary to know some right from wrong.

For Cutler (2013) is essentially saying that every response and judgement appears to be valid. However, I have used what Cutler (2013) has said to illustrate that even when looking at art, it is important that answers are available, especially when the museum would like visitors to ask questions (see Horniman, chapter four). Answers depend on questions, and questions are dependent on what the visitor is interested in and what they want to know. In turn, what the visitor wants to know is influenced by what they

see in museums, both objects and contextual information. If the museum provides answers, this does not necessarily take autonomy away from the visitor over their learning. Having *answers* to hand, the visitor can be better equipped to respond and understand. Taking this forward, how do we apply this in the context of the family learning experience? How can answers be presented in such a way so as not to dictate the questions, or even stop the visitor asking questions at all? Cutler tells us that "it's all about ideas" (2013). Under what conditions do ideas flourish? I will be tackling this issue in the HOB in the Horniman where there is very little information about the objects.

Experience as a Means for Interpretation

It is not the case that museums and galleries facilitate visitor engagement merely through the provision of contextual information. Nicholas Serota (2000), director of Tate 1988-2017, and Sandra Dudley (2012), Senior Lecturer in the School of Museum Studies, University of Leicester, both put forward that *experience* has a large part to play. Serota (2000) suggests that the experience of art has become a priority for galleries, evidenced by the way art is now displayed. Dudley (2012) advocates for more visitor experience of the physical materiality of objects. Their thoughts on *experience* are discussed below.

In January 2000, Serota said that there is a public demand for both authoritative history and experience, yet there is a growing inclination by curators to favour experience over interpretation. Serota (2000) talks about the *storyline* of works of art, where the history of art becomes less significant and personal experience becomes paramount. He discusses the distinction between the visitor feeling like they are attending a history of art lesson or "at worship with all our faculties given over to the experience of the work itself" (Serota, 2000: 10) as being at different ends of a spectrum. This debate feeds in to the purpose of museums, a discussion on "whether museums should focus on the audience or whether the main concern of the museum work is the collection" (Gron, 2011: 204).

In the 1990s the trend for displaying contemporary and twentieth century art became to give "weight to the work of individual artists, which favours presentation over analysis", suggesting that how a work of art is displayed is seen to have more of an impact than any accompanying interpretation provided by the museum. Providing an experience became prioritised over promoting debate and the discovery of ideas. Serota says of that time, "traditional museum disciplines of juxtaposition, analysis and interpretation

were reduced to the minimum: experience was paramount" (2000: 17). This way of exhibiting artwork continues today as Serota tells us that "this new convention is so common as to be taken as the norm" (2000:15). This focus on experience is a shift from seeing museums as places to conserve works of art.

Serota (2000) tells us that the reason for this shift, to displaying art for the public to experience, was partially due to artists getting more involved in how their work is presented. Artists began to have more say in how their work was displayed and sometimes even created work especially to fit a particular space, such as Phyllida Barlow's Commission at Tate Britain 2014 (appendix 13) where she created work in response to the Tate's collection and the Duveen Galleries. As well as creating the work, artists were getting more control of the public's experience of it. Display was being influenced by the artists themselves, they were not simply handing over their work to a curator to best decide how to display it.

This became problematic, as Serota writes that there is agreement that the "encyclopaedic and dictionary functions of the museum are neither achievable nor desirable. But there is less general agreement on how to balance the interests of the artist, the curator and the visitor" (2000: 42). Facilitating this type of visitor experience of art in the gallery appears to be favoured over what could be seen as a more traditional model of providing historical context, and this is done through different approaches to display. Serota (2000) discusses examples of methods galleries have used to display art, from presenting a single artist's work favoured in the 1980s to putting artist's work together to highlight the parallels and contrasts between them, such as at the Museum fur Moderne Kunst in Frankfurt (Serota, 2000).

Discussing the experience of art, Serota (2000) writes about the need for opportunities for deep and measured observation to facilitate prolonged concentration and engagement. The manner in which art is displayed is thought to provide and facilitate an experience rather than through the provision of historical knowledge and context. Visitor interpretation is facilitated "by subtle juxtapositions of experience" (Serota, 2000: 55). Consequently he argues that visitors "will have to become more willing to chart their own path, redrawing the map of modern art, rather than following a single path laid down by a curator" (Serota, 2000: 55). I argue that this is problematic, as in expecting the visitor to *redraw the map of modern* art do we then expect them to have the skills and experience to do so? Is simply the experience of art enough to draw a map of (in this case) the wider field of modern art, to understand where artworks fit in a

particular culture, timeframe or context? I would argue that some visitors need support to do this, *paths* could be laid down by curators, not a single linear *path* but options that visitors are able to take if they chose to do so. By paths I mean support that a gallery might provide for the visitor, which might take the form of museum interpretation.

Serota (2000) however, is not proposing to leave the visitor to their own devices, he talks about generating conditions for experiencing a sense of discovery, conditions created by the curator which "stimulate readings of the collection" (2000: 55). It could be said that these conditions favour the experience of art over authoritative history, and are created by the ways in which art is displayed. I would suggest that Cutler (2013) and Serota (2000), both from Tate, promote the idea of visitors being responsible for charting their own paths (and therefore learning experience) in the gallery. Cutler (2013) through advocating that there are no right and wrong answers where visitors can think what they like. But does that mean we leave visitors to be self-sufficient? I argue that museums should provide interpretation which can be drawn on by the visitor if they so wish. I am not calling for a return to what Serota calls, a "conveyor belt of history" (2000: 55) but for conditions for the visitor that facilitate discovery, maps (in a metaphorical sense) that can guide visitors yet not necessarily plan their journey for them. Otherwise visitors can simply be left to draw on their own sensibilities and interests which may or may not be sufficient.

Experience of Encounter

Dudley (2012) puts forward a case for encouraging visitor engagement with the material culture of objects in the absence of contextual information in the form of labels and text. Her idea is to offer visitors the chance to respond to the object just for itself, to its physical qualities such as texture, surface, density, colour for example. She does not deny that cognitive understanding of the object is important, but says that the physicality of the objects is too, which can be overlooked when producing interpretation, labels and text. The physicality of objects "can trigger personal, emotional and sensory responses that may have significance of their own as well as in enhancing subsequent understanding" (Dudley, 2012: 3). Her concern is that museums make information about objects so central that it might diminish opportunities for engagement, and visitors therefore focus too much on the overlying context rather than on the object itself. This is something I discuss in more detail in relation to the Horniman, chapter four. Dudley (2012) acknowledges the importance of making objects and interpretation accessible, to help visitors identify meaning and context, yet argues

that these could be the very strategies that prevent or limit the opportunities to directly encounter and respond to objects in and of themselves.

Dudley (2012) uses a personal experience to illustrate her argument, a time at Compton Verney Art Gallery and Park, Warwickshire, England, a former stately home, which houses one of the top three Chinese art collections in Europe. On encountering a bronze figure of a Chinese horse, over a metre high, she says she was "utterly spellbound by its majestic form" (Dudley, 2012: 1). This initial response was just to its material characteristics. Despite not being able to touch it, and having up to that point not seen a label or any interpretive text, she says "I still knew nothing at all about this artefact, other than it clearly represented a horse and that I guessed it was made of bronze: nonetheless, its three-dimensionality, tactility and sheer power had literally moved me to tears" (Dudley, 2012: 1).

Dudley (2012) was convinced that had there been a label or text panel, it would have interfered with, or even prevented altogether, her powerful and moving reaction to the horse, impeding her ability to encounter the object for itself. "I would have been distracted by the text, would have been drawn to read it first, and would not have had the opportunity to experience and sensorially explore the artefacts physicality for its own sake" (Dudley, 2012:2). After her initial response, she read the accompanying interpretive material which provided context information. This served to enhance her initial response, it "further intensified its power over me. I was left breathless all over again" (Dudley, 2012: 2).

The argument I have with Dudley using this encounter with a bronze horse as an example of a powerful, positive response to its material characteristics, benefiting from not having any interpretive text (in the first instance), is that she appears not to acknowledge her previous experience of looking at objects and the bearing this has. Dudley is a senior lecturer in museum studies, therefore it could be said that viewing objects is something she is very familiar with and she came to this encounter with the horse with substantial experience of viewing objects and possibly even knowledge about the types of objects in the Chinese art collection at Compton Verney. She writes about "imagining how it would feel to stroke it, or how it would sound if I could tap the metal, or how heavy it would be if I could try to pick it up. I was, in other words, sensorially exploring the object even though I had to intuit and imagine rather than directly experience most of the encounter" (Dudley, 2012: 1). Her imaginings resulted in the powerful feelings she describes above. I would argue though that even in being

able to imagine sensorial exploration, she has developed skills to do this that some museum visitors do not necessarily have. She perhaps brings a level of experience to the encounter that enabled her to get more out of it than perhaps other visitors with less experience. I put forward that her encounter was facilitated by her prior experience and, despite not looking at the gallery interpretation, is not a direct result of simply viewing the object in and of itself. I suggest that Dudley is in an advantaged position of being able to view objects knowing much about how to do this beforehand.

Dudley (2012) acknowledges that experience is contingent and our interpretations are culturally, socially, historically and personally situated, "heavily influenced by who we are and the prior knowledge, experiences, feelings and so on, we bring to bear" (2012: 7). We see what we do because of the personal and cultural ways we have developed to see (Gadamer, 2013). We all see and respond to objects in different ways. Part of Dudley's (2012) enquiry into visitor responses to the physicality of objects focuses on how people respond to objects before they know or ask anything about them. I would argue that she had the kind of prior experience that privileged her to be able to respond without the need for text (in the first instance). Others may have needed contextual information to be able to have anything like the quality of her *powerful* response. Even being able to see that the horse was made of bronze suggests a certain level of prior understanding that surely would have influenced her response.

Despite encouraging the idea of viewing objects without interpretative material, Dudley refers to contextual information provided by the gallery as being "crucial" (2012: 2), and after reading, it "further intensified its power over me" (2012: 2). Her argument for opportunities to encounter objects in themselves, without the influence of interpretive text, is so that they do "not dissolve into meanings and context does not inhibit our opportunities to engage with things, even those we know nothing about" (Dudley, 2012: 11). She suggests that museums have a preference for information over the material. Conversely I would argue that, for some visitors, knowing nothing about an object may act to inhibit responses. As well as providing contextual information, museum interpretation could be used to facilitate visitor responses to the physical materiality of the object too.

Rather than distancing contextual information for fear of inhibiting and possibly precluding emotional responses to the object in itself, museum interpretation can facilitate many types of encounters, including responses to the physical characteristics of objects. Dudley makes a plea not to discard what museums have learnt about

interpretation and telling stories but "regain something powerful about the magic of things themselves – something that is central to what museums can offer" (2012: 12). "The *challenge* [my italics] lies in producing successful and accessible interpretive interventions which simultaneously do not dilute, if not remove altogether, the sense of magic, mystery and excitement that objects can convey" (Dudley, 2012: 3).

An Ideal Pedagogic Scenario for Family Learning

Pringle (2010) gives us an account of research she undertook in UK at Tate Modern in family learning, in her role as head of Learning Practice and Research at Tate. She draws on the literature surrounding three areas of concern; *Creative Learning, Family Learning* and *Gallery learning*. Exploring these three areas, she draws out successful criteria to generate an "ideal pedagogic scenario" (Pringle, 2010:12) for family learning. Through research undertaken at Tate Modern, she sought to determine whether positive features of this *ideal pedagogic scenario* were embedded in two different family learning programmes.

The two programmes chosen for the research were *Start* and *Small Steps in a Big Space*:

- *Start* is a free drop-in weekend event aimed at five to twelve year olds. It provides a range of activities to do in the galleries. Staff are on hand to explain the activities and when finished, families are encouraged to debrief with a member of staff, a chance to show and discuss their work.

- *Small Steps in a Big Space* takes place in the education space and the gallery. Three two hour sessions are led by artist educators, aimed at children with their parents/carers in the local area.

The aims of Tate Modern and its family learning programme are to, "develop understanding of modern and contemporary art. The Family Programme aims to widen access and encourage those unfamiliar with attending to visit. It also seeks to enable all visitors to participate fully, enjoy their experience and make meaning from art" (Pringle, 2010: 13). This reveals that the family audience is included in Tate's overall mission to develop and sustain active audiences for modern and contemporary art (Introducing Tate Learning, 2014, appendix 14).

Creative Learning

The first area of museum learning Pringle examines is *Creative Learning*. Acknowledging that it is a contested term, she presents us with Craft's construction of *Creative Learning*, which he describes as, "any learning that stimulates learner creativity. Such creativity, this suggests, is not confined to the arts, but rather embraces key aptitudes which individuals can apply across different subject areas" (Pringle, 2010: 7).

Play is seen as an important element of creative learning and Pringle tells us that, "learning through play is central to gallery education practice, with practical activities in particular allowing for an element of enjoyment and experimentation" (Pringle, 2010: 7). In *Creative Learning* learners are encouraged to take responsibility for their own learning and learning is seen as an active process. Play is used in museums as a means for visitors to explore ideas and concepts in making activities (Hooper-Greenhill & Moussouri, 2001). Pringle links *Creative Learning* with Creative Teaching and lists elements of *play* such as "innovation, control, relevance and ownership" (2010: 8) as essential elements. Research has shown that *Creative Learning* "enhances curiosity, independence, risk taking and flexibility, as well as learner engagement and motivation. Similarly, creative learners are seen to enhance their critical and evaluative skills, use their imagination and collaborate strategically" (Pringle, 2010: 8). In *Creative Learning* the emphasis is on the learner in control of what they learn and their learning outcomes.

Pringle (2010) ends her discussion on *Creative Learning* warning us that "whilst many claims are made, some have cautioned that rhetoric tends to run ahead of concrete experience, and participants often arrive at sweeping conclusions on the basis of limited evidence" (2010: 8-9). Acknowledging this, drawing upon the limited evidence available, she uses ideas about *Creative Learning* to form her *ideal pedagogic scenario*.

Family Learning as Social Learning

Family Learning is a term generally used to describe learning approaches that involve children and parents or carers, encouraging them to learn together. The National Institute of Adult Continuing Education (NIACE) presents a pedagogical approach to family learning with its guide to *Developing and Supporting Family Learning in Museums and Galleries* (Meade, 2009). NAICE (2009) makes a case for museums

supporting the needs of families through developing their learning and calls for shared understanding of the key principles and practices of family learning. In the museum, family learning happens in a sociocultural context (Falk and Dierking, 2000, Hooper-Greenhill & Moussouri, 2001). Falk and Dierking tell us that "much of the way humans make sense of the world is through human interaction with others, through distributed meaning-making. For learning, particularly learning in museums, is fundamentally a social experience" (2000: 38). It is the social experience of a family learning that Pringle (2010), and others above, use the term *Family Learning* to describe; a banner under which family programmes are offered. However, a family learning programme does not always provide for the whole family; often the emphasis is on provision for children (see chapter one). Sociocultural mediation (Falk & Dierking, 2000; Hein, 1998) is an important aspect of family learning and meaning making, and affects the ways families participate. Families can be seen as a particular community of practice. (Falk & Dierking, 2000; Wenger, 1998). I am looking to better understand how meaning making and collaborative learning happen in a family context.

"Research into informal learning in all museums pays attention to families' motivations for attending. Dierking for example, suggests that families view museums as social settings in that they provide an opportunity to do something together as a family. As such the social aspects of museum visits are important" (Pringle, 2010: 10). Families visit for a number of reasons. Packer tells us that "although most visitors don't come with a deliberate intention to learn, they do seek or are unconsciously drawn into an experience that incorporates learning" (2006: 334).

Pringle discusses the impact of the physical environment on museum learning, but mainly in terms of physical access and being child-friendly. "Other factors which affect families' experiences include the museum environment (degree of child-friendliness) and the physical layout of the exhibits" (Pringle, 2010: 11). Much has been written about museums adopting a more child-friendly approach, with Kids in Museums campaigning in the UK (appendix 15). My research into museum learning focuses on cognitive access to museum collections, how the family engages and makes meaning although I acknowledge that there are many types of access (see chapter one for comment on threshold fear). I would like to see the child-friendly remit extended to always include cognitive as well as physical access.

Pringle identifies that participation is a key feature of family learning activities. (For more on participation, see below, Bishop, 2013; Falk, 2009; Femming 2014).

"Participatory exhibits which allow for some interaction sustain families' interest for longer and family guides that encourage active learning, questioning and involve more playful activities are deemed to be more successful" (Pringle, 2010: 11). In this research I look at how museums can perhaps create a participatory approach through their interpretation, particularly with permanent collections, where there may be little or no specific provision for the family visitor.

Learning in the Gallery (Gallery Learning)

Pringle describes "gallery pedagogy as a complex process that involves learners constructing meaning through engagement with art" (2010: 11). Gallery learning "has been prompted by galleries' desire to become more visitor centred" (Pringle, 2010: 11). Learning is seen as having "potential to develop new audiences, engender cultural value and enable deep and rich experiences that have a lasting impact on visitors" (Pringle & DeWitt, 2014). Underlying this is a desire to attract and keep new audiences and further develop the relations with current visitors. If galleries are to attract families, they need to be family centred providing rich experiences. An understanding of how families learn will help to do this.

Pringle writes that learning in galleries has been "problematised" (2010: 11) and it has been difficult to determine what visitors learn, "particularly in informal scenarios" (2010: 11). Pringle (2010) sees meaning making as one of constructing knowledge, as opposed to the more traditional notion of transfer of information. She cites Hooper-Greenhill "who argues that learning in museums needs to be understood not just as the acquisition of skills and knowledge, but must include: '...The development of judgement and the formation of attitudes and values. It includes the emergence of new forms of behaviour, the playing of new roles and the consolidation of new elements of personal identity'" (Pringle, 2010: 12-13). Despite this being the accepted view of learning, there is little understanding of how it happens collaboratively in the family group.

Pringle tells us that "Learning is only part of what families set out to do (and have been found to do) when they visit the gallery" (2010: 12). This however, depends upon your definition of learning. Lave and Wenger describe learning as "an integral part of generative social practice in the lived-in world" (1991: 35). They argue for "a theory of social practice in which learning is viewed as an aspect of all activity" (Lave & Wenger, 1991: 37-38). Learning is high on the agenda for museums and the Tate website claims that, "Learning is central to all Tate's activities" (Cutler, 2013).

The essential premise of Pringle's (2010) ideal pedagogic scenario for family learning appears to be summed up by the following statements:

"Common to all [programmes] *is the construction of learners as active and engaged in purposeful, yet enjoyable and fun, tasks. Similarly the literature highlights the importance of collaborative, dialogic forms of teaching and learning that allow for participation and meaning making by all, whilst enabling individuals to take responsibility for their learning"*

(Pringle, 2012: 12).

Visitors are responsible for their own learning and learning happens when visitors are engaged in a task, through connecting to the content of the museum, they construct meaning.

"This environment is supportive, yet liberating; learners are able to question, imagine, explore and take risks and critically reflect on their experiences within a safe intellectual and physical space. Finally, participation ideally engenders a range of beneficial outcomes: greater confidence, curiosity and independence, improved communication skills, enhanced understanding and original thinking and increased knowledge"

(Pringle, 2010: 12).

Pringle (2010) draws conclusions for her *ideal pedagogic scenario* for family learning, concluding that for visitors to be actively engaged, tasks need to be purposeful, fun and enjoyable and the environment needs to be supportive. Visitors should be encouraged to question, imagine and explore. There should be opportunity to take risks and critically reflect in a safe intellectual and physical space. Her findings emerged from research in programmed activities in the contemporary art gallery and touch on the idea of the setting. Through my research I set out to further understand the museum as a supportive learning environment looking at the part museum interpretation plays in the family learning experience. How can museum interpretation support family learning?

Pringle (2010) is making huge claims about what family visitors learn. She lists what visitors should be able to do in a supportive environment, yet apart from describing this environment as safe, she does not go as far as to say how it might support family learning; nor how collaborative, dialogic learning allows for family participation and

meaning making. Of particular interest to me is her mention of increased knowledge. This suggests a process of acquisition rather than a process of "refinement" (Roschelle, 1995), of ideas and understanding. I support the idea of learning being a process of conceptual change that happens slowly involving "a restructuring of prior knowledge to encompass new ideas" (Roschelle, 1995: 5).

A Look at Family Learning in Art Museum Interactive Spaces

Adams, Luke and Ancelet (2010) have undertaken a study of family learning in interactive spaces in art museums in the US and UK. Their research takes the form of a literature review looking into research in family learning across museums, plus they carried out web surveys with art museum educators. Their research is specific to art galleries (the place in which they are testing their assumptions about museum learning), but it raises issues for family learning in all museums. Adams, Luke and Ancelet note that there has been little research focusing on families and their use of art museums "*despite the fact that more than 90% of art museums nationwide* [in the USA] *offer specialised programming for families*" (2010: 19).

Their study seeks to identify the families who use interactive galleries and understand how and why they use these spaces in order to "more fully understand how family galleries facilitate intergenerational learning and what forms that learning takes" (Adams, Luke and Ancelet, 2010: 20). They also seek to comprehend how families connect this experience with the larger museum experience and also to their everyday lives.

They identify the following questions:

- *Who are the families who use interactive galleries in art museums, and why do they use these spaces?*
- *How do families situate their use of interactive galleries within the larger art museum experience?*
- *What is the value of interactive galleries in art museums for families?*
- *How does the value of interactive galleries in art museums intersect with and support a family's core values?*

(Adams, Luke & Ancelet, 2010).

At the core of their investigation is the notion of *connections*. "*Our study explores who connects with these galleries, why, and in what ways*" (Adams, Luke & Ancelet, 2010:

2). Connections are explored in terms of families connecting with: interactive spaces, permanent collections, exhibitions and with each other (amongst themselves). They suggest that museum educators' intentions, when planning and designing interactive galleries for families, their purpose is to build *connections;* to attract families to the museum in the first instance, then to act as launch into the permanent collection and exhibitions, both cognitively and physically. Their purpose is also to engender connections by providing a space for families where they can become more familiar with museum experience; encouraging them to become confident, regular museum visitors. Despite these aims, they report that little research has been done to determine whether interactive spaces successfully do this or not: "findings were inconclusive and hinted that the connection to the rest of the museum was not necessarily direct" (Adams, Luke & Ancelet, 2010: 5).

Family Agenda

Like many, Adams, Luke and Ancelet (2010) define the family using Falk and Dierking's (1992) idea that *a family is made up of persons who define themselves as such*. Primary motivations for families visiting museums are to learn something new, enjoy themselves and to spend quality time together (Packer, 2006; Packer & Ballantyne, 2006). "Each family arrives at the museum with a unique set of goals, motivations, and expectations for their museum visit on any given day. These desires, needs, and expectations have become known as the family agenda" (Adams, Luke & Ancelet, 2010: 3). It is the family agenda that determines their behaviour; what they see, what they do, and what and how they learn. Families consider museums to be learning institutions (Black 2005; Packer, 2006).

"Over the past fifteen years museum researchers increasingly support the idea that learning in museums needs to expand far beyond the traditional notion of learning as the acquisition of facts and skills to include a range of affective, perceptual, and social learning factors" (Adams, Luke & Ancelet, 2010: 9). From their literature review, Adams, Luke and Ancelet (2010), establish three main categories for learning outcomes.

The learning outcomes are:

- Relationship-building
- Knowledge and skills
- Attitudes and perceptions   (Adams, Luke and Ancelet, 2010: 9)

"Recent studies have documented the correlation between visitor's entry motivations and what they learn from the museum experience" (Adams, Luke & Ancelet, 2010: 9). Family visitors report that their motivations for visiting include the purpose of these outcomes. There appears to be a significant correlation between enhanced motivation and better learning as a result of successful museum visits [see Hooper-Greenhill 2006 for the research on this by the Research Centre for Museums and Galleries (RCMG), Leicester]. These learning outcomes relate closely to those proposed by RCMG and the former Museums Libraries and Archives Council (MLA) and currently the Arts Council (appendix 11) as Generic Learning Outcomes (GLOs) (Hooper-Greenhill 2006).

- Knowledge and understanding
- Skills
- Attitudes and values
- Enjoyment, inspiration and creativity
- Action, behaviour, progression

In a bid to define the impact of museum the GLOs were created in 2003 giving "the sector an opportunity to express the impact of museums, libraries and archives learning in a way that had not been possible before" (Coles, 2009: 21). Underpinned by a learner centred approach they place emphasis on the learner rather than the structures by which learning is delivered. Learning is considered to be "broader than content knowledge" (Ellenbogen, Luke & Dierking, 2004: S51), and my research with its focus on meaning making, does not preclude other learning outcomes (above).

The Idea of Connections to Facilitate Meaning Making

"The theory of constructivism is based on the premise that, by reflecting on our experiences, we construct our own understanding of the world we live in" (Black, 2005: 140). Encountering the new, we reflect on experience, and construct meaning in the context of what we already know, using prior understanding and knowledge. Assumptions and biases inform our understanding and determine how knowledge is constructed. Learners determine what and how they learn. Learners are "the determinants of what is learnt" (Black, 2005: 140). Knowledge therefore is seen as fluid, a construction, rather than ready formed. I elaborate on this in chapter four.

Traditionally museums have been seen as repositories of knowledge. Knowledge was seen as ready formed, static, able to be transmitted to learners, not affected by the

learner's perspective (Hein, 1998). John Dewey (1938), an American philosopher whose ideas have been influential in education, describes this view of knowledge as "a finished product, with little regard either to the ways in which it was originally built up or to changes that will surely occur in the future" (1938: 19). Traditionally this idea of knowledge, a kind of *truth* about objects, was central to museum learning and the authority of the museum, not only of the curator but the educator too.

From a constructivist position, learning in museums is seen as meaning making where visitors "construct an understanding of what they see, touch, and manipulate" (Hein, 1998: 152). Meaning is made through visitor *connections* with exhibits. Therefore as many meanings can be made, as there are *connections* between the visitor and the objects. Visitor understanding can therefore differ completely from a museum's interpretation. Taking Adams, Luke and Ancelet's (2010) idea of *connections* forward, how and what visitors learn depends on their interaction and the connections that the museum facilitates. Seeing if and how *connections* occur becomes key to understanding how learning happens in museums.

Meanings are said to be shaped by the quality of the connections. These connections, though made by the family, are influenced by how content is exhibited. This depends on the ontological position of the museum, what the museum considers knowledge to be and how it is presented. In the main this could be from a realist or constructivist viewpoint (see chapter one). From a realist point of view, knowledge is static and independent of the learner, it is able to exist outside and irrespective of the mind of the individual (Hein, 1998). From a constructivist position, knowledge is constructed in the mind of the learner informed by prior experience (Black, 2005; Hein, 1998). A museum's idea of knowledge will inform its approach to interpretation. From a realist approach, information is presented in a didactic way; facts that can be learnt. This approach would see the museum as an expository of information able to be transmitted, unchanged, into learners' minds. A constructivist approach sees learning as a dynamic process of communication between the museum and visitor, allowing for construction of meaning by the visitor (Black, 2009; Hooper-Greenhill, 2006).

From the perspective of constructivist theory it is acknowledged that exhibits are displayed within particular narratives, put together by museum staff who have their own bias and assumptions. Museums' approach to display is not value free, but a construction of meaning of their own making. In his influential book, *The Engaging Museum* (2005), Graham Black proposes the idea of an *interpretative approach*, an

approach which allows for a broad cognitive access to museum collections. "An interpretive approach will emphasise the audience-centred nature of what we do and seek to engage as diverse an audience as possible" (Black, 2005: 187) and therefore seeks to present content in ways which encourage and enable this to happen. Learning becomes a process of partnership between the visitor and the museum, of co-creating understanding and hopefully a more personally formed meaning.

George Hein (1998) is the leading U.S. advocate of constructivist learning in museums: "the constructivist museum needs to publicly acknowledge its own role in constructing meaning when it displays objects and develops programs. It is important that this human decision-making process – full of compromise, personal views, opinions, prejudices and well meaning efforts to produce the best possible material for the public – be opened up to view" (Hein, 1998: 177). If a museum acknowledges in displaying exhibits, that it is not representing truth but interpretation, this will "open the museum to wider interpretation and access to broader audiences" (Hein, 1998: 177). An audience centred approach could encourage learning as it validates and facilitates the connections that visitors make, bringing about greater cognitive access. Adams, Luke and Ancelet tell us that interactive galleries are spaces to gain knowledge and skills and "above all, museums create interactive galleries in an effort to provide engaging educational environments for families" (2010: 10). "What receives less agreement is what families should or might learn in the interactive galleries" (Adams, Luke & Ancelet, 2010: 10).

Much focus has been paid in museums to welcoming the visitor, both physically and cognitively, making them feel comfortable (Black 2005; Hooper-Greenhill, 1994) leading to programming that attracts and includes families, such as interactive galleries discussed here. Despite efforts to familiarise families and making them feel comfortable, museums will be places where visitors experience new things. "People need to connect to what is familiar, but learning, by definition, goes beyond the known; it leads to new agreeable places" (Hein, 1998: 176). Museum interpretation can lead visitors to these *agreeable places*. Hein (1998) discusses the balance between making visitors feel comfortable, connecting with what they already know, and challenging them with the unfamiliar. "The trick, of course, is to find just the right degree of intellectual challenge to leave the learner slightly uncomfortable but sufficiently oriented and able to recognise the challenge that she will accept it" (Hein, 1998: 176). Museums interpretation might balance the familiar with challenge, in order to stimulate visitor

curiosity making it an intentional learning outcome. I discuss curiosity in more detail in chapter five.

"While interactive spaces do draw more families to the art museum, they cannot make up for exhibitions and collections that are not in themselves, engaging for families" (Adams, Luke & Ancelet, 2010: 14). Finding out more about how families are learning in art galleries, establishing "the nature of knowledge gained in these spaces and which types of knowledge tend to predominate" (Adams, Luke & Ancelet, 2010: 14), can inform interpretative practice. Recognising how and what families learn can inform educational policy and practice, ensuring that not only is the interactive gallery a welcoming space for families, but so are permanent collections and exhibitions. This does not mean *dumbing down* content or pitching interpretative materials at children, but taking an interpretive approach (Black, 2005) that allows for multiple connections. An example of this is *Object Conversations* (appendix 16) at IWM London. Visitors handle original artefacts, displayed on a trolley, overseen by informed volunteers who share and layer information.

Both interactive galleries and traditional (non-interactive) galleries can use interpretation to generate family participation. Black tells us that "active participation does not necessarily mean pulling levers or pressing buttons. Physical involvement is only a means to an end" (2005: 198). Visitors "are no longer willing to be passive recipients of received wisdom but instead want more say in what they are allowed to know" (Black, 2012: 79). The changes in the language used to talk about the learning agenda in museums reflects this. Museums tend to talk about *learning* rather than *education*. Alec Coles, then director of Tyne and Wear Museums, puts forward that "learning characterises something that people do, and that develops them, while education is an organisational construct that describes a service commitment to transfer knowledge to someone" (2009: 94). The language used has described visitor learning rather than museum teaching. "Museums must become enablers and mediators and must focus on the approaches involved in delivering this much more flexible and relevant learning agenda" (Black, 2012: 79). Through this research I look at how museums are enabling.

Like Adams, Luke and Ancelet (2010), the idea of making connections is a key concept for my research; visitors making cognitive connections and social connections within the family group, other visitors and museum staff. Learning in museums is seen as happening through connections and a lack of connections can curb meaning making,

as I have experienced. I began this research in the Discovery session at the Horniman frustrated by the intentional lack of interpretation (written text) in the HOB (described in detail in chapter four). As a visitor myself to the HOB, I had missed things, not made connections, been left flummoxed by objects we as a family could not understand. We needed information and museum interpretation (information) to make connections and help us answer our questions.

Photo 3: Hands on Base, Horniman Museum

There are answers to be had in engaging with objects, however in terms of being correct, they depend on the questions asked. Questions depend on what visitors are interested in and want to know. Tate, with an ethos of putting the visitor at the centre of their own learning, aims to give visitors the freedom to respond personally, not having

to reach a *correct* answer. This idea raises questions about what information, if any, the museum should offer. How can it be done in such a way as to engender personal responses and promote individual meaning making rather than telling visitors what to think? Do *answers* (as museum information) get in the way or promote access?

The example of the pufferfish, above, establishes that there are right and wrong answers which can lead to visitors making a variety of connections dependent on personal interests. There is a place for information in visitor meaning making; the issue lies with how it is presented, which is dependent on a museum's approach to interpretation. A successful interpretative approach would allow for the interests of the learner that does not inhibit, but engenders meaning making. Some answers are fixed. For example, Matisse did produce *The Snail* (1953) (appendix 17), it is made of painted, cut paper and we know where and when it was created. There is no right or wrong way of responding to *The Snail*, but if a visitor asks how it was made, there are definite answers, it would be wrong to attribute the work to another artist and to misunderstand the techniques Matisse used to create it, for example. Tate pedagogy (Cutler, 2013; Serota, 2000) appears to be concerned with visitor responses and experiencing art, not about Matisse and why he made it and why in this medium. As argued above, contextual information has a part to play in how visitors respond to art, and perhaps similarly objects. As Dudley (2012) argues for more opportunities to engage with the physical materiality of objects without the intrusion of contextual information, I argue that rather than interrupt the process, it can be provided in such a way to optimise visitor engagement and facilitate personal connections. It could be argued that ideas and understanding can be misdirected, resulting in visitors not only getting it wrong but also limiting opportunities for responses. For example, working on an object handling trolley at IWM London with swastikas, it is important that visitors do not attribute the history of the swastika symbols to Nazi Germany (which many do), but understand that they are also used to decorate Hindu wedding venues and appear on a seal to Buddha's heart, existing many years before they were appropriated by the Nazis. This contextual information often challenges visitors understanding and values. Information needs to be available for visitors. It is not possible for Tate to manage visitor responses, and Cutler (2013) acknowledges this, so how do we communicate to visitors that all responses are valid as a basis for further discovery?

In addition to the sources discussed here in detail I have used others and these will be apparent in later chapters, reflecting the changing emphases in my thinking as my research developed.

Multisensory Haptic Learning

Haptic learning and the tactile perception of learning is multisensory (Spence, 2007). Pye (2007), UCL, Institute of Archaeology, tells us that teachers perceive that handling objects enriches learning, but acknowledges that this has been difficult to evaluate. Haptic learning is perceived to benefit the learning experience in that being able to handle an unfamiliar object and imagine what it would be like to use it may prompt deeper understanding (Trewinnard-Boyle and Tabassi, 2007). Fiona Candlin, lecturer in Museum Studies, Birkbeck College, University of London, tells us that handling sessions "make good pedagogical sense for museums" (2007: 89) particularly with reference to bodily-kinaesthetic intelligence (Gardner, 2013), that is learning by doing. Museums offer handling sessions attempting to appeal to a broad audience and for Candlin (2007) this helps to challenge the precedence of access via academic knowledge, which is particularly problematic when it is the only way offered to visitors to access collections. She also suggests that being able to touch objects is seen to appeal to non-museum goers, and it also provides physical access for visitors with visual impairments. However, both people with visual impairments and those without, experience and understand the world through touch. For example, touch and sight provide overlapping information about the shape, size and texture of an object, however touch is not a substitute for sight (Candlin, 2007). For both sighted and partially sighted people touch helps to build a visual picture, used to identify, make comparisons and judgements. "Multisensory experiences are generally richer, more pleasurable, and more memorable than unisensory experiences" (Spence, 2007: 57).

Participation

It could be argued that for some museums, the visitor experience is not prioritised, meaning that participation is perhaps shaped by larger driving forces such as funding. Writing in 2013, Claire Bishop, professor in the PhD Program in Art History at City University of New York Graduate Centre, New York, discusses whether exhibitions in art museums are driven by public interest or by private donations and corporate sponsorship. Bishop (2013) argues that some museums are not driven by the idea of meeting visitors needs, but rather by meeting the needs of the donors and sponsors who fund them. This has a bearing on the visitor experience, on the ways visitors are able to participate. Discussing what she calls a "global panorama of contemporary art museums" (Bishop, 2013: 12), citing examples such as the Louvre and Centre Pompidou, Paris, and Guggenheim, New York, she says that "what binds them all

together is less a concern for a collection, a history, a position, or a mission than a sense that contemporaneity is being staged on the level of image: the new, the cool, the photogenic, the well-designed, the economically successful" (Bishop, 2013: 12). Bishop suggests that these museums are driven by image and by measuring value in economic terms, and are therefore "creatively and intellectually crippled by its reliance upon blockbuster exhibitions designed to attract corporate investors, philanthropists, and mass audiences" (2013: 55).

Bishop (2013) puts forward that for the image led museum motivated by economic success, *spectatorship* is the predominant mode of visitor participation and experience, prioritising the *image* needs of the corporate sponsors and private donors. She argues for museums to be spaces of historical and cultural reflection, that this would best represent the interests of the public, making them relevant. She appears to be suggesting that the idea of spectatorship is defining how visitors participate, as museums bow to the economic and image pressures of their funders, perhaps becoming *creatively and intellectually crippled*, rather than focus on their *collections* and *history*. She argues "for culture and the humanities to be appreciated as important and extraordinary in their own right, existing outside the language of accounting and use value" (Bishop, 2013: 62). In contrast, David Fleming (2014), director of National Museums Liverpool, UK, argues for a much more audience focussed approach, driven by a belief that museums can change people and the importance of the impact of museums on their visitors. "Giving access to ideas and provoking an emotional response is, arguably, the most important function of museums – and this can be applied to all types of museums not just those concerned with social history" (Fleming, 2014: 27). He puts forward that the museum's remit is to connect with and have an impact on the public. This has a bearing on the ways people participate, how they appeal to audiences. Fleming argues that visitors should have emotional experiences, and for the National Museums Liverpool, museums of social history, these arise from the stories they tell, "about people not objects, and people are about emotions, not things" (2014: 23).

In 2011, the National Endowment for the Arts, an independent government agency of the United States that supports and funding for the arts, produced a report on arts participation in the U.S.A., *Beyond Attendance: A Multi-Modal Understanding of Arts participation* (Novak-Leonard and Brown, Wolfbrown, 2011). In it we read that the term participation has commonly been thought to be referring to *attendance* in the arts. However, attendance is just one way that the American public participate in the arts,

and currently it is accepted that participation involves multiple modes of engagement "including attendance, interactivity through the electronic media, arts learning and arts creation" (Novak-Leonard and Brown, Wolfbrown, 2011: 26). The concept of attendance is broad, thought to involve different ways of participating. The report puts forward a framework categorising arts participation by the extent to which people get involved. There are five categories of participation dependent on the amount of creative control exercised by participants, ranging from having no control to total control. The five categories ranging from total participation (*inventive participation*) to none (*ambient participation*) are:

1. ***Inventive Participation*** *engages the mind, body, and spirit in an act of artistic creation that is unique and idiosyncratic, regardless of skill level (e.g., composing music, writing original poetry, painting).*

2. ***Interpretive Participation*** *is a creative act of self-expression that brings alive and adds value to pre-existing works of art, either individually or collaboratively, or engages one in arts learning (e.g., playing in a band, learning to dance).*

3. ***Curatorial Participation*** *is the creative act of purposefully selecting, organising, and collecting art to the satisfaction of one's own artistic sensibility (e.g., collecting art, downloading music, and burning CDs).*

4. ***Observational Participation*** *occurs when you see or hear arts programs or works of art created, curated, or performed by other people (e.g., attending live performances, visiting art museums). We define two sub-types of observational participation: 1) participation in live events, and 2) electronic media-based participation.*

5. ***Ambient Participation*** *includes encounters with art that the participant does not select (e.g., seeing architecture and public art, hearing music in a store).*

(Novak-Leonard and Brown, Wolfbrown, 2011: 32)

These categories, however, could be problematic if they are held to be rigid when thinking about museum learning, for the self-guided family in Discovery in the HOB in the Horniman (see chapter four). I would argue that visitor participation cannot simply be pinned down to any one of the above categories. Visitors may fall into several of the categories throughout the duration of their visit. Working with the Horniman's handling collection, families can be involved in *interpretive participation,* as they think about and

perhaps discuss what they see, but I also suggest that they are also involved in *observational participation,* as they look at and handle objects curated by the museum. Perhaps they could also be said to be involved in curatorial participation as they select and organise, not only the objects they handle, but perhaps the ideas and understandings they might share. Whilst perhaps museum learning cannot be put into one category as a type of participation, this framework has been devised to move beyond a "simplistic characterisation of arts categories as being either active or passive" (Novak-Leonard and Brown, Wolfbrown, 2011: 32). The categories have been devised to differentiate participants' involvement in the arts. However, museum learning could occur in any of the categories above, whatever the level of participation. I suggest that in the museum learning context, that there equally opportunities to learn from *seeing public art,* as there are from being involved in an *act of artistic creation*.

Participation can also be thought of in terms of visitor experience. Falk describes the museum visitor experience as "a set of interacting, contextually relevant factors" (2009: 34), asserting that it is "not something tangible and immutable; it is an ephemeral and constructed relationship that uniquely occurs each time a visitor interacts with a museum" (2009: 158). Participation can be seen in the interaction between the visitor and the museum. This is said in the context of using the idea of visitor studies (using demographics, visitor frequency, and social arrangement) to understand the visitor experience (Falk, 2009). Falk (2009) encourages us not to see the museum as fixed, but as resources for the visitor, therefore the visitor experience is not predictable despite visitors coming to see the same exhibition, collection, galleries. The museum provides many possibilities of experience through their collections, exhibitions, interpretation etc, and the reference point (Falk, 2009) for the experience is determined by the visitor themselves. Visitors come with motivations which "create a basic trajectory for the individual's museum visitor experience" (Falk, 2009: 36). Falk has developed five visitor roles to represent the majority of visitor motivations (see below), acknowledging that motivations are complex and his categories are not fully descriptive and that visitors are "capable of enacting more than just these five roles" (Falk, 2009: 65), yet he suggests that they are robust and will help understand the museum experience for a large percentage of visitors, from the visitor perspective. The roles are; 1) Explorer, 2) Facilitator, 3) Experience Seeker, 4) Professional/Hobbyist, 5) Recharger (see below for the descriptions of each role). He also acknowledges that these roles are not fixed, they are fluid, and motivations can change dependent on the personal, social and physical context of each visit (see above, Falk & Dierking, 1992).

1. Explorer: the need to satisfy personal curiosity and interest in an intellectually challenging environment.
2. Facilitator: the wish to engage in a meaningful social experience with someone who you care about in an educationally supportive environment.
3. Experience Seeker: the aspiration to be exposed to the things and ideas that exemplify what is best and intellectually most important within a culture or community.
4. Professional/Hobbyist: the desire to further specific intellectual needs in a setting with a specific subject matter focus.
5. Recharger: the yearning to physically, emotionally, and intellectually recharge in a beautiful and refreshing environment.

The idea of categorising visitors by motivation has also been adopted by audience focussed, museum research agencies such as Morris, Hargreaves, McIntyre (Appendix 18) to segment visitors and provide museums with insight to understand their audiences. They have developed eight segments; Enrichment, Entertainment, Expression, Perspective, Stimulation, Affirmation, Release and Essence (Appendix 19). They too acknowledge that visitors' motivations and behaviour vary with each visit.

Part 2: Literature Review Continued, Illuminated by Instances of Family Learning

A *Minds-On* Approach to Family Learning

"Family learning refers to learning approaches that engage parents or carers and children in learning or supports intergenerational learning" (Meade, 2009: 3). Museums attract family audiences, but do they offer opportunities for families to engage and learn together as an intergenerational group? Under the banner *families* many museums offer activities primarily aimed at children and even then, often to children of specific ages. For example, AHOY! the new children's gallery at the National Maritime Museum, Greenwich, is advertised as *Family Fun* for the 0-7s. With the intention of being family friendly, museums offer activities and programming for children but can exclude older members of the family group, both adults and older children. However, according to Wolf and Wood (2012), US researchers at The Children's Museum of Indianapolis, there is a move away from child-centred to family-centred learning in the provision for children. "In using child-centred approaches museum professionals realised that they were overlooking adults as critical members of the learning cohort"

(Wolf & Wood, 2012: 30). They point out the obvious, that young children do not visit alone but are accompanied by adults. "Currently, my estimate is that up to 60 percent of museum visits include children in the group. You fail to provide for children at your peril. But, remember that they are a very sophisticated audience" (Black, 2005: 91).

It is recognised that education is a core function of museums (Black, 2005; Coles, 2009; Durbin, 1996). In 1997 the Labour government increased investment in public cultural institutions with the expectation that they became more accountable and demonstrate their effectiveness and benefits for the public. This served to legitimise and embed "the learning credentials of the cultural sector" (Coles, 2009: 92). Driven in part by a need to secure funding, museums have had to reflect on and justify their education provision. "The attempt to justify public funding by demonstrating their educational value to society has forced museums and heritage organisations to look much more closely at the nature of what they are actually providing for their users. This has led at last to the general recognition of education and learning as a core function within museum provision" (Black, 2005: 128). Despite this, informal learning in museums is not always understood and valued, leading to some concerns about its future, discussed in more detail in chapter six.

Active Participation

Learning, particularly in schools, has been viewed as the acquisition of skills and knowledge, delivered unchanged from teacher to student. Knowledge is seen to be straight-forwardly transferrable, understood in the same way by all. This can be understood in terms of *behaviourism* which emerged in the late nineteenth century (Wikipedia, d) as one of the first schools of thought used to understand the science of learning (Dierking, 1996). With its emphasis on objective methods of investigation, behaviourism (McLeod, 2007) "for the most part does not recognise that there may be many ways to 'know' something and that individual differences strongly influence learning" (Dierking, 1996: 21). Later cognitive theories of learning began to see learning "as an active process requiring construction" (Dierking, 1996: 23). Moving away from seeing learning primarily in didactic terms, it is now acknowledged that individuals construct knowledge through experience (constructivism, Hein, 1998), a process of *active participation*. At its simplest, active learning is considered to be a way of learning where students participate in the learning process, by doing things, as opposed to, conversely, just listening (Wikipedia, e).

The concept of *active participation* "has elevated experience (as distinct from codified information contained in books) to a more important place in the effort to educate" (Hein, 1998: 6). Through actively participating with the content of the museum, visitors learn through constructing knowledge. In a family setting visitors participate through social interaction and construct knowledge and understanding collaboratively through shared experience. Yet even though the experience is shared, knowledge is considered to be constructed in the minds of individual learners (Hein 1998). In the museum setting "learning is facilitated through the use of objects, the opportunities to learn are based on the learners' interests" (Hein, 1998: 7). Learning can be seen as a process of constructing meaning and this idea is central to this research.

Social Interaction

"Increasingly, we appreciate the central role that social interaction through language plays in learning. We also know that museum visitors come predominantly in social groups; individual visitors account for only 5-20 per cent of all visitors" (Hein, 1998: 172). The social quality of learning is "the very means by which family learning takes place. …[Through] *teaching* behaviours such as showing, telling, naming, describing and questioning, practised by parents and their children" (Wood, 1996: 79). Learning results "primarily from these interactions rather than from interaction between individuals and objects" (Wood, 1996: 79). Learning, including meaning making, is socioculturally constructed (Falk and Dierking, 2000). "Meaning emerges in the interplay between individuals acting in social contexts" (Hein, 1998:149). Social interaction accounts for how family learning takes place as well as the context. Hands-on spaces for shared learning, such as the Pattern Pod in the Science Museum, London, where adults and children can get involved together promote *social interaction* and *active participation*. "Evidence [from research in museum learning] suggests that the exhibits that most effectively engage an audience are those encouraging social interaction, discussion and involvement within and beyond the groups involved" (Black, 2005: 202).

Using the idea of *active participation* as a condition for learning, creating opportunities for *social interaction*, I put forward the idea of a *minds-on* approach for learning using ideas behind some established *hands-on* approaches. Family learning could be facilitated through a *minds-on* approach to interpretation where visitors are encouraged to look, imagine, ask questions, develop ideas, wonder and talk to each other using strategies employed by the museum trail; a pick up and do activity often designed for

children. Interpretive material for families is sometimes developed in the form of paper trails, like the *Voyage of Discovery* trail at HMS Belfast (appendix 20), and multimedia guides such as those at Tate Modern (appendix 21).

The Silver Family Trail from the V&A

I now discuss a trip to the V&A with my daughter, then aged 9. This was part of a flexi-schooling programme (see chapter one). My intention was for us to learn together and we sought out and prioritised children's activities on offer. These were generally limited to trails as most museums did not offer programmed activities during the week in term time. My daughter chose one of two children's trails on offer at the V&A, the Silver trail (appendix 22) which consisted of a sheet of activities for the child and an information sheet for the adult to use to support the child.

Photo 4: The Silver gallery, V&A.

Children's trails may not be solely concerned with didactic information. As a ten year old told me, "*I don't like it when the answers are the same for everyone and you can get it wrong*" (conversation with Kate, Oct 2009). Some activities may be closed and others open-ended where children are encouraged to think independently, expressing ideas and feelings. Black reports that parents want "experiences that are content-rich, not superficial, and based on the organisation's strength" (2005: 72). According to Black (2005), trails should reflect the institutional identity of a museum and focus on its contents. Black's idea of museums being audience centred, having a layered interpretive approach, is one where "the chief aim of interpretation is not instruction, but provocation" (2005, 181). This is an idea that was initially put forward by Freeman Tilden (1957), in his influential book, *Interpreting our Heritage*, who said of

interpretation, "but the purpose of Interpretation is to stimulate the reader or hearer toward a desire to widen his horizon of interests and knowledge, and to gain an understanding of the greater truths that lie behind any statements of fact" (1957: 33). A successful trail can elicit and endorse ideas for the child, the adult and the whole family group. It is my experience that children soon spot a poorly designed trail which does not *provoke* and encourage learning; where the child thoughts and ideas are neither asked for nor validated. For example, at the Cumberland Pencil Museum (2009) (now Derwent Pencil Museum) (appendix 23), the trail for the under fives asked us to count paper stars pinned to the walls in various places around the museum. Counting these stars did not relate to the content of the museum.

The first question on the Silver trail, V&A, asked the child if they or their family had anything at home made from silver. For us this question immediately prompted a dialogue. The idea that we could own something relevant to the silver collection at the V&A enabled us to make an instant connection with the collection (Adams, Luke & Ancelet, 2010). This question prompted conversation about the silver we had at home belonging to my grandmother (which we had not talked about before). Falk and Dierking (1992) tell us that social interaction encourages deeper engagement and broader understanding.

The trail facilitated social learning and discussion in which we could create meaning and understanding. Falk and Dierking suggest "conversations are pivotal in a family's attempt to find shared meaning in exhibits" (1992: 48). "Through interpretive frames of talk, visitors make meaning of displayed artefacts in art and history museums" (Silverman, 1990: 251). Through conversation "questions are asked, ideas are transmitted, and it can be inferred that learning occurs" (Falk and Dierking, 1992: 110). The first question in the children's trail put us at the centre of our own learning, prompted conversation, provoked thought and helped us make connections between the Silver gallery and our own lives. The trail served not only as a trigger for learning but also served to validate our thoughts, ideas and understanding through demonstrating that they were important in the learning experience. The Silver gallery trail was a critical trigger for our mutual engagement.

According to the literature, "Reflection is clearly 'intimately connected' [with the learning process]" (Black, 2005: 141). Trails promoting thinking and reflexivity, ask questions that provoke and elicit responses, providing space for pondering and deliberating. They provide opportunities to express opinions and help visitors make personal connections

with objects. Trails that encourage reflection promote learning. Black talks about being able to reflect as a significant factor, as having "a key role in enabling experiential learning to take place" (2005: 141). Reflection can be encouraged through the use of open-ended personal questions.

As visitors make sense of their museum visit they contextualise what they see, making meaning from their experience. Falk and Dierking insist that "all visitors personalise the museums' message to conform to their own understanding and experience" (1992: 138). "Museums are novel environments, full of strange and wonderful things. Visitors come to museums to learn about these things and, of necessity, they rely upon their conceptual frameworks – their knowledge and experience – to understand what they encounter" (Falk and Dierking, 1992: 74). Through the trail we were able to personalise the experience, drawing on prior knowledge and experience. "Placing an object within an appropriate and comprehensible context will significantly enhance the visitor's ability to comprehend an object's use and value" (Falk and Dierking, 1992: 138). For us, the trail put the objects in the Silver gallery in an understandable context, often through explaining the objects' possible uses, for example a milk jug. The V&A appeared to have recognised "that the traditional audience is not 'one' but a plurality – a mass of separate audiences each seeking its own experiences and outcomes from what is basically the same product" (Black, 2005: 3).

This was a memorable learning experience, rooted in our interests and prior understanding, rather than what the museum thought we should know, evidenced by my daughter asking to go back six years later, documented in this blog post, a light-hearted look at what we remembered from our initial visit (appendix 24).

This was the experience of one of my daughters. Since then I have seen my other daughter, Miriam, struggle with more open-ended activities, despite clear instructions. For example, when using a paper trail at the Design Museum, London; and being asked to design a creature using the letters in your name. I put this down to preferred learning styles (Gardner, 1998/2004). Miriam, aged four at the time, needed a lot more parental support to complete an open-ended activity whereas her twin brother did not. Not everything works for all children.

Multimedia Guides

Children's trails need not always be on paper hand-outs. Multimedia guides (i.e. trails on small electric hand-held devices) can provide opportunities for a greater capacity of

interaction. At Tate Modern (2009) visitors could hire a *Children's multimedia guide to the Tate Modern* (appendix 25). Tate Modern invites you to journey around the galleries with their "colourful, fun and interactive multimedia guide. Listen to music, watch video clips and play games that help you find out more about some of our most family-friendly artworks on display" (appendix 25). They provide an interactive experience, containing a wealth of information which would not fit in a single paper trail. Multimedia guides can offer visitors more choice and opportunities to find relevant information and access interactive activities. Using identification numbers, visitors find information and activities pertaining to specific artwork. The multimedia guides worked for us a family; however, as they rely on the use of headphones, one guide per person, they are not particularly designed for social interaction. When my children wanted to share their experiences they had to remove the headphones and the machine hanging around their neck and pass it on so I could then listen to it (alone). It is also worth bearing in mind that these multimedia guides are not for taking home, but a paper trail offers opportunity for reflection, and consolidation of learning, after the experience.

From the use of trails we can see that effective family learning:

Table 1: The experience of effective family learning

promotes social interaction	is participatory
attempts to meet the needs of the whole group	stimulates reflection
is not oversimplified	is experiential
introduces key words and concepts	engenders personal connections
provides a space to share experience	provides room for reflection

Welcome them as Equals

Black (2005) discusses the pressure that museums have felt in being publicly accountable (see page above). "These pressures have come from a number of directions – from above (governing and funding bodies), from below (audiences) and from within the profession itself" (Black, 2005: 1). It is from *below* (the situation of which I had most experience at the time of writing this early on in my research), from the position of the audience that I discuss and contrast two visitor experiences to different

galleries within the arts. "For visitors to have a quality experience, museums must promote a positive but accurate external image, provide a 'sense of occasion' on arrival, *welcome them as equals* [my italics], meet the highest possible standards of service and do their best to encourage audience motivation to become involved" (Black, 2005: 5). A gallery visit to *Byzantium 330-1453* (2009), RA, is used as a case study to shed light on the idea of being *welcomed as equals*.

I focus on two main areas of enquiry.

- **Interpretation**
- **Inclusion**

Interpretation

In this thesis the term *interpretation* is used in two ways. First as an educative practice centred on revealing meanings rather than the transferral of didactic information, although this approach does not discount learning. As "an educational activity [interpretation] aims to reveal meanings and relationships through the use of original objects, by first-hand experience and by illustrative media rather than simply to communicate factual information" (Black, 2005: 179). Secondly, used to describe contextual information about objects provided by the museum; a product, it is "what we provide for our visitors" (Black, 2005: 179), in this instance, referred to as *museum interpretation*. As well as being information for visitors, interpretation is also the means by which the museum delivers its content. Black (2005) discussing the principles of museum interpretation, speaks of its objective as "revealing the meanings behind the natural or cultural resource. …the critical objective of interpretation, the challenge being to provoke thought among visitors so that they seek to discover" (2005: 180). The way in which objects are displayed in the museum depends upon a museum's interpretative approach. However, it is the process of interpretation, of visitor meaning making as an educational activity, that interests me and it is inevitably bound up with museum interpretation.

Black outlines "a true interpretive philosophy which:

- *believes entirely in an audience-centred approach to exhibition development*
- *sees the museum visit as an opportunity for the museum and its visitors to take part in a journey and in a conversation together*"

(2005: 208).

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An interpretive approach that is audience-centred encourages and promotes dialogue with all visitors, whatever their age, their level of interest and ability. Interpretation, as an educational activity, creates opportunities for visitors to make meanings through engagement with objects, and as such is a dynamic process.

An interpretive approach, as a constructivist strategy, favours a relativist epistemology where reality is fluid dependent on the process of constructing meanings (Gadamer, 2013), as opposed to an objectivist stance where reality is understood to be the same for all of us, where meanings are static, not dependent on the learner. Hein tells us that "epistemological positions, whether articulated or tacit, determine how a museum decides what it is that is contained within its walls, and how it should be displayed" (1998: 19). With a relativist epistemology "knowledge is relative, influenced by culture and needs to be explained and interpreted, depending on purpose, use and situation" (Hein, 1998: 19), in contrast to a realist epistemology in which objectivism is possible; where knowledge is stable (Hein, 1998). Wenger (1998) says that knowledge is a broad concept in which information (pieces of information) is only a small part and "knowing involves primarily active participation in social communities" (Wenger, 1998: 10) I discuss this more fully later in this chapter.

Features of Black's (2005) interpretive approach:

- It is audience centred
- It provides opportunities to challenge, provoke thought
- It is an active and dynamic process
- It is underpinned by a relativist epistemology

Inclusion

In being audience centred, *inclusion* is generally considered in terms of how museums might expand their audience base, often reflecting social concerns. The inclusion remit for museums "reflects the increasingly close links between external public funding and a requirement for museums to respond to current social and political agendas, not least in terms of showing evidence of a commitment to developing new audiences beyond the white middle classes" (Black, 2005: 46). This is often addressed by setting out to attract under-represented groups and communities. The Department for Culture, Media and Sport (DCMS) is undertaking a museums review, Culture White Paper (2016) to look at how government and statutory bodies can support the sector to increase access, widening participation to all (DCMS, 2016).

Inclusion "incorporates not only the physical and sensory, but also intellectual, social, cultural and economic access – the removal of a whole range of barriers to participation" (Black, 2005: 64). This research focuses on the idea of *intellectual* inclusion, on how collections and the manner in which they are displayed (interpretive approaches) might encourage intellectual access, looking at how visitors access information and the place this has in meaning making.

Byzantium 330-1453 - Royal Academy of Art (2009)

With reference to *interpretation* and *inclusion*, I discuss a visit to *Byzantium 330-1453* at the RA. I saw this exhibition with a companion one evening. The aim of our visit was to spend time together, whilst seeing an exhibition, something we both do regularly. My companion described herself as "someone a bit interested, with knowledge she has acquired over the years, with little formal training" (conversation with Beate Hellawell, 2009). She told me that she visits museums four or five times a year, has an MA, is well read and travelled, and feels *at home* attending arts events. To know this is relevant to our experience of the exhibition, discussed below. I interviewed her about this visit four months after the occasion.

She told me, "my overwhelming memory was that I felt really stupid. It felt like the exhibition was for an elite group of people with knowledge and qualifications, who knew about art" (conversation with Beate Hellawell, 2009). This was her response to the contextual interpretation; object labels, wall text and the exhibition guide, which appeared to be highly subject-specific assuming a lot of prior knowledge of Byzantine history, particularly in terms of architectural references, with no explanation of the terms for the non-specialist. She also said that the tone of the information was very *academic* and *exclusive*. It was "*unnecessarily pompous… it was a particular discourse, not mine, it excluded me. It felt like a deliberate attempt to make me feel that this was for serious art experts. It didn't encourage learning and questioning*" (conversation with Beate Hellawell, 2009); something we were both expecting. She expressed that "*the Royal Academy seemed to be stuck in old paradigm which didn't involve the non-expert who is interested and open to new experiences*" (conversation with Beate Hellawell, 2009). We did not find the museum interpretation accessible.

Contextual information was presented as straightforward factual information using specialist vocabulary; it did not encourage debate or questioning. It acted as a barrier to our engagement. In other words, the RA's interpretative approach appeared to be informed by a realist epistemology, a modernist approach to knowledge (see above).

Museums have historically approached learning from a realist perspective and despite being sites of learning, museums have often had educational philosophies that have acted as barriers to learning where their "pedagogic style has operated as an excluding strategy" (Hooper-Greenhill, 2007: 13). According to Wood (1996) and Hein (1998) museum text should encourage social interaction bringing with it the benefits of social learning, a deeper level of enquiry and broader understanding.

We were both made to feel alienated and rather *ignorant*. For my companion the exhibition content was "not memorable" (conversation with Beate Hellawell, 2009). Four months after the visit, she primarily remembered her emotional response to the exhibition, to the interpretation with its exclusive language, which had served to frustrate rather than facilitate meaning making. We did not feel like equal partners (Black, 2005) in the exhibition experience but rather felt excluded. Our experience could have been made more inclusive by an approach that accepts "visitors as equal partners on a journey, who are being offered an opportunity to explore material for themselves and reach their own decisions, there is much less likelihood of information being presented anonymously, as if by a voice of authority from on high" (Black, 2005: 197).

She described the atmosphere as "*a very exclusive space and place, I felt like I was gate-crashing something I wasn't entitled to*", where "*we were breaking an unspoken rule*" (conversation with Beate Hellawell, 2009) by talking to each other throughout the exhibition. "Research has demonstrated that social influences outside the immediate family or group also influence visitor behaviour. Beyond mere curiosity, visitors observe other visitors to gain information or knowledge" (Falk and Dierking, 1992: 51). Visitors are influenced by watching what others do, visitors looking to other visitors for expectations about behaviour, *modelling* (Simon, 2010). The *exclusive* atmosphere and the idea of *gate-crashing* was conveyed by the other visitors, as "*we were talking, we weren't seen to be taking it seriously. There was a code of conduct that I wasn't initiated into, people were there to study earnestly, rather than there for a night out*" (conversation with Beate Hellawell, 2009). The atmosphere discouraged social interaction, or rather we concluded that it encouraged a specific discourse; reflective, quiet, involving, earnest, learned, quiet and unquestioning. This curtailed our enjoyment and ultimately our learning.

Social interaction (see above, Hein, 1998; Black 2005) provides a means for learning and engagement. Good social interaction has benefits for the visitor and provides a

positive learning experience, that of participatory learning. Social interaction "broadens and deepens understanding" (Black 2005). It can be promoted or stifled through the museum's approach to interpretation. It best takes place when visitors feel comfortable (Hooper-Greenhill, 1994) and included in the museum, in an atmosphere conducive to social participation. The museum's interpretive approach can help to create an atmosphere in which visitors can feel comfortable and able to engage.

A layered interpretive approach can help create a more inclusive, user-friendly atmosphere. "Exhibitions will use a palette of display approaches and have a layered provision of support material to meet the differing needs of visitors" (Black, 2005: 64). The only visitors whose needs appeared to have been catered for in this exhibition, were those of the expert visitor with specialist knowledge of Byzantine history, those with specific social and cultural capital (Bourdieu, 2010, see chapter two).

Her memories of the visit support what Falk and Dierking say, "data on what visitors recall from their museum experiences many years later consistently indicate that the social aspects of a visit are rarely, if ever, forgotten and, sometimes what a visitor recollects are primarily the social aspects of the visit" (1992: 54). John Stevenson's (1993), museum research consultant, findings are similar at the Science Museum, visitors remember the experience of their visit.

To include the family visitor:

Table 2: Criteria to include the family visitor

Text/interpretation could:	- be for the non-expert - provoke - be engaging and relevant to the object and the visitor - be part of creating an atmosphere - foster social interaction - not alienate - promote/elicit questions and ideas - make the context/object comprehensible, enhance understanding - values, endorse and validate visitor ideas, questions and meanings (communicate that what visitors think and say is important) - acknowledge visitors are not one but a plurality

Social interaction:	• results from provocation
	• "broadens and deepens understanding" Black (2005)
	• happens when visitors feel included (atmosphere)
	• can be encouraged by text, interpretive material

How learning is perceived plays a large role in informing the museum's interpretive approach. An interpretative approach which aims to include the family might promote access through its commitment to active participation and to facilitating social learning encounters.

Sustained Shared Thinking

It could be said that being welcomed as equals means working with visitors; thinking with them, "partners in a joint enterprise" (Black, 2005: 3), as families learning in museums.

I now introduce the idea of using *sustained shared thinking,* from the Department for Children Schools and Families' former *Every Child Matters* document (2007), as an approach that might inform the creation of museum interpretation that could take families' needs into account. *Sustained shared thinking* is a strategy discussed in the context of Learning and Development: Creativity and Critical Thinking as such:

- *"In the most effective settings practitioners support and challenge children's thinking by getting involved in the thinking process with them.*

- *Sustained shared thinking involves the adult being aware of the children's interests and understandings and the adult and children working together to develop an idea or skill."*

(Department for Children Schools and Families, 2007: 33)

The idea of sustained shared thinking as a strategy supports family learning in two ways. Firstly to exemplify how best meaning making happens for the family as a joint enterprise with the museum, and secondly, proposed as a strategy for the development of museum interpretation in partnership with families. The museum as a practitioner could support family learning by getting involved in the process of meaning making with them, creating *effective settings* for learning. Research and evaluation could be used by museums to research where and how *sustained shared thinking* occurs, increasing

its chances of being a planned regular feature of museum learning. This would mean that museums develop, test and pilot approaches to their interpretation with the families themselves.

A *sustained shared thinking* strategy could also be applied to how museums understand intergenerational learning, of adults and children working together, where adults are supported to become effective facilitators (Falk and Dierking, 2000: 95).

To plan for *sustained shared thinking*, the Every Child Matters report states that "planning always follows the same pattern – observe, analyse, and use what you have found out about the children in your group so that you can plan for the next steps in their learning" (Department for Children Schools and Families, 2007: 21). Including families in planning in museums is also supported by Kids in Museums. In their manifesto they ask museums to "communicate well. Let families know what you offer. Include this on your website and social media. Chat with families before they visit and after they leave. Build relationships and include them in long-term decision-making. These families will become your greatest advocates" (Kids in Museums website, The Mini manifesto). What we see families do in museums, observing how they learn, can best inform future practice. It is always worth bearing in mind though that "when you are planning remember that children learn from everything, even the things you haven't planned for" (Department for Children Schools and Families, 2007: 22). It was my daughter learning in ways that I had not anticipated, or planned for, that prompted this research (see chapter one). My point in citing this reference is that if children have the potential to learn from everything, it should not be assumed that they do, but rather museums can put strategies into place to optimise the potential for learning to happen. This is a holistic approach to museum learning. Museums and galleries can plan and review through observation, building up an understanding and knowledge of their visitors, of how they engage and learn, through *getting involved with the thinking process with them*. For me this acts as best practice.

A Visit to the Earth: Art of a Changing World Exhibition at the Royal Academy (2010)

Primarily learning in museums has been seen to be about learning from objects and simply putting an object on display has been considered enough to facilitate the learning experience. "In the nineteenth century, museum professionals put their confidence in the organised presentation of specimens – and by extension works of art

or artefacts – hoping that the visitor would learn by associating those objects placed together in sequence. In the first half of the twentieth century, art museums especially put far more emphasis on the display of individual works of art, confident that they could communicate directly on their own – or if not, they were simply not effective as works of art" (Lord, 2007: 17). Museum artefacts were often seen as able to speak for themselves; learning centred on the object. "Later in the last century museum educators taught the truism that objects cannot speak for themselves, so museum 'interpretation' and departments of communication became important" (Lord, 2007: 17). Nowadays learning is a personal experience and dependent on the visitor making connections with museum objects where visitors construct meanings, a process of interpretation.

Objects can be understood "within a frame of subjectivity, that is, we know that they mean different things to different people" (Dudley, 2012: xxvii). What an object means to one person may not mean the same to another. From this position the learner plays an important part in the construction of meaning, with pre-existing knowledge playing a considerable part in how museum objects are experienced. Dudley puts forward that the meanings people give to objects are "situated, contingent and shifting" (2004: 4), focused in relationships between themselves and objects.

Learning therefore is dependent on both the visitor and the museum. As such I discuss the roles that the *personal, social*, and *physical* contexts (Falk and Dierking, 1992) play in family learning in a family visit to the RA to see the exhibition *Earth: Art of a changing world* (2010) to look at examples of how each context came into play. This piece of writing is not intended as a critique of the visit from the perspective of what may, or may not, have been the learning intentions of the RA, but is an examination of how our family engaged with the exhibition and how learning occurred.

The Personal, Social and Physical Contexts for Learning

Personal Context

Acknowledging a *personal context* for learning, it is recognised that we all learn differently, an idea put forward by Gardner, professor of Cognition and Education at the Harvard Graduate School of Education, with his theory of *multiple intelligences* (1998/2004). Gardner (1998/2004) challenges the idea of people being able to learn the same things in the same way. He puts forward the idea of a number of intelligences (appendix 26) and says that we "possess all these intelligences, [yet] exhibit different

profiles of intelligences" (Gardner, 1998/2004: 5). We learn, remember and understand in different ways.

The *personal context* of learning acknowledges individual visitor perspectives and interests. This is important for museums as visitors not only learn in different ways but also have *free-choice* (Falk and Dierking, 1992) as to what they learn. Learning is seen as meaning making by individuals as they interpret what they engage with from their own perspective, tacit or otherwise. Connections are made with objects in the context of visitor prior knowledge and experience. Visitor motivation comes from within, "learners are naturally motivated to make sense of things; what sustains motivation is successful sense-making, providing opportunities for learners to question assumptions and explore alternative interpretations" (Falk and Dierking, 1992: 106).

Social Context

The "*social context* also influences what and how we learn. Learning is a social activity, mediated mainly by small-group social interaction" (Falk and Dierking, 1992: 109). Museums are places which facilitate social learning, this is particularly so for family visitors, where collaborative learning can support the needs of the child (Munley, 2012). Wolf and Wood (2012), museum educators, suggest that in collaborative learning visitors can build on each other's participation. "Social types of learning are extremely important, and evidence suggests that they are also long term; yet they are frequently overlooked in discussions of learning in museums. Social groups, and family groups in particular, are the primary learning environment for humans" (Falk and Dierking, 1992: 110). We learn by listening to others, talking to others, sharing ideas and also watching other people (modelling, Simon, 2010). A museum visit always has social context, whether visitors come alone or in groups, as the behaviour of other visitors will also have a bearing on the learning context, as discussed earlier at the RA, *Byzantium 330-1453* exhibition, where our behaviour was influenced by other visitors.

Physical Context

The *physical context* acknowledges the impact physical setting has upon learning. "All learning occurs within a physical context, and this contextual stamp ultimately becomes important in determining what information is perceived, how it is stored, and when and how it is recalled. Where one is has a tremendous impact on how, what and how much one learns" (Falk and Dierking, 1992: 112). The *physical context* at the RA made a big impact on our visit, in terms of enabling social interaction, active participation, free-

choice learning and decision making. The quality of the physical space allowed for sustained levels of engagement both with the exhibition and with each other. I discuss the impact of the *physical context* in this instance in terms of visitor numbers and museum interpretation.

Earth: Art of a Changing World, RA

I chose to visit *Earth: Art of a Changing World* exhibition understanding the exhibition to be about artists' responses to climate change. I thought that conceptually this exhibition would be readily accessible for my children; Jesse aged, 12, Kate 10, Tom and Miriam 6. Climate change is an issue with which they are very familiar, both from school and the media. The exhibition guide suggests, "by connecting issue with art, and presenting works of art whose themes are powerful and thought-provoking, the exhibition translates notions that can appear scientific and abstract into human terms" (Croll-Knight & Herrick, 2009: 13). My children have had experience of translating and representing issues at school through paintings, posters, poems etc. Therefore the idea of art (broadly speaking) to represent themes and concepts was not something new to them.

Having established that there was an activity trail, *Art Detectives,* we sourced them at the entrance. On seeing that the trail was twelve pages long, Jesse declared, "*there's too much writing*" (Conversation with Jesse, 2010) and handed it back to me in order to work in his own sketchbook (see chapter one). Jesse and Kate had both chosen to bring along their sketchbooks, a habit that with my art-teaching background I had initiated and encouraged as a way of getting them to engage with museums. After completing four pages (activities) of the trail, Kate and Tom both stopped using it. Throughout, Tom and Miriam needed support to use the trail, for example matching trail activities with exhibits in the gallery, reading instructions (long paragraphs of text) and explaining some vocabulary to them, such as *threatening* and *climate change*.

Here I discuss our engagement with some individual pieces of artwork in terms of the *physical, social* and *personal* contexts (Falk and Dierking, 1992).

Anthony Gormley's (1992) *Amazonian Field* (appendix 27) was made up of clay figures, approximately 12 cm high, filling a room to the threshold. Jesse discussed viewing the work from different angles, "*If you stand up they are looking at you because they are looking up, if you crouch down* (to their level) *they are not looking at you*" (Conversation with Jesse, 2010). In the exhibition guide, which Jesse had not read,

Gormley is quoted, "I wanted the art to look back at us, its makers (and later viewers), as if we were responsible – responsible for the world that it, and we, were in" (Croll-Knight & Herrick, 2009: 20). However, Jesse's *personal* response was not directed by gallery interpretation. In the *social* context, he shared his thoughts and ideas, contributing to our whole family experience.

Cornelia Parker's (2004) *Heart of Darkness* (appendix 28) consisted of pieces of burnt wood, hung in a large cube shape. We walked around it and discussed what it was made of. Tom asked me if it was hot and said, "*imagine if that was actually on fire*" (Conversation with Tom, 2010). Miriam observed, "*it looks like it's a cube of wood*" (Conversation with Miriam, 2010). Through conversation we explored the materials, texture, making process, installation process and shape of the work. The trail told us that Parker's concerns informing this piece centred on *climate change*. I needed to explain what *climate change* meant to Tom and Miriam, which they found frustrating, as she wanted to be able to complete the trail without any help.

Tue Greenfort's (2009) *Medusa Swarm* (appendix 29) depicted a number of suspended glass jellyfish. The trail asked, "Do you think that these sculptures are beautiful or threatening? Why?" (Croll-Knight & Herrick, 2009: 10). Miriam had to ask what *threatening* meant. She told me that "*they look beautiful but if they were real I'd be scared*" (Conversation with Miriam, 2010). The trail read, "Climate change has caused many species to become homeless, and some have had to move into unfamiliar environments that they are not designed to live in" (Croll-knight & Herrick, 2009: 10). The task was to draw your favourite animal both in its natural and *wrong* environment. Miriam did this enthusiastically, having a definite favourite animal, a pig "*because they are pink*" (Conversation with Miriam, 2010). We discussed the meaning of *natural environment* and what it could be for a pig. She first drew a pig on a farm, then at the beach in the sea. Enthused by this, she showed her brother what she had done, explaining the task to him as I had done to her. He then completed the task.

Hearing our conversation above, Kate undertook the task in her sketchbook, drawing pandas, about which she had prior knowledge. She talked about them being an endangered species and asked us to list all the endangered animals we could. The term *endangered* had not been used in the trail. Miriam volunteered that she thought dinosaurs were endangered. Kate explained to her that dinosaurs were extinct, different to endangered, prompting a discussion why dinosaurs had become extinct. This conversation was rooted in *personal context,* drawing on prior knowledge and

understanding. We shared ideas, expressed opinion, asked questions and challenged assumptions.

In Darren Almond's (2008) *Tide* (appendix 30) digital clocks covered an entire wall of the gallery making an impact both visually and aurally. It kept our attention as we waited for all 567 clocks to change time, both on the minute and the hour. We checked whether they told the real time, discussed how many minutes were in an hour and how the twenty-four hour clock works. The exhibition catalogue cited, "Time is a regular preoccupation in Almond's work, which draws our attention to the fact that we are all bound together by its passage" (Royal Academy of Arts, 2009: 48). As we engaged with this work and each other, we played a game, waiting for the clocks to change. Almond's *Tide* not only drew our attention, but through our engagement with it we were *bound together* by time, modelling the very statement that Almond was making through his work, set in the *physical* and *social* context.

The Physical Context at the Royal Academy

The *physical context* is the one over which the museum appears to have the most control. For the purposes of this thesis, I define the physical context as the whole museum environment; the galleries, the exhibits and the interpretation such as wall text, labels and trails.

Physical Context: Feeling Comfortable

The *Earth* exhibition was quiet both in terms of the number of visitors and noise level, giving us more physical space to interact with the artwork and each other, making it easier to have discussions. As a family, crowded places can feel less safe, it can feel easier to lose children. Having so few visitors around meant that I was comfortable to let Jesse view the exhibition alone, at his own pace. Falk and Dierking (1992) discuss the effect that physical space has upon museum learning. "Perception of physical spaces as, for example, open and friendly or dark and menacing influences one's sense of well-being and security, which in turn affects ability to learn" (Falk and Dierking, 1992: 113). The RA had little control of visitor numbers. However it is worth noting that the physical environment impacts the learning experience, and being in a less crowded space had a positive impact on the social and personal context of our visit. We were able to talk to each other, follow individual interests and view the art more easily.

Social Context: Parents as Facilitators

The *Art Detectives* trail helped us engage with the artworks, playing a large part in our learning experience in the *physical context*, both directly as our youngest children set about completing the tasks, and also indirectly as it influenced our conversation as a family and the work the older two did in their sketchbooks. Despite being produced for children, the trail acted as a springboard and starting point for our family engagement. When supported, adults act as effective facilitators for children (Falk and Dierking, 2000; Wolf & Wood, 2012). Our conversation was personalised through being encouraged to develop ideas, leading to conversations outside of the trail's remit.

Lord (2007) identifies two modes of family learning in museums. One being where "the parents act as the educator and tell the story, …or (whether) both generations learn with the help of the museum on a more equal basis" (Lord, 2007: 73). Whether these two happen separately as distinct modes of learning or not, adults tend to act as interpreters during family visits (Falk & Dierking, 2000). "In various settings, particularly those that have not been intentionally designed for young children, parents and other adults may naturally scaffold the learning and interactions of young children" (Wolf & Wood, 2012: 33). For example, the trail used words my youngest children did not understand, yet this did not exclude them from the activities, but caused me to act as interpreter, scaffolding (Vygotsky, 1978) the experience. In turn, they scaffolded the experience for each other.

Our learning was socially mediated through scaffolding, an idea discussed by Vygotsky (1978). In Vygotsky's framework, when a group is confronted with a concept to teach or a problem to solve, the knowledge or skill of any one group member influences the roles every other group member will play in relation to one another. Knowledgeable group members support the learning of less knowledgeable members by providing *scaffolding*, or support in the learning process. Scaffolding (which I discuss in more detail below) can take the form of questions, cues, or other learning supports" (Falk and Dierking, 1992: 110). I scaffolded our experience by explaining tasks and vocabulary, as had Miriam in describing tasks to her brother. We did this through dialogue and it was not, as one might imagine, restricted to adults, with more life experience and perhaps consequently more knowledge, supporting the learning of the children with less. Scaffolding occurred through both adults and children sharing knowledge, concepts and ideas, through asking and answering questions, disclosing

observations and offering instruction. The *Art Detectives* trail scaffolded the experience too, presenting us with questions, asking us to respond and facilitating discussion.

 "Parents can be effective facilitators for their children's learning when exhibitions are designed with collaborative learning in mind and when adults feel comfortable with the content and experiences provided in the museum" (Falk and Dierking, 2000: 95). Lord suggests that museums could create "an information path for parents explaining how to interpret objects to their children. Parents are informed via information sheets or special labels regarding what they can explain to their children and what children can learn from this artefact or installation. …They help start the dialogue between children and parents. Parents are still the narrator, but can rely on information provided by the museum" (2007: 73). Here, Lord (2007) is suggesting providing a methodology for parents in which they take the lead; adults being clearly directed, given explicit ways to participate, suggested learning outcomes and specific information to meet children's needs. While this may be one end of the spectrum, the other end is simply to expect parents to *get on with it* with no support. From a constructivist perspective, I would argue for support for parents but with no specific learning outcomes. Some museums have produced support for adults with more generic learning guides. For example the Portland Art Museum, Oregon, USA, has created a downloadable guide for families, *Have Conversations Here* (2016), which outlines talking and listening strategies, primarily to address issues of social justice and violence when looking at politically charged artworks. It suggests strategies for talking and listening such as starting by finding out what your child knows already, and how to ask follow up questions.

At the RA, despite being an interpreter for my children, I felt like we were learning together with us in control of the pace and focus. We did not necessarily reach the same conclusions despite exploring new ideas and creating meanings through the same dialogue. Lord (2007), a Canadian museum learning professional, discussing families learning together, experimenting freely with no specific learning outcomes in mind, tells us that "answers are not prefabricated but depend individually on the learner. This means that caregivers and children may pose different questions and find different answers, there again children and parents are addressed equally as they learn from a different knowledge base" (2007: 74).

The Social Context: Dialogue

Through dialogue we made sense of things, questioned assumptions, made new meanings and explored alternative interpretations within the *social context* of our family

group. Lord tells us that "family learning will be most effective if a dialogue between generations is encouraged, and knowledge and meaning is created in the exchange between generations" (2007: 72). Ellenbogen, Luke and Dierking, museum learning consultants, put forward that families "construct meaning through their conversations" (2004: S50). Discussing family learning, Miranda Borun, director of research and evaluation, Franklin Institute Science Museum, Philadelphia, USA, suggests that conversation "is the preferred medium of instruction" (2008: 9). Our talk took various forms; observations, suggestions, questions, reflections, imagining, playing together, expressing opinion and ideas, responding and explaining. Our dialogue appeared to serve two primary functions:

- a vehicle to create new meanings and understanding
- scaffolding

Personal Context: Acknowledging and Drawing on Visitor Perspectives and Interests

We each brought our own perspectives and interests to the learning experience. Barry Lord, museum learning consultant, tells us that in some sense we learn from what we already know "because of the ideas, interests, attitudes, and concerns that we take to the museum" (2007: 14). The trail asked us for our opinion and ideas. It drew on our interests, recognising that we had our own perspectives, and gave us opportunities to draw on them. Valuing the *personal context* served to validate our thoughts and ideas.

It is acknowledged that learning involves more than contextual information (Hooper-Greenhill, 2007). Falk and Dierking (1992) tell us that most conversations between adults and children in museums are concrete, focusing on the exhibits, for example talking about what they are and what they are made from. "Discussions of abstract ideas and feelings, and generalizations about exhibits, do occur, but for most visitors, such conversations occur infrequently, and for some visitors, not at all" (Falk and Dierking, 1992: 110). We discussed both abstract and concrete concepts in the RA. One such abstract conversation centred on what constituted art whilst looking at Yael Bartana's film (2003) *Kings of the Hill* (appendix 31). Kate volunteered, "I don't think video in museums is really art to me because you wouldn't really say a movie was art" (conversation with Kate, 2010). She said that she thought sculptures, photos and paintings are art.

Another example of a discussion about abstract concepts happened when we watched Tracey Moffatt's (2007) film, *Doomed* (appendix 32), in which she "plays on our fascination with disaster. Doomed stuns and grips the viewer throughout its relentless onslaught of spliced together movie disaster scenes, set to an emotive soundtrack" (Croll-knight & Herrick, 2009: 45). Whilst watching Doomed, Tom narrated the film with his own sound effects, using crashing, banging and booming noises. After watching, Tom said, "If all those things happen to the earth, it would just die. This is what happens when all the bad things happen at once. If tornadoes, earthquakes happen and buildings fall down, the earth would die" (conversation with Tom, 2010). He had made his own sense of the film and rationalised what he thought the real impact of these events would have upon the earth.

Hooper-Greenhill and Moussouri, museum studies lecturers, report the significance for the family "of the social interactions between family members in enhancing learning behaviours. …viewing museum learning as a social rather than as an individual experience" (2001; 13). Social interaction is important and as such "a sociocultural perspective frames learning in and from museums as socially and culturally constructed through people's actions within a specific community of practice" (Ellenbogen, Luke & Dierking, 2004: S50). Families operate within a particular community of practice (Wenger, 1998) with shared vocabulary, assumptions and values, which I discuss below.

In the table below I list the behaviour we used to participate in the Earth exhibition in *personal*, *social* and *physical* contexts.

Table 3: Personal, social and physical contexts

Personal context	Social context	Physical context
Summary		
• Individual meaning making • The museum acknowledges visitor perspectives and interests • Visitors draw on prior experience and knowledge	• Learning is mediated through social interaction	• The environment: physical space and the museum's approach to displays and interpretation • Allows for sustained levels of visitor engagement with the exhibition and each

		other
Examples from visiting the Earth exhibition		
Familiar theme/concept: personal connections (climate change)	Parent as interpreter: unfamiliar vocabulary	Unfamiliar/new vocabulary, yet not obscure or specialised
Observations: *it looks like…*	Family discussion: sharing observations, suggestions and ideas for ways of looking, doing and behaving	Art Detectives trail: questions and writing/drawing activities
Suggestions and ideas: *imagine...* suggestions for ways of looking at the work	Questions: about the exhibits and the concepts, engendering responses	
Connections: if *they were real… -if all those things happen to the earth, it would just die* (Moffatt, 2007)	Ideas: *imagine…*	Engaging with artwork: provided opportunity to discuss abstract ideas and feelings –discussing what constitutes art?
Personal connections: *draw your favourite animal….* Able to bring in your own ideas and understanding.	Family discussion: creating own meaning and understanding- discussing endangered animals, reasons for animal extinction	Verbal interaction/connection with exhibits: Tom engaging through making sound effects (narrating the film)
Creating meaning and understanding: rationalisation, making sense of things	*Scaffolding*: with concepts ideas and activities in the trail. Supporting each other.	Looking: waiting and playing together. (Tide 2008)
Reflection on abstract ideas and feelings	Discussion about abstract ideas and feelings	*Atmosphere*: feeling comfortable, able to keep the children in sight, able to talk to each other, space for discussion.

What did not work		
	There were no staff on hand to support/help	*Too much writing* in the Art Detective trail

From these examples of family experiences I identify elements of learning that are dependent on the *personal*, *social* and *physical contexts*, acknowledging that they cannot be separated.

Communities of Practice

Traditionally learning has been seen as a result of teaching, particularly in the classroom where teaching and learning are intentional, planned activities, seen as separate from activities. "Our institutions, to the extent that they address issues of learning explicitly, are largely based on the assumption that learning is an individual process, that it has a beginning and an end, that it is best separated from the rest of our activities, and that it is the result of teaching" (Wenger, 1998: 3). In a school context, learning happens in environments free from distraction, as a result of teacher led activities. Learning is usually assessed by testing "where knowledge must be demonstrated out of context, and where collaborating is considered cheating" (Wenger, 1998: 3). Far from cheating, we have seen that learning in the museum centres and depends on collaboration in the form of social interaction.

I have seen that learning in museums happens through participation. Through interacting with each other and the world, we learn. Learning is not an isolated activity, it happens all the time. However learning can be brought into focus, such as at school or during specific planned activities in museums and galleries, but that is not necessarily when learning happens, nor is the learning outcome inevitably what is expected. I have seen this with my children when they reveal their knowledge and understanding in the most ordinary situations, such as when I was asked whether motorbikes had pedals in *the olden days*, but didn't dinosaurs *live in the olden days* (conversation with Tom, 2010). Their understanding of *the olden days* could be said to demonstrate a muddled concept of time. This learning experience was not planned for, we were walking to school. "Learning is an integral part of our daily lives. It is part of our participation in our communities and organizations" (Wenger, 1998: 8). Learning "is as much a part of our human nature as eating or sleeping, that it is both life-sustaining and inevitable" (Wenger, 1998: 3). It is from this perspective that I understand family learning in museums and as such underpins my research.

Learning as Social Participation

Wenger tells us that learning is "fundamentally a social phenomenon, reflecting our own deeply social nature as human beings capable of knowing" (Wenger, 1998: 3). He proposes a social theory of learning that doesn't replace other learning theories but "yields a conceptual framework from which to derive a conceptual set of general principles and recommendations for understanding and enabling learning" (Wenger,1998: 4). He proposes that learning is not something we necessarily apply our minds to at a specific time, although it can be, especially in the context of schooling. He sees learning is firmly placed "in the context of our lived experience of participation in the world" (Wenger, 1998: 3). It can be said that we live, therefore we learn.

When considering what matters about learning; the nature of knowledge, knowing, and the knower. Wenger (1998) starts with four premises:

1) *"We are social beings. Far from being trivially true, this fact is a central aspect of learning.*

2) *Knowledge is a matter of competence with respect to valued enterprises – such as singing in tune, discovering scientific facts, fixing machines, writing poetry, being convivial, growing up as a boy or girl, and so forth.*

3) *Knowing is a matter of participating in the pursuit of such enterprises, that is, active engagement in the world.*

4) *Meaning – our ability to experience the world and our engagement with it as meaningful – is ultimately what learning is to produce"*

(Wenger, 1998: 4)

Wenger discusses social participation as an "encompassing process of being active participants in the *practices* of social communities" (Wenger, 1998: 4). We make sense of things through social interaction and participating with others (Falk and Dierking, 2000; Wolf & Wood, 2012), and this involves learning, constructing meaning. Wenger (1998) presents four components that characterise social participation as a process of learning:

1) *"Meaning; a way of talking about our (changing) ability – individually and collectively – to experience our life and the world as meaningful.*

2) Practice: a way of talking about the shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action.

3) Community: a way of talking about the social configurations in which our enterprises are defined as worth pursuing and our participation is recognizable as competence.

4) Identity: a way of talking about how learning changes who we are and creates personal histories of becoming in the context of our communities."

<div align="right">(Wenger, 1998: 5)</div>

The Family as a Community of Practice

These four components of learning (above) are "deeply interconnected and mutually defining" (Wenger, 1998: 5). They make up a model for a social theory of learning where learners are seen as belonging to a *community of practice* (Wenger, 1998). Learning is a social enterprise; the concept of a community of practice is used "as a point of entry into a broader conceptual framework of which it is a constitutive element" (Wenger, 1998: 5). "Collective learning results in practices that result in the pursuit of our enterprises and the attendant social relations. These practices are thus the property of a kind of community created over time by the sustained pursuit of a shared enterprise" (Wenger, 1998: 45). These four components account for the ways families learn, how they participate as a community using shared social frameworks and perspectives to make sense of the world. In others words, the family in the learning experience is considered to be a *community of practice*.

Wenger (1998) tells us that we all belong to communities of practice, we may belong to several at any one time, and they are fluid and change over time. "Communities of practice are an integral part of our daily lives. They are so informal and so pervasive that they rarely come into explicit focus, but for the same reasons they are also quite familiar. Although the term may be new, the experience is not" (Wenger, 1998: 7). Understanding that family learning in museums happens within a community of practice allows for everyone to be included, where learning is seen as inevitable and accessible. It is within the community to which we belong, that the social practice of learning happens. However, museums and galleries engender learning in particular ways that can favour some social practice over others, as seen in the *Byzantium* exhibition above. Learning is a participatory activity and by promoting participation,

seeing learning as a social practice, museums can make it possible for families to learn together.

"Placing the focus on participation has broad implications for what it takes to understand and support learning.

- *For individuals, it means that learning is an issue of engaging in and contributing to the practices of their communities.*

- *For communities, it means that learning is an issue of refining their practice and ensuring new generations of members.*

- *For organizations, it means that learning is an issue of sustaining the interconnected communities of practice through which an organization knows what it knows and thus becomes effective and valuable as an organization."*

(Wenger, 1998: 8)

Both the museum and the family itself influence the learning experience, being separate yet overlapping communities of practice. Families act as a community of practice both inside and outside the museum. With learning considered to be an integral part of daily life, the family does not need to be in a learning environment in order to be thought of as a community of practice. Families come to museums with established ways of thinking and acting, implicit ways of learning that involve assumptions that are particular to them (Ellenbogen, Luke and Dierking, 2004; Gadamer, 2013), which are continually being refined. New frameworks, perspectives, ways and understanding of how learning happens are constantly negotiated. "Our perspectives on learning matter: what we think about learning influences where we recognize learning, as well as what we do when we decide that we must do something about it" (Wenger, 1998: 9). With this research I hope to reveal how family learning happens and produce a critical study, bringing into focus how meaning making for the family happens creating a broader perspective and understanding of family learning in museums.

Wenger (1998) discusses how meaning is constituted. "Meaning involves the interaction of two constituent processes, …*participation* and *reification*" (Wenger, 1998: 52). Meanings are negotiated, as such brought into being through participation. Meaning making is a gradual, productive process, not negotiated from scratch but produced using what we know already, through social participation. For Wenger (1998) negotiation involves sustained engagement and readjustment. "Participation and

reification form a duality that is fundamental to the human experience of meaning and this to the nature of practice [of meaning making]" (Wenger, 1998: 52). How participation happens, although not necessarily articulated by those involved, is dependent on how and what we understand participation to be. Participation, the social experience, is essential for meaning making to happen, mediated through social experience (Lave and Wenger, 1991). *Active participation* (Black, 2005) and *social participation* (Wenger, 1998) as modes of learning entail visitor engagement as a *community of practice* with the museum.

Ellenbogen, Luke and Dierking (2004) discuss the place of the family in museum learning research. They say that it is necessary to resituate "the focal point of what we study from the museum agenda to the family agenda" (Ellenbogen, Luke and Dierking, 2004: S53). As a community of practice, the family is seen as a learning institution (Ellenbogen, Luke and Dierking, 2004, 2007) with its own agenda. It is from this perspective that I research family learning, seeing the family as a learning institution operating in a larger learning organisation, the museum.

Scaffolding

Vygotsky (1978) presents the idea of learning through social mediation through the practice of scaffolding. Learning is seen as an "interpersonal process" (Vygotsky, 1978: 57), which first happens in the social context, then in the "intrapersonal" one, …on the individual level" (Vygotsky, 1978: 57) as people assimilate knowledge. Vygotsky sees learning as essentially a social process and uses the idea of the "zone of proximal development" (Vygotsky, 1978: 84), to discuss the learning capabilities of children, what they are able to do with guidance and collaboration. Vygotsky (1978) does not appear to define the idea of the child by age, but writes about children as distinct from adults. The zone of proximal development "is the distance between the actual development level, …and the level potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978: 86). The process of being guided, or the act of working collaboratively with more capable individuals, is called scaffolding. Scaffolding concerns social support for learning involving "the creation of processes and ideas between two or more individuals" (Falk and Dierking, 2000: 44). Scaffolding acts to mediate meaning making in a social context. Meaning making is an active social process (see chapter three): social context of leaning, Falk and Dierking, 1992; learning as social participation, Wenger, 1998; active participation and social interaction, Hein, 1998. This research

explores the role museum interpretation plays (content and the ways in which it is presented) as a mediator and how it acts to scaffold learning. Information, in terms of museum interpretation is optional (visitors have the choice to engage with it or not) and can be layered to meet different visitor needs.

Learning in the Museum as Guided, Shared Interpretation

Museum interpretation is generally seen as, but not limited to, the means by which information presented to visitors. This can take the form of texts, labelling and wall panels as well as literature, guides and books. In this thesis the definition of *interpretation* is extended to describe the learning experience in the museum (Black, 2005).

Earlier in this chapter it was put forward that knowledge is constructed through engagement with objects, rooted in personal experience and dependent on prior experience. However visitors do not engage with objects in isolation, participation involves a complex set of relationships with the object; how it is displayed, any information presented alongside it and what museum staff may say about it. Then there is what the visitor brings to the experience of looking; their prior knowledge, previous experience and interactions with other visitors. The nature of visitor engagement with objects is impacted by personal, social and physical factors (see above).

However if we focus on learning purely as a process whereby visitors create their own understanding we are in danger of ignoring the role the museum plays and their knowledge about their collections. With this in mind, Burnham and Kai-Kee (2011) present "a model of museum education in which our interest in the viewer is served by our interest in the artworks. According to such a model, we could not simply transmit what we see and know about artworks, but neither could we narrowly focus on what our viewers see and think about them." (Burnham and Kai-Kee, 2011: 60) Burnham and Kai-Kee are educators in art museums in the U.S.A. and I draw on their concept of teaching as *guided, shared interpretation* (Burnham and Kai-Kee, 2011), applying it to learning in museums in general.

Burnham and Kai-Kee's (2011) approach is dependent on both the viewer's and the museums' understanding of artworks, it requires both visitor and museum to contribute to the learning process. In a move away from seeing learning purely in terms of visitor experience, Burnham and Kai-Kee (2011) bring the idea of *teaching* to the fore in the museum education debate, purposefully using the word *teaching* when discussing their

role in museum learning, moving away from using the term, and visitor-led approach, *learning*. *Teaching* is seen as more of a didactic process where the museum imparts knowledge to the visitor, where the museum exerts institutional authority and where visitors absorb knowledge. *Teaching* suggests that museums take a proactive part in visitor learning (Coles, 2009). The term *learning* is currently in mainstream use. For example both Tate and the V&A both use the word *learn* for tabs on their website (last accessed April 2016). The term *learning* describes a visitor led process and hence the learner is seen to be at the centre of their learning, this fits with current theory on learning in museums (Black, 2012; Xanthoudaki, 2015) in the literature if not in all practice. Learning is a key role for museums; a key part of their mission (Black, 2005, 2012; Hooper-Greenhill, 2007). However, particularly for informal learning, it is seen as something visitors do, particularly as a result of museum programming. Programmes for schools learning tend to adhere to a curriculum developed to meet the requirements of the National Curriculum (Appendix 5). However free-choice (Falk and Dierking, 2012) (informal) learners are free to follow and develop their own interests.

Learning can be seen as an interpretive process where the visitor has agency, where meanings are constructed through a process of interpretation. Programmed museum learning is planned to allow the visitor to play an active part in their learning. The focus is on visitor as learner rather than museum as teacher. This may not always happen in practice but it is accepted as good practice (Black, 2005, 2012; Falk and Dierking, 2000; Hooper-Greenhill, 2007).

Burnham and Kai-Kee (2011) put forward a new approach to *teaching* in the art museum which also embraces the idea of visitor centred learning. This is not a shift back to the museum as the voice of authority transmitting didactic information to visitors. Their focus is on teaching, but maintaining the idea of visitors actively participating in the construction of knowledge and understanding. They still seek to involve the visitor in constructing meaning, rather than assigning meanings to works of art, however they use the term *teaching*. In this context Burnham and Kai-Kee (2011) discuss whether information about museum collections can perhaps discourage or displace the connections and understandings visitors make. They say that a shift "from what objects say to what viewers think" (Burnham & Kai-Kee, 2011: 60) has provided a more useful model for museum education. Burnham and Kai-Kee set out to create a model which meets in the middle of these two approaches; of visitors responsible for their own learning, constructing meanings, and the museum as authoritative voice

assigning meanings, and as such reframe museum teaching as "interpretation" (2011: 60).

"We have come to view museum teaching as a guided, shared act of interpretation in which the objects of study invite multiple views, such that our understanding of the artworks is enriched by dialogue and debate with and among the visitors" (Burnham and Kai-Kee, 2011: 60). The focus of the learning experience here is the dialogue between museum and visitor. There is scope for many types of dialogue, as the museum has no singular platform for communication with visitors, no one voice. Knowledge is still viewed as being constructed within the mind of the visitor but they suggest that this occurs within the dialogue between the museum and visitor. They write, "within the play of dialogue, the object reveals itself" (Burnham and Kai-Kee, 2011: 61), acknowledging the part the museum plays in facilitating learning, and have developed a model seeing learning as a dialogue between museum and visitor. In a dialogue, all parties should have opportunities to speak as well as listen. In this model, museums and visitors explore objects together, both speaking and listening where museums as well as visitors become open to the possibility of new and multiple meanings.

Burnham and Kai-Kee (2011) point out that understandings are never complete. Each time we view an object, our understanding of it can change, we make new connections dependent on dialogue, who we are having it with and what each party is saying. Burnham and Kai-Kee (2011) remind us that "we are not working towards an ultimate truth, but that every dialogue requires us to be open to the possibility of new meanings, new interpretations" (2011: 61). From this position, the museum and visitor both contribute to the conversation about the museum's collections, involved in dialogue in which information is shared, thoughts are expressed and all opinions are valued. Here the museum moves from a place of authority to one of joining in the debate and open to the possibility of new understandings and meanings, facilitating dialogue in which the museum not only shares their knowledge and understanding but listens to visitors. The museum lends its voice, not as one of authority but of that of an equal (Black, 2005; Esser-Hall, 2000), both able to contribute to the discussion. "We have found that in our teaching we join our viewers to probe and examine works of art that draw our interest. We ask that eyes and minds engage to unfold works of art in time through an open-ended dialogue that requires and benefits from everyone's contributions" (Burnham and Kai-Kee, 2011: 60). They see it as the museum's responsibility to guide the discussion and facilitate the sharing of ideas.

Labels in the Museum: Explaining Things Away

Through a process of interpretation, visitors create knowledge and understanding, guided by visitor interests (Hein, 1998), yet the museum plays a significant part. Not only does the museum provide the subject matter, the objects to be looked at, it also provides an interpretation of those objects in its approach to display and the information it chooses to offer. The museum, like the visitor, undergoes a process of interpretation in constructing knowledge and meaning, creating a framework for looking at and thinking about objects, through creating text and labels. Black tells us that how the museum presents its content has traditionally been based on an "assessment of the audience's needs" (2012: 11), and for the twenty-first century puts forward the idea that interpretation should inspire and support the visitor to "question, debate, collaborate and speculate" (2012: 11). " A good label …should encourage visitors to look [and] understand" (Trench, 2013: 16).

A Remit to Provide Information

Historically, museums have provided information about objects, primarily in the form of labels. When private collections opened up to the public, it was a curator's job to provide explanations of the objects, sometimes via a tour (Schaffner, 2006: 156). Schaffner tells us that "the invention of the modern museum brought with it a mandate to educate the masses" (Schaffner, 2006: 157). With the education mandate came a parliamentary bill. "In 1857, the British House of Commons passed a rule that, in national museums, objects of art, science, and historical interest would thenceforth be accompanied by 'a brief description thereof, with the view of conveying useful information to the Public, and sparing them the expense of a catalogue'" (Schaffner: 2006: 157). Information provided by the museum had to describe an object and provide *useful* information for the public. The museum had a responsibility to create labels for the public, not for the expert. Therefore in being *useful*, one would think that they should have been easy to read and understood by the non-expert.

Moving from Providing Information to Promoting Engagement

The purpose of modernist museum interpretation has been to convey information, but today the current remit of museum interpretation goes further. Black tells us that currently ideally, "a new exhibition will be shaped by a commitment to engagement rather than the primary goal being to convey information – so emphasising the importance of the experience itself, not just the outcomes" (2012: 77). However, the

modern art gallery has not set out to convey information apart from the title and date of work, and the artist's name, for example Tate. The expectation is that viewers respond through feelings. Therefore both the museum's and art gallery's remits could be seen to be about promoting learning through experience (Serota, 2000) rather than seeing learning purely in terms of quantitative outcomes, i.e. what has been learnt. In prioritising experience, visitor engagement is seen as key. Indeed at the V&A, labels should encourage visitors to "find their own reward, whether aesthetic, intellectual or personal" (Trench, 2013: 16).

Labels

Of particular interest to me is the provision of contextual information and how it features in the family learning experience. For some, labels are seen as a distraction, and engaging with the label can become the primary experience rather than engagement with the object. Labels are part of the experience but their place can be said to be too dominant both visually and in terms of knowledge; what is said and how it is said (Storr, 2006).

The Problem of Labels: Distraction or Assistance?

 Storr (2006) has concerns about people reading labels instead of looking at artworks. "If people read the labels instead of looking at the work, it is the exhibition-makers fault, not theirs; he or she has made the labels too prominent, too plentiful, too wordy, too graphically interesting, or in any other way too 'interesting' in the general field of vision" (Storr:2006, 24). Labels can be seen to distract and even get in the way. Describing how visitors might move from one label to the next instead of looking at the art, Storr writes, "curators should do nothing to encourage and everything to interrupt this information-gathering, art-obliterating choreography" (2006: 24). Here exhibition-makers are being accused of making labels *too interesting* so as to distract the visitor away from the objects. If this is the case, do labels need to be redesigned or removed completely? Storr tells us that it is "the exhibition-makers job is to arrange this encounter between people and what puzzles them in such a fashion that they will derive the maximum benefit and pleasure from it – that is, from the particularities of the work, their own uncertainty, and their innate drive to exploit to the fullest extent their own imaginative and intellectual resources – and make something out of the new experience" (2006: 24). I argue that labels benefit the encounter, particularly in addressing visitors' uncertainty about objects. Storr (2006) implies that labels can very much get in the way, yet also expects exhibitions to be planned to facilitate visitor

encounters. Storr (2000) talks of the visitor exploiting their resources for learning and engagement which could be said to be revealing a bias towards the visitor using their intellectual resources rather than museum labels to make something of the experience.

Storr's (2006) argument comes from the art gallery where he tells us that "the primary means for '*explaining*' an artist's work is to let it reveal itself. Showing is telling" (2006: 23). Art-works are expected to explain, to speak for and to reveal themselves. It appears that the visitor *encounter* is to be facilitated by the work of art itself, with potential *explaining* being inherent in the object. Where does information fit within this model of *encounter*? Consideration needs to be given to how the museum can use its *academic* resources to help *reveal* objects. I think that the debate should centre on visitor needs, and if visitors need them, then provide them.

I do not see this as an either/or situation, that of providing labels or not, but one of how best to create labels that visitors can choose to read or not. I am not purely talking about written labels here, but all types of museum interpretation. Balance is needed in providing information to make sure that it is not a distraction. Labels should be "part of a three-way switch: from looking at the art, to reading the label, which points back to the art" (Schaffner, 2006, 164). The relationship between visitor and object can, and often is, facilitated by the label.

Ingrid Schaffner (2006), senior curator Institute of Contemporary Art, Philadelphia, USA, tells us that "the viewer is not asked to be merely a reader, but an interpreter who is welcome to bring his or her own unpredictable and unaccountable sense of meaning to what's on view. …observation is the primary experience to be enhanced (or worse, obfuscated) by explanation" (2006, 164). Labels should not obscure objects through their explanation. They should not only acknowledge the visitor as interpreter but welcome their *unpredictable* meanings too.

Chapter 3: Methodology

Qualitative Research Plan of Action: Searching for Effective Family Learning

This chapter outlines the research methods and methodologies used to carry out this research and the theoretical positions behind them. Qualitative methods and approaches are used to carry out ethnographic case studies looking at family learning in museums. As is characteristic to qualitative research, I am not aiming to bring about understanding that can be directly generalised but seek to produce research that is *valid* (Cohen, Manion, Morrison, 2011). A naturalistic inquiry approach is used which involves the study of a natural setting where "social science is seen as a subjective rather than an objective undertaking, as a means of dealing with the direct experience of people in specific contexts, and where social scientists understand, explain and demystify social reality through the eyes of different participants; the participants themselves define social reality" (Cohen, Manion, Morrison, 2011: 15). I am concerned with lived and felt experience from the perspective of the research participants. However, I acknowledge that all inquiry is value bound and that all events are subject to interpretation by both researcher and research participants.

This research is set primarily in the Discovery session in the Horniman (see chapter four). Two other small case studies connected to my work and family learning experience, a case study at the NMM looking at a Family Workshop, *Family Flotilla,* are used to look at the conditions in which effective family learning takes place. Using my own family learning experience a case study at HMS Belfast is used to look at entry points and challenges posed by objects, using the tradition of autoethnography (Elliott, 2005; Ellis & Bochner, 2000; Magana, 2008c; Trahar, 2009).

A bounded system (Creswell, 2007: 244), the system of family learning is used to investigate and explore the process of how families learn together in a museum context. I look at how the family group makes meaning and comes to understandings and the role the museum plays in this. This has been a heuristic practice, a process of discovery. A grounded theory approach is used as it involves the systematic generation of theory from data employing inductive thinking where ideas and concepts become apparent through constant reviewing of the data.

Through this research I have developed a conceptual framework of family learning through the process of immersing myself in the field; collecting data through observation and interviews. I began the formal process of this research with preliminary ideas as to how families learnt in museums through which research questions were developed. Before beginning this study I had informally begun to develop ideas through self interest as a teacher and parent (see chapter one). Following many visits to museums with my family, I had begun to ask what elicited meaning making and what did not. These questions were then developed into a research proposal. As with the idea of grounded theory, where meanings emerge, my research questions emerged in a similar way and have continued to be refined through naturalistic enquiry.

My interest in family learning became narrowed down to looking at the process of meaning making. When flexi-schooling my daughter (as detailed in chapter one), it was the differences between my expectations of her learning and what she actually talked about and responded to that caused me to think about meaning making. Why were we not learning the same thing from the same source material? This experience highlighted the individual nature of meaning making and the many plausible responses to be had from the same leaning experience.

Meaning Making

Meaning making is a term associated with constructivist approaches to psychology (Wikipedia, a), understood to be a process of "how individuals construe, understand and make sense of life events, relationships and self" (Wikipedia, a). Neil Postman and Charles Weingartner (1969), American educationalists, used the term meaning making as a metaphor for how the mind works when learning, with reference to the school learning experience. As such meaning making is a metaphor for learning rooted in constructivist education theory and inquiry based learning. Postman and Weingartner put forward that "what we perceive is largely a function of our previous experiences, our assumptions and our purposes (i.e. needs). In other words, the perceiver decides what an object is, where it is, and why it is, according to his purpose and the assumptions that he makes at any given time" (1969: 76). Since our perceptions come from us and our past experience, it can be said that each individual makes meaning in a unique way.

Postman and Weingartner (1969) prefer the term meaning making to describe learning in schools as it stresses the process of creating meaning by a unique individual rather than "assumptions of sameness in all learners" (1969: 77) and that there are no

limitations to meaning making. New meanings continue to be made as perceptions shift and change. They call for teachers in schools to see their students as meaning makers, accepting that learners make what they will of what is taught and they see knowledge as subjective (see chapter two). This could present problems for schools in terms of assessment and mark schemes. However, they suggest that systems of assigning meanings are needed, and propose that procedures are needed to determine consistency in assessment. Essentially though, they are arguing for students to be seen at the centre of the learning process, for them to be able to improve their meaning making capabilities, rather than impose standardised meanings through teaching. "This is the basis of the process of learning how to learn, how to deal with the otherwise meaningless, how to cope with change that requires new meanings to be made" (Postman and Weingartner, 1969: 82).

Essentially this is why I have focussed on the process of family meaning making in museums. It fits with my motivations (see chapter one) for why I visit museums with my family, the idea of the child at the centre of their own learning and learning for fun (Cara & Brookes, 2012). I want my children to know that school learning, although varied, serves a particular purpose and is not representative of the possibilities of learning in other settings. It is most important to me that learning can be directed by the learners themselves and need not be driven by tests and exams (Lipsett, 2008). With my focus on meaning making my research explores the idea of learning how to learn.

Theoretical Perspectives of the Study

Methods, Methodologies and Assumptions

I use Michael Crotty's (1998), (lecturer in education and research studies, The Flinders University of South Australia), questions below as a structure to explain my methods and methodologies and the assumptions behind these.

- "*What methods do we propose to use?*
- *What methodology governs our choice and use of methods?*
- *What theoretical perspective lies behind the methodology in question?*
- *What epistemology informs the theoretical perspective?*"

(Crotty, 1998: 2)

Crotty (1998) presents these questions to help researchers choose appropriate theoretical perspectives, methods and methodologies and the philosophical

assumptions that inform them in social science research. Despite putting these questions together in 1998, they continue to be widely used, accepted as good practice in the field of social science research (Mack, 2010).

Crotty (1998) presents us with four elements of the research process.

- *Methods*: the techniques or procedures used to gather and analyse data related to some research question or hypothesis.

- *Methodology*: the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes.

- *Theoretical perspective*: the philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria.

- *Epistemology*: the theory of knowledge embedded in the theoretical perspective and thereby in the methodology.

(Crotty, 1998: 3)

I have found that my thinking has not followed a linear path, such as the one listed above, but has been a process of assembling my thoughts and ideas in relation to the literature and experience in the field of museum and family learning. Completing this chapter towards the end of my research, I discuss each element put forward by Crotty (1998) beginning with epistemology.

Epistemology (Constructivist and Constructionist)

The theory of knowledge underpinning this research, the theoretical perspective that aligns with my thinking is a constructivist one where meaning is constructed not discovered. Meaning is not *out there* waiting to be discovered but created within specific social contexts in the minds of individuals. Crotty (1998) refers to this as *constructionism*. "What constructionism claims is that meanings are constructed by human beings as they engage with the world they are interpreting" (Crotty, 1998: 43). From this position reality can only be approximated, as meanings do not exist outside of human thought. Meanings therefore can be said to be contingent; interpretations. This is in contrast to a positive approach to social science research in which human behaviour is seen in objective terms, and knowledge is understood to pre-exist, externally, outside the mind of the knower (Magana, 2008c).

In this thesis the terms *constructionism* (Crotty 1998) and *constructivism* (Black 2012; Magana, 2008c) are both used. Constructivism is the term favoured by many writers on museum learning theory (Black 1998, Hein 1998) but Crotty (1998) makes a distinction between the two. Put simply, he uses the word *constructivism* in relation to meaning making in the mind of the individual for "the meaning-making activity of the individual mind and… [uses] *constructionism* where the focus includes the collective generation [and transmission] of meaning" (Crotty 1998: 58), *constructionism* used for meaning making in a social group.

For the purposes of this research, the term *constructivism* is used to indicate where meanings do not pre-exist but are created in specific social contexts in the minds of individuals. "The social world can only be understood from the standpoint of the individuals who are part of the ongoing action being investigated and… [their] model of a person is an autonomous one" (Cohen, Manion, Morrison, 1998:15). A constructivist reading of knowledge, the idea of people construing meaning in a social setting, aligns with the idea that all meaning is and continues to be interpreted (Gadamer, 2013, see chapter two). Therefore meanings are not always generalisable; they are often subjective, contingent, defined by individuals and dependent on context. Meaning is idiographic, unique to the individual and how they construe their world, even when focussing on specific properties of the same context. From this position, reality can be made sense of in different ways and this can pose a problem for the researcher where no-one meaning stands as true or valid.

The construction of meaning does not simply demand our imagination. "What we have to work with is the world and objects in the world. …The world and objects in the world may be in themselves meaningless; yet they are to be taken seriously" (Crotty, 1998: 44). Regarded in this way, constructionism parallels the concept of *intentionality* (Crotty, 1998: 44). In this instance intentionality has nothing to do with deliberation or purpose, but of the mind becoming conscious of and knowing something. "Intentionality posits a quite intimate and very active relationship between the conscious subject and the object of the subject's consciousness. Consciousness is directed towards the object; the object is shaped by consciousness" (Crotty, 1998: 44). Within the concept of intentionality, the person and the experience cannot be separated; meaning is constructed in the interaction between the two. What this means for this study is that meaning making is not only the subject of the research but also the means by which the research process is understood. How family learning is perceived by both

researcher and participants is shaped by those involved, through their experience of family learning.

A constructivist position on epistemology informs my understanding of research and is also where I stand in relation to learning from objects in museums in terms of meaning making (see chapter two). Constructivism therefore is significant to this research in two respects; firstly for the idea that meanings are constructions formed in the mind of the individual, and secondly for its relevance to museum learning.

Social Constructionism

Social constructionism (Andrews, 2012; Berger & Luckmann, 1966) informs the theoretical perspective behind this research. Both research and museum learning involves the researcher and the subject of the research; learning in the museum involves the visitor and the museum, not just the object. Making sense of things, constructing meaning is a social activity. That is not to say that all meaning making happens in a group such as a family, but that we make sense of the world in, "a social milieu in which a 'system of intelligibility' prevails. We inherit a 'system of significant symbols'. …Our culture brings things into view for us and endows them with meaning" (Crotty, 1998: 54). It makes sense then to use *social constructionism* as a theory to support my research methodology because it is concerned with the ways in which meanings are created. "The basic generation of meaning is always social, for the meanings with which we are endowed arise in and out of interactive human community" (Crotty, 1998: 55). Meaning making is social in the sense that meanings are shaped by frameworks that exist within a particular culture.

Peter Berger and Thomas Luckmann authors of *The Social Construction of Reality* (1966), discuss the role of knowledge in society, particularly the idea of common sense understanding. They talk of an intersubjective common-sense world in which reality is constructed. In the everyday world which we share with others, consensual ideas as to what constitutes knowledge are taken for granted. *Common-sense* understanding is seen as a natural attitude, described as such because it refers to consensual ideas and understanding that are common to and shared by many (Berger & Luckmann, 1966). "The reality of everyday day life is taken for granted as reality. It does not require additional verification over and beyond its simple presence. It is simply there, as self-evident and compelling" (Berger and Luckmann, 1966: 37). In a shared world, knowledge can correspond, though not all knowledge is shared. For common-sense knowledge to routinely exist in everyday life, Berger and Luckmann (1966) say this

requires some suspension of doubt. With the concept of intersubjective common-sense knowledge individuals are able to share understanding, however, this appears to be more about how knowledge corresponds among individuals rather than the social context in which reality is understood.

This is contested for not taking account of the part that culture plays in intersubjective knowledge. It could be said of intersubjective knowledge and understanding, that rather than being seen to be how things naturally are, knowledge is actually constituted within a particular culture (see below). What could be seen as *common sense* understanding is rather brought about through consensual ideas as to what constitutes knowledge by that particular culture (Andrews, 2012). Where reality is seen as a social construction "we are born into a world of meaning" (Crotty, 1998: 54) through which we make sense of the world. Common sense knowledge is thought to be so because of the social cultural conditions that make it appear so. Cultural conditions for interpretation are taken for granted, they provide working groundings, borders, themes, and materials for constructing realities (Holstein & Gubrium, 2008). Social construction is subject to processes in which "local culture, organisational settings, and institutional structures all mediate talk and interaction. They shape the ways individuals understand and represent local realities. They should not be viewed as prescriptions, rules, or norms for the social construction processes but rather seen as offering more or less regularised, localised ways of assigning meaning" (Holstein & Gubrium, 2008). This approach to research favours the idea of interpretivism (see below).

"Culture is that collection of behaviour, patterns and beliefs that constitutes standards for deciding what is, what can be [and] how one feels about it" (Magana, 2008c). "Social constructionism places great emphasis on everyday interactions between people and how they use language to construct their reality. It regards the social practices people engage in as the focus of enquiry" (Andrews, 2012). A focus of this research is on the interactions between visitors and museum, with both objects and the setting, and how these contribute to the process of meaning making. Using the perspective of social constructionism this research sets out to study the multiple realities constructed by families and the implications of these on their learning. This fits with an ethnographic approach (Holstein & Gubrium, 2008), seeking to understand the culture of family learning from the diverse perspectives of family learners themselves. I look at the "social construction process within the context of local culture, organisational structure, going concerns, and any number of other socially organised circumstances" (Holstein & Gubrium, 2008: 380).

Interpretivism

Social constructionism is relativist (Gadamer, 2013): "What is said to be 'the way things are' is really just 'the sense we make of them'" (Crotty, 1998: 64). From this perspective, as researchers, we are to hold our understandings lightly, "seeing them as historically and culturally effected interpretations rather than eternal truths of some kind" (Crotty, 1998:64). How we see and inhabit the world is different for each of us, which makes for the idea that we inhabit different worlds. Our physical worlds may be the same but our understandings of that world and how individuals construe their reality may be very different. Unlike common-sense understanding (above) in which consensual ideas are taken for granted, an interpretivist perspective takes into account the part culture plays in the understandings people share. It has been important to hold this reasoning to the fore throughout the process of this research study, especially because "description narration can no longer be seen as a straightforwardly representational description of reality. It is not a case of mirroring *what is there*. When we describe something, we are, in the normal course of events, reporting how something is seen and reacted to, and thereby meaningfully constructed, within a given community or communities" (Crotty, 1998:64). It is therefore necessary for the researcher to bear in mind the part interpretation plays in studying participants. What the participants report and what the researchers understand are interpretations, how they construe their worlds. Value-free objective interpretation is not possible; meaning and understanding come about through many layers of interpretation by both participant and researcher. This is an important idea for the concept of reliability which I discuss later in this chapter (Law & Urry, 2003; Law, 2006). Cohen, Manion and Morrison report that "there are multiple interpretations of, and perspectives on, single events and situations" (2011:17). Ethically researchers must acknowledge interpretation and acknowledge biases and assumptions. "Researchers recognise that their own background shapes their interpretation, and they *position themselves* in the research to acknowledge how their interpretation flows from their own personal, cultural, and historical experiences. ...The researcher's intent, then, is to make sense (or interpret) the meanings others have about the world" (Crotty, 1998: 21).

Contrary to positivism (Weinberg, 2008) where knowledge is considered unambiguous, where meaning exists independent of human consciousness, an interpretivist perspective sees knowledge as culturally derived, and socially and historically situated. Social situations are therefore understood in terms of interaction with culture (Magana, 2008c). Crotty goes so far as to suggest that "culture is best seen as the source rather

than the result of human thought and behaviour" (1998: 53). Detached value-free observation, while an ambition, is not always possible. "The interpretivist approach... looks for culturally derived and historically situated interpretations of the social life-world" (Crotty, 1998: 67). A criticism of social constructionism can be that any interpretation can be seen as valid and no one interpretation can stand as correct. I address the idea of taking multiple meanings to an extreme with no shared understanding, in chapter two I bring in Esser-Hall's (2000) idea of phenomenological hermeneutics where all parties have an equal share in the process of meaning making, and are accepting of others' understanding.

Symbolic Interactionism

I use the idea of symbolic interactionism as a theoretical perspective. Symbolic interactionism sees the individual as integral in creating their social world, and how they interpret the world is based on the meanings objects have for them rather than objects having intrinsic meanings in themselves (Carter & Fuller, 2005). In the museum, the meanings that people make determine the responses they have to the exhibits. Using Hooper-Greenhill's (2007) definition of learning, which includes the formation of opinion, attitudes and values as well as the acquisition of skills and knowledge, we can see that responses are part of the learning experience, and how visitors respond depends on the meanings they construct. The majority of interactionist research uses qualitative research methods, such as participant observation, to study aspects of social interaction.

The key principles of symbolic interactionism that are most pertinent to this research are that:

- *Individuals are constructors of their own social realities.*
- *Meanings are continually being created and recreated through a process of negotiation.*
- *Meanings are derived from interaction within a particular social and cultural context.*

(Cohen, Manion, Morrison, 2011)

My focus of symbolic interactionism is on the interaction between people and objects in a social space. Responses are not made directly to objects themselves but based on the meanings individuals attach to those objects; a kind of interpretation. "Interaction

implies human beings acting in relation to each other, taking each other into account, acting perceiving, interpreting and acting again. Hence a more dynamic and active human being emerges rather than an actor merely responding to others" (Cohen, Manion, Morrison, 2011: 20). In some sense interpretation is performative. This is congruent with how I work as a researcher and museum learner, seeing meaning making as a construction, derived from social interaction. From this perspective, the family itself is seen as a dynamic resource for museum learning (Summer & Summer, 2014), "an educational institution within the larger learning infrastructure" (Ellenbogen, Luke & Dierking, 2007: 18).

This is consistent with the idea of relativity as discussed in chapter two. All perspectives are valued equally (Esser-Hall, 2000; Gadamer, 2013) and perspectives are subjective. "Knowledge must always be knowledge from a certain position" (Berger and Luckmann, 1966: 22).

Research Design

Methodology

> *"We believe that qualitative study is forged in the transaction among what is done and learned and felt by the researcher. It is an intensely recursive, personal process, and while this may be the hallmark of sound research, it is crucial to every aspect of the qualitative way of looking at life"* (Ely, 1991: 10).

This research has been a personal process, from the initial thinking to developing and refining questions. The process has centred for the most part, on my experience in the field of family learning (see chapter one). As a family learner researching family learning, my role has been central to the research process, providing an emic perspective. My experience has served to both instigate the research and has scoped my thinking.

A Naturalistic Paradigm

In naturalistic inquiry questions emerge and become refined through studying the literature and entering the field. Questions and answers are discovered. Features of a naturalistic inquiry include:

- *The social situation: Answers to questions lead to emerging theory, a process in which questions shift and provide further direction for the study.*

- *Literature and personal experience shape the course of research.*
- *Context is important: a natural setting, a real life event, i.e. something that would happen whether the research was happening or not.*

A naturalistic paradigm acknowledges multiple meanings and that meaning is never static, but dependent upon researcher, context and the field. Alternatively in a positivistic paradigm "the claims of empirical scientific research were held to be absolute" (Ely, 1991: 2). An anti-positivist approach would emphasise "that social reality is viewed and interpreted by the individual herself according to the ideological positions she possesses" (Dash, 2005, pdf), where knowledge is acquired through personal experience. A naturalist inquiry approach involves studying phenomena in its natural setting, focussing on people in real life experiences. The researcher attempts to see the situation from the participant's point of view acknowledging that they cannot escape from providing an interpretation (Crotty, 1998). Ethnography and autoethnography are types of naturalistic inquiries that are carried out in the field, attempting to ascertain and reveal socially acquired meanings.

> *"Those who work within the naturalistic paradigm operate from a set of axioms that hold realities to be multiple and shifting, that take for granted a simultaneous mutual shaping of knower and known, and see all inquiry, including the empirical, as being inevitably value-bound"* (Ely, 1991: 2).

Ely states that qualitative research is best understood through identifying the characteristics of its methods rather than by defining it. She presents us with the following six characteristics:

1. *Events can be understood adequately only if they are seen in context. Therefore, a qualitative researcher immerses her/himself in the setting.*

2. *The contexts of inquiry are not contrived; they are natural. Nothing is predefined or taken for granted.*

3. *Qualitative researchers want those who are studied to speak for themselves, to provide their perspectives in words and other actions. Therefore, qualitative research is an interactive process in which the persons studied teach the researcher about their lives.*

4. *Qualitative researchers attend to the experience as a whole, not as separate variables. The aim of qualitative research is to understand experience as unified.*

5. *Qualitative methods are appropriate to the above statements. There is no one general method.*

6. *For many qualitative researchers, the process entails appraisal about what was studied.*

<div align="right">(1991: 4)</div>

My Question: A Real-Life Need

Chapter one outlined my area of study and initial questions, real-life experience questions which came from personal experience of spending time with my family in museums.

Ely tells us that at the outset of naturalistic research, three characteristics are needed:

1. *"An adequate self-awareness about how the field of study relates to one's own life;*

2. *A sound grasp of the research method one has chosen. This assumes a sound grasp of its literature, as well as research experiences and reflections thereon.*

3. *A broad grasp of the literature and practices in one's field of concern and the theories and assumptions associated with these".* (1991: 30)

How I Meet these Characteristics

In being aware of how the field of family learning relates to my own life, I have discussed how this study came about, my position as researcher, family learner and museum learning professional and my motivations for family learning in museums (see chapter one). Discussed at more length below I reflect on having an emic perspective, in part, and the implications of using my own family for research purposes.

Narrowing the Focus

Ely (1991) tells us that initial research questions should be broad with the aim of them being refined throughout the research process. "For most of us, the questions shift, specify, and change from the very beginning in a cyclical process as the field logs grow, are thought about, analysed, and provide further direction for the study" (Ely, 1991: 31). At the beginning of this research process I began with broad questions, the topic of family learning. My questions became refined over time through the course of

collecting and analysing data, narrowing down to the essentials of what I wanted to know in keeping with naturalistic inquiry (Frey, Botan & Kreps, 1999), using ethnographic methods to understand the specifics of the family learning experience. Initially I was looking at how we as a family were learning together in a museum, finding the process intriguing. From that broad topic, I identified the process of meaning making as an area of study. Ely (1991) tells us that it is through practical engagement with the field that we are able to narrow the focus of the research. "Both questions and answers must be discovered in the social situation being studied. This cycle, this dance, is at the heart of qualitative research" (Ely, 1991: 55-56).

An Emic Perspective

An ethnographic approach has been taken to this research with, in part, an emic perspective in using my own family, including myself, as research participants. When using my family I use an autoethnographic methodology, I am part of the culture I am studying; being both participant and researcher. I have checked my involvement to ensure that I address the balance of participation and observation, discussed later in this chapter, using my family as research participants. Being both a participant and an observer is not restricted to an emic approach (see below in *Participant Observation,* Ely, 1991). "Most people learn to walk the fine line between contributing and researching that serves both the research process and the social unit being studied" (Ely, 1991: 24). The high degree of personal engagement has been both a strength and potential weakness. I have at times been so involved in the museum visit that I have been distracted from my role as researcher and I have also been at pains to be as objective as possible. Yet I acknowledge that in undertaking naturalistic inquiry true objectivity is not possible. See chapter one for insider, outsider research (Breen, 2007).

Ethnographic and Autoethnographic Approaches

Ethnography is the study of a culture, the study of a way of life and sets out to understand a particular culture rather than aiming for generalisable results. It is an approach in which the researcher aims to make meaning from and understand experiences (Kelley, 2014). Cohen, Manion and Morrison tell us that the purpose of ethnography is to portray what is happening from the (multiple) perspectives of the participants; to provide "description, understanding and explanation of a specific situation" (2011: 128). In ethnographic research, the researcher takes a central role as a primary tool for research. Researchers need to be self aware, acknowledging their actions and the bearing they have on the research, declaring assumptions and biases,

in so far as it is possible within an interpretivist approach. "Ethnographic research requires attentive observation, empathetic listening, and courageous analysis. Ethnographers must be good at seeing 'what is there', which sounds simple, but is not" (Ely, 1991: 41).

Creswell (2007) tells us that the thrust of ethnography is one of describing and interpreting a culture-sharing group, making it suited to exploring how learning happens across groups of family learners. Ethnographic strategies for analysing data include "analysing data through description of the culture-sharing group [and uncovering] themes about the group" (Creswell, 2007: 79).

In using my family's experience of learning I have also undertaken autoethnography. Using an autoethnographic approach the researcher examines the social and cultural world through personal experience (Denshire, 2013; Trahar, 2009), looking at the ethnography of one's own group focussing "on the study of one's own culture and oneself as part of that culture" (Magana, 2008: 1), said to illuminate the culture. I use my own insights to gather observations into the culture of family learning in my own family settings. Kelley suggests that "autoethnographies work best when they are applied to an experience or context from which the author seeks to understand or derive meaning" (2014: 349). Both ethnography and autoethnography seek to further understand self, others and culture (Kelley, 2014). I am part of a culture of family learning and as such I seek to understand instances of family learning. An autoethnographic approach has enabled me to connect my experiences of family learning with others, garnering insights about the experience and how meanings are formed, "connecting the personal to the cultural focussing outwards on social and cultural experience" (Ellis & Bochner, 2000: 733).

Using my Family as Research Participants

Part of my reflective practice is to make clear the impact of using my family on the research process. Ethnography is concerned with lived experience. As such I have adopted autoethnography to examine the experience of my family learning in museums. Data has been gathered through observing the actions and words of my family.. Being present for an entire visit increased the opportunities for observing events and listening to their ideas, understanding and opinions that were particularly meaningful to them . This often happened on the journey home when we would reflect upon our visit. When carrying out research as a participant with my own family I was a "participant-as-observer" (Cohen, Manion and Morrison, 2011: 457) with privileged

access to my family. At times this was challenging, difficult to keep my *researcher hat* on due to the physical constraints of observing and logging data, as well as being involved as a family visitor.

Whilst observing my family it was important that I recognised my own agenda. In chapter one I have discussed my motivations for family learning in museums (purposive leisure and learning for fun, Packer & Ballantyne, 2002; Shaw & Dawson, 2010). My family experience cannot be untangled from the influence of these motivations as I am part of it, and as a parent I often have more say in how we spend our time (particularly at the time of the data collection when my children where younger). However I tried to minimise the influence, especially in our conversation, by not being explicit about my own motivations for family visits to museums and not discussing our experience in terms of family learning. As far as my children were concerned we were simply having a fun day out. When carrying out research with them, I used language that we used in everyday life and guided our conversation with open-ended questions in the style of semi-structured interviews (Creswell, 2007).

I made room for my family to follow their own agenda when visiting museums, in keeping with the way in which we were used to visiting museums before I began this research. They always had the choice as to whether to participate in certain activities or not. For example at the Royal Academy (2010) they could choose whether or not to use the children's trail (see chapter two). I allowed them to follow their own agenda by adopting a position of *hanging back* during our visits, letting them take the lead and organise themselves in terms of what we did and for how long. On HMS Belfast I encouraged my children to chart their own journey around the ship. I tended to follow them, letting them take the lead, allowing their motivations and interests to be revealed through their interactions and behaviour. However, trying not to influence our family agendas during a visit was not entirely possible. It was problematic as I myself was a participant in the research process having an emic perspective (Cohen, Manion & Morrison, 2011). I was part of the phenomena I was researching, part of the study, affording me multiple identities, as both family learner and researcher, helping me to organise and make sense of my experiences and that of my family.

Learning experiences happen in a social context, in encounters with others; where we negotiate our sense of self with others (Elliott, 2005). The social context (Gadamer, 2013) influences how we tell our stories and what we choose to tell, embedded in social relationships (Elliott, 2005). The experiences my family conveyed are not only

rooted in a shared wider cultural, social context of the world we inhabit together, but also in shared history which frames our experiences. In discussing this research with Kate, now 18 (2017), I asked her how she felt about me being both researcher and mother during our family visits. Did she think that I could represent our family experience from their perspectives, rather from my own bias? She acknowledged that I would be telling the story as her *mum*, "*but maybe it's better that you're a mum because it's about family learning. You have a unique perspective on our thoughts and feelings, a very particular perspective; you're not just writing them down and saying what they are. You're going to interpret our thoughts and feelings and they mean something different to you than a random person. You understand us as people more than other people. They might miss things that are important and relevant*" (conversation with Kate, July 2017). Kate had identified that I had privileged access not only to them as research participants but also to a shared history and to their thoughts and feelings.

Some "researchers from more positivist and empirical orientations feel autoethnographic approaches are not valid and therefore not an appropriate method for research" (Kelley, 2014). Critics have said that autoethnographic research is just stories, Allyson Kelley (2014), US health evaluation research scientist, is in favour of it, arguing that it is a valid qualitative research method "based on writing and reflection that allows researchers to explore personal experiences through social [and] cultural contexts" (2014: 347). Autoethnography can be criticised for being self indulgent with the focus on the researcher and how they represent their experiences and those of the participants. It can lead to unfettered introspection. However, personal experience is important for how it illuminates the culture being studied (Ellis & Bochner, 2000). Therefore, as discussed above, I have applied a reflexive methodology to reflect upon the nature of this research and my role, articulating my motivations and bias, acknowledging that I report on how I see things not how things actually are.

A Grounded Theory Approach

I use a grounded theory approach. "Grounded theory depends on methods that take the researcher into and close to the real world so that the results and findings are grounded in the empirical world" (Magana, 2008c). The idea of grounding results in observations of the real world is problematic, in terms of reliability. Questions need to be asked whether it is possible to observe and represent an empirical world without it being subject to interpretation (see above). I explore this further below looking at

reliability in qualitative data analysis, putting forward the idea that there is no neutral way of representing and analysing data (Law & Urry, 2003; law, 2006). Creswell however, tells us that a grounded theory approach focuses on "developing a theory grounded in data from the field" (2007: 78). Grounded theory focuses on generating theory, inferred from collected data, rather than testing theory. It involves "grounding a theory in the views of participants, …studying a process, action, or interaction involving many individuals" (Creswell, 2007: 79). Through studying the culture of family learning, listening to the participants' views, I seek to identify the criteria and conditions in which family learning takes place.

As an inductive process, theory is seen to emerge from the data (Magana, 2008c; Crotty, 1998) as categories are developed and themes surface. Criteria for effective family learning have emerged in this study, based upon the views of the participants. Here I use *effective* to mean that family learning has been able to take place, meanings have been created and understandings reached. Grounded theory has been used to identify where family learning has taken place and data collected through observation and interviews has generated theory.

Methods (the instruments used to collect data)

Case Study Research

An Instance

A case study is an inquiry into an event, it "allows the researcher to concentrate on a specific instance or situation and to identify, or attempt to identify, the various interactive processes at work" (Bell, 1999: 11). It demands the asking of *what* and *how* questions. I have identified my instance as the issue of family learning in a museum, that is, learning in an intergenerational group as discussed in chapter one. In a case study the researcher identifies a *unit* of research, which in this instance are family visits in the context of free-choice learning (Falk and Dierking, 1992), seeing the family as a *learning unit.* Ellenbogen, Luke and Dierking (2007) stress the importance of situating the family unit at the heart of further research in order to understand its role in museum learning. Case study research concerns itself with interaction, and through identifying and exploring the interactive processes that occur as families engage as free-choice learners, I hope to develop a better understanding of the process of family learning in museums.

Bounded System

Case study research entails the study of an issue looked at through one or more cases within a bounded system. "The case selected for study has boundaries, often bounded by time and place. It also has interrelated parts that form a whole. Hence, the proper case to be studied is both bounded and a system" (Creswell, 2007: 244). I have looked at instances of meaning making by families as they have engaged with objects in museums. I have looked at visitor interactions between themselves, the exhibits and with museum interpretation in seeking to identify criteria for effective family learning.

Purposeful Sampling

I undertook non-probability sampling, *purposive sampling*, selecting participants from the population of family learners already visiting a museum, taking advantage of families and their desires and motivations. Research participants selected were those who happened to be available, this corresponds with the idea of *convenience sampling* (Cohen, Manion, Morrison, 2011), also called *opportunistic sampling* (Creswell, 2007; Patton, 1990). I took the opportunity to ask visitors already present in Discovery and Family Flotilla to participate in my research, visitors were not invited to attend these sessions in the first instance. A key reason for convenience sampling is practical access; using the nearest respondents, those accessible at the time of the research. Opportunistic sampling "involves on-the-spot decisions about sampling to take advantage of new opportunities during actual data collection. ...[taking] advantage of whatever unfolds as it unfolds" (Patton, 1990: 179). My research sample emerged during the fieldwork as it was not possible to plan it in advance; it depended on who turned up on the day. Michael Patton, (1990) US evaluation consultant, suggests that being open to following wherever the data leads is a strength of qualitative research.

I also used my own family on a visit to HMS Belfast as a case study (see chapter five), who were not merely chosen for their accessibility (see chapter one). My experience of family learning with them triggered this research, providing instances in which I had begun to ask questions about how we were learning together. Having an emic approach and using autoethnographic methodology was of benefit as it gave privileged access to participants and their perspective. In each instance, the family group "does not represent any group apart from itself, it does not seek to generalise about the wider population" (Cohen, Manion, Morrison, 2011: 156). As such, my research cannot make generalised claims about family learning, but it could be carefully applied to instances of family learning with a similar population.

Data Collection

I used the following methods of data collection.

- ***Participant Observation:*** *carrying out intensive listening and observing, observe and participate, aware of oneself and others as participants.*

  - ○ *Active participant, privileged observer, limited observer.*

- ***Interviews:*** *Semi-structured, to expand data collected through observation*

- ***Observation:*** *in-depth, prolonged engagement, tracking and timing.*

Participant Observation

Participant observation, using ethnographic and autoethnographic approaches was used to carry out this research. This required intensive observing and listening through observing and interviewing families (see purposeful sampling above).

> *"Classic participant observation ... always involves the interweaving of looking and listening ... of watching and asking – and some of that listening and asking may approach or be identical to intensive interviewing. Conversely, intensive interview studies may involve repeated and prolonged contact between researchers and informants, sometimes extending over a period of years, with considerable mutual involvement in personal lives – a characteristic often considered a hallmark of participant observation"*
>
> (Ely, 1991: 43).

As a participant observer it has been important to be both insider and outsider (see chapter one, Breen, 2007; Dwyer & Buckle, 2009) observing myself and others, in order to try to become aware of all that is happening in the field. Ely (1991) tells us that particular to participant observers as opposed to ordinary participants is the dual purpose of being aware both of oneself and others as participants, and aware of the role the researcher plays in relation to the field as well as that to other participants. This dynamic of trying to detach oneself from a very familiar situation can be described as becoming "the other" (Ely, 1991: 49), attempting to see the world as the person we are studying does, acknowledging that this is not entirely possible.

Ely distinguishes three different participant-observer styles:

- *"The active participant* has a job to do in the setting in addition to the research;

- *The privileged observer* is someone who is known and trusted and given easy access to information about the context

- *The limited observer,* the role most of us play, observes, asks questions, and builds trust over time, but doesn't have a public role other than researcher"

(1991: 45).

In carrying out this research, I fell into one or more of these categories at any given time, dependent on the context. With my family I was both *active participant* and *privileged observer;* researcher, mother and learner. At other times in the Horniman I was a *limited observer;* researcher and Explainer (see chapter four). Using my own family as research participants I had insider role status (Dwyer & Buckle, 2009), being a member of the group I was researching, sharing the experience of family learning with them, using the same language (see emic perspective, above). Observing in Discovery was to some extent easier. Here my position shifted slightly to one of "observer-as- participant" (Cohen, Manion and Morrison, 2011: 45). As a researcher I sought to be as unobtrusive as possible, yet I participated as an Explainer.

Observation cannot be carried out without considering the impact of the observation on the research setting. The act of observing in itself can alter what is being observed. Despite our best efforts to be unobtrusive we have an influence over the context in which we are carrying out our research. We cannot negate the influence of our presence when observing but we must acknowledge it and aim to keep it to a minimum. Ely tells us that, "the important issues are:

1. *that we participate as closely as possible in line with the needs of our study;*

2. *that we make ourselves as aware as possible of the ripples caused by our participation;*

3. *that we attempt to counter those ripples that might hinder the participant observer relationship and, hence, the study; and*

4. *that we describe in the report both what worked and what did not"*

(1991: 47).

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In keeping the influence of my presence to a minimum as a participant observer, I made every effort to maintain my role either as a family learner, researcher or Explainer. In these roles I behaved as was expected, as much as I could, recording events as discreetly as I could. I kept field notes during observations as a participant observer and produced reflective notes as soon as I could after the event. "As qualitative researchers, we must educate and re-educate ourselves to practice detailed observation without reading in our own answers, our own biases" (Ely, 1991: 54). As a participant observer I would argue with Ely (1991) that it is not possible to carry out observation without bias. Observation cannot be free from our own values; it cannot be truly objective and untouched by our own judgement. We must be aware of our own subjectivities, even in choosing what to observe we make value judgements through our selections.

Prolonged Engagement

A feature of naturalistic inquiry is prolonged engagement, i.e. spending sufficient time carrying out observation in the field to understand the culture or social setting. This is different to longitudinal research which involves repeated observations comparing variables over a long period of time. Guba and Lincoln (1989), qualitative researchers, say that prolonged engagement and persistent observations are the most helpful techniques for constructing a view of the context in its natural state. Participant observation demands "...sufficient involvement at the site to overcome the effects of misinformation ... to uncover constructions, and to facilitate immersing oneself in and understanding the context's culture'" (Ely, 1991: 51). I stayed in the field, collecting data in multiple ways, until a sufficient body of research had been gathered to confirm that conclusions were valid (Magana, 2008b), until meanings had emerged (see grounded theory above).

Interviews

With an ethnographic approach to interviewing, Ely tells us that it is important to not just attend to the words spoken by the participants. The interview, like intense observation, involves looking and interacting too.

> *"We are ethnographic observers when we are attending to the cultural context*
> *of the behaviour we are engaging in or observing, and when we are looking for*
> *those mutually understood sets of expectations and explanations that enable us*

to interpret what is occurring and what meanings are probably being attributed by others present"

(Ely, 1991: 45).

Participant observation is often combined with other forms of data collection in order to gather data on how participants account for and understand particular events (Cohen, Manion & Morrison, 2011). In carrying out participant observation in the HOB, short semi-structured interviews were undertaken with participants following on from observations. Interviews were used to expand on the data collected and analysed during observation to build a richer picture of participants' thoughts and ideas. I attempted to see the world from participants' perspectives and document events in their words (even though it is acknowledged that this is not truly possible). The interviews had no formal structure; however I led them and directed their course. "The tasks of an ethnographic interviewer include providing focus, observing, giving direction, being sensitive to clues given by the participants, and generally being as involved as possible" (Ely, 1991: 59). Interview structures can be shaped through the process of interviewing. A characteristic of social constructionism is that researchers do not start with a theory, but develop one through the process of open-ended research. This is the same with questions posed to participants during interviews, "the more open-ended the questioning, the better, as the researcher listens carefully to what people say or do in their life setting" (Creswell, 2007: 21). Open-ended responses then inform further inquiry.

Due to the short length of time the interviews with families in the HOB took, it could be argued that they might not actually be categorised as interviews at all, but perhaps seen as "casual everyday conversations" (Qu & Dumay, 2011). Interviews however, exist in a variety of forms. "Interviewing covers a wide range of practices [including] open-ended, apparently unstructured, anthropological interviews that might be seen almost as friendly conversations" (Seidman, 2013: 14). I would argue that, however short the interactions I had with families in the context of participant observation, they can be viewed as interviews as the conversations were not carried out on an equal footing but I was in charge of the questioning of a voluntary interviewee (Qu & Dumay, 2013).

The length of the interviews was in proportion to the families' visits to the HOB which in themselves were not lengthy visits. Generally visits tended to last between ten minutes to half an hour (see tracking and timing below). "The unstructured interview process

shapes to the individual situation and context, …most of the data gathered through participant observation is gleaned from informal conversations in the field" (Qu & Dumay, 2013). Interviews that are built on and emerge from observations where questions emerge in context, and the interviewer is able to match questions to individual circumstances are strengths of informal conversational interviews (Cohen, Manion & Morrison, 2011).

Tracking and Timing

"Tracking visitors refers more specifically to recording, in a detailed manner, not only where visitors go but also what visitors do while inside an exhibition. It can provide quantitative data in relation to stay times as well as other behavioural data" (Yalowitz & Bronnenkant, 2009). It is used to record different variables such as route in a gallery and time spent at an exhibit. I carried out tracking and timing in the Horniman, however did not typically track visitor paths around the gallery (Diamond, Luke & Uttal, 2009), but used it to observe how the Discovery Boxes (see chapter five) were being used. I used Yalowitz and Bronnenkant's (2009), visitor studies researchers, notion of *other behaviours* presented below.

"Other Behaviours—These often describe what people did, above and beyond the stops and include:

- *Visitor path (the route a visitor takes through the space)*
- *Social interactions with others in group*
- *Social interactions with other visitors*
- *Social interactions with docents or volunteers*
- *Using hands-on/interactive elements"*

(Yalowitz and Bronnenkant, 2009)

My findings from tracking and timing were helpful in terms of gaining information on how long visitors spent with each box yet gave me limited information as to the quality of visitor engagement with the boxes and each other. I therefore decided to shift my focus from looking at how the visitors behaved with the Discovery boxes to looking at the strategies visitor used to make meaning from their engagement with the objects inside. I discuss the Discovery boxes, in the context of Discovery in the next chapter.

Qualitative Data Analysis

Qualitative data analysis involves accounting for, explaining and making sense of the data from the perspective of the participants. "Qualitative data analysis is distinguished by its merging of analysis and interpretation and often by the merging of data collection with data analysis in an iterative, back and forth process" (Cohen, Manion, Morrison, 2011: 537). I began to analyse data as soon as I entered the field, a process intimately connected to my literature review, (see chapter two, part two); A Minds on Approach to Family learning, Welcome Them as Equals, A Visit to Earth: Art of a Changing World Exhibition at the Royal Academy 2010). Theory was used to make sense of data and vice versa, continually refining the focus of the research. Data was organised and explained individual by individual and key issues were amalgamated across respondents (Cohen, Manion, Morrison, 2011).

A major feature of qualitative research is that analysis often begins early on in the data collection process to enable theory generation (Cohen, Manion, Morrison, 2011). Researchers are advised to "start writing and analysing early and frequently (i.e. as soon as the first data have been collected), …rather than leave all the writing and analysis until the data collection is over, as this enables progressive focusing and selection of key issues for further investigation to be conducted. …writing is thinking" (Cohen, Manion, Morrison, 2011: 539). The purpose of qualitative data analysis in this study has been to explain (key features), to interpret and generate theories. As salient features emerged, they were used to direct the course of subsequent focusing and data collection (Cohen, Manion, Morrison, 2011).

A criticism of qualitative data analysis is that selecting and analysing data involves personal bias of the researcher (Cohen, Manion, Morrison, 2011). However, this lack of objectivity can be "attenuated by reflexivity on the part of the researcher" (Cohen, Manion, Morrison, 2011: 540). Interpretation becomes data through the process of progressive focusing. "Fact and interpretation are inseparable, and the selection of which events and data to include are, to some extent, under the control of the researcher. Indeed, as participants (including the researcher), act on interpretations, interpretations may, themselves become facts [data] in the situation" (Cohen, Manion, Morrison, 2011: 540). Cohen, Manion and Morrison (2011) suggest that whilst data selection inevitably involves personal choice, specifying theoretical assumptions and research methods provides the rationale for selection.

Data collected from observations, interviews (with museum staff and through participant observation with families) and Horniman documents was categorised as

part of the process of explanation and interpretation. From participant observation with families, two principal overarching categories emerged; the role of the staff (Explainers) and museum, and the role of the visitor (adults and children) in the facilitation of the family learning experience. Within these overarching categories, five core units of analysis were identified from short interviews with families in the HOB:

1. How visitors used information folders in the Discovery boxes

2. Information (knowledge) from sources other than information folders

3. Lack/absence of information

4. Visitor perception of information folders and interpretative information in the HOB

5. Anomalies

As data was coded into manageable chunks within these core units of analysis, further units of analysis emerged within each of the five categories, making connections between the data from interviews and participant observation, helping to conceptualise emerging themes within the data. Data was organised into the following categories:

1. Use of information folders in the Discovery boxes:

   o By parents

   o By children

   o Behaviour used to interact with information folders

   o To discover theme of box

2. Information (knowledge) from sources other than information folders:

   o Explainer role

   o Introductory talk

   o Information shared during the session

   o Shared/offered by parents

   o After being questioned

- o Without being prompted

- o Information shared/offered by children

- o Information sourced from objects in the Discovery boxes/HOB

- o Information sourced from the rest of the museum

3. Lack/absence of information:

   - o Not understanding the theme of the Discovery box

   - o Not understanding the (function/origin) of objects in HOB

4. Visitor perception of information folders and interpretative information in the HOB:

   - o Expectations of content

   - o Expectations of who the information folder is aimed at

   - o Reasons for not using the information folders

   - o Parents expectations of children's learning behaviours and understanding

   - o Using the information folders in the context of an object handling session

5. Anomalies:

   - o Visitor use of the information folders

Data from observations of the Object Handling Trolley was also subject to the two overarching categories of staff and visitor behaviour in the learning experience. However, it was also coded according to other emerging units of analysis: observed behaviour on the Object Handling Trolley, listed below:

- Touch

- Dialogue

- Questions from visitors, direct questions such as, 'what is that? Where is it from?' etc

- Open-ended questions from volunteers, facilitating engagement and investigation

- Prompting, by both volunteers and visitors (amongst themselves)

- Identifying objects

- Recognition

- Emotional responses; wonderment, fear, affection, astonishment

- Curiosity

- Knowledge connections (building upon prior knowledge)

- Personal connections (personal stories)

- Volunteers inviting visitors to engage

- Further exploration of the museum by visitors

Data from staff interviews and Horniman documents were coded by the further units of analysis listed above.

From the data analysis key features emerged serving to generate four concepts of museum interpretation in the HOB, and the role they play in the family learning experience, discussed in chapter four:

1. Text and labelling

2. Using questions to facilitate learning

3. Using Explainers to provide museum interpretation

4. Using labels and text to provide information

Reliability

Due to the nature of the in-depth study into one or a few (multiple) cases, the findings of the research may not be transferrable across the board but only relate to the case(s) studied. It is therefore preferable to aim for reliability rather than generalisability. I have sought to produce valid findings with sufficient detail for others working in similar circumstances; to extend the boundaries of existing knowledge, to inform others in a comparable context and perhaps become the basis of further research.

With the researcher choosing what data to include in qualitative data analysis, Cohen, Manion, Morrison (2011) tell us that there are issues with reliability. There is no neutral way of presenting and analysing data, "the construction of the researcher's account is,

in principle, no different from other varieties of account" (Cohen, Manion, Morrison, 2011: 54). In qualitative research reliability can be regarded as a fit between what researchers record as data and what actually occurs in the natural setting that is being researched (Cohen, Manion, Morrison, 2011). With the idea of data selected by a researcher corresponding to a natural setting there is an assumption that it is possible to describe the world as it is, that a reality exists that is able to be discovered. There is an assumption "that it is possible to distinguish between that world on the one hand, and the knowledge that arises from its investigation on the other. The implication is that we pose questions of the world, then gather relevant data in an appropriately rigorous manner, then we will end with good knowledge of the social" (Law & Urry, 2002: 3).

I would argue that it is not as simple as this and it is not possible to discover ultimate truth, mainly for two reasons; the situation being researched cannot be fully known and social science research methods serve to enact the situation. John Law, (Lancaster University, UK), puts forward that "realities are not fixed in concrete, it is not simply a matter of reporting them" (2006: 9). He goes so far to say that "however much we want to be comprehensive, to know something fully, to document or to represent it, we *will* fail" (Law, 2006: 9). This will not be due to inadequate research methods, but because in making the world present we also make absences, we leave things out. It is impossible to know something fully (law, 2006). Absence can be brought about through the data we select, we cannot make everything present.

The assumption that reality is truly knowable is challenged by Law and Urry's (2002) proposition that social inquiry and the methods used help to enact the social world. Social inquiry is performative, it has an effect on the situation being researched by bringing into being that which is being researched, "it produces realities" (Law & Urry, 2002: 4). Consequently Law and Urry suggest that we cannot know reality as it "is a relational effect. It is produced and stabilised in interaction that is simultaneously material and social" (2002: 5). Research methods produce the realities they describe. Werner Heisenberg, a German theoretical physicist, said that "what we observe is not nature itself, but nature exposed to our method of questioning" (1958: 57). Reality exists in relation to our thoughts and ideas. This is not to do with perspective and how we each see the world, different realities are produced through social inquiry. Law and Urry (2002) argue that social science is a system of interference and researchers must be honest about which realities they want to make more or less real and that the truth cannot be properly discovered, concluding that there are perhaps no reliable facts.

Law (2006) suggests that social science is messy, unknowable, and "that contemporary social science methods are hopelessly bad at knowing mess" (2006: 2). Social science methods are informed by realist assumptions (see chapter two) where it is possible to represent the world as a single reality and definite. But Law argues that the world is "vague, diffuse, uncertain, elusive and/or undecided" (2006: 6) and it needs to be acknowledged that in social inquiry we make a world that is not singular or definite. From this position I cannot lay claim to my research being generalisable.

In this research the data analysis has been rooted in museum learning practice and theory. As such the idea of "construct validity" (Cohen, Manion, Morrison, 2011: 295) is used as a means of establishing credibility. The idea of construct validity is carried out "through employing accepted definitions and constructions of concepts and terms" (Cohen, Manion, Morrison, 2011: 295). In this research close links have been made to museum learning terms and concepts, using them to further understand family learning situations in the case studies presented. This has been done through conceptualising; building a picture in relation to theory rather than creating a model (of new theory).

Looking at validity in terms of meaning making, learning in the museum, Hein tells us that constructivist learning (the theory in which this research is situated) "requires that the conclusions reached by the learner are not validated by whether or not they conform to some external standard of truth, but whether they 'make sense' within the constructed reality of the learner" (1998: 34). It could be said that this idea of having no external absolutes, of not being able to validate knowledge, accepting that something is true because someone says it is true is taking things to extremes. This is described as radical constructivism (Hein, 1998), which is problematic, particularly for a family learning group, as there would be no way of reaching agreement in a social group. However as a researcher, it is important to acknowledge that participants' perspectives, how they see the world, may be different both to the researcher and to each other. Findings are not validated by matching them to a corresponding external truth. With both meaning making and research, it is important that findings and ideas make sense by representing the phenomenon of family learning from the perspective of the participants. With construct validity the categories researchers use should reflect the way participants experience and see the research setting, as such the researchers attempts to present the situation, as much as possible, through the eyes of the participants (Cohen, Manion, Morrison, 2011). Therefore I am more concerned with internal validity, an explanation of events evidenced by data, rather than external validity where results are generalisable.

Ethical Concerns

This research has been carried out in line with the British Educational Research Association's (BERA) Ethical Guidelines for Educational Research (2011) and the core principles for good practice for social science research as laid out by the Economic and Social Research Council (ESRC) (2016). Research participants were families (adults and children) and museum staff. An ethics form was submitted in September 2011.

Permission from the Horniman was obtained to carry out the research in Discovery, and signs were put up for the public (as was the Horniman's wish) to inform visitors that they may be observed and for what purpose, offering to answer any questions. The case study at the NMM (see chapter six) was part of a wider NMM evaluation project for which the NMM produced consent forms.

Working with Family Participants

By their very nature families included adult and child participants. Voluntary informed consent was always obtained and participants were appropriately informed. Care was taken to explain the nature of the research as fully as I could to both child and adult participants, making sure that they understood the nature of the study and what it would involve before they agreed to take part. In interviewing families informed consent was obtained from both children and adults, with the understanding "that children who are capable of forming their own view should be granted the right to express their views freely in all matters affecting them, commensurate with their age and maturity" (BERA, 2011). All participants were given the opportunity to decline to be involved, taking care to let them know that there was no obligation. It was explained to participants why their participation would be useful and how the results would be used to further understand effective family learning, and who was going to see the results. Families were interviewed as a group and children were not spoken to without their parents present.

There were no perceived risks to family research participants as the data collected was not sensitive. However, all data was treated with confidentiality recognising participants' right to privacy and care was taken to anonymise participants. Participants were kept anonymous by identifying them by their position in the family (i.e. parent, grandparent, son, daughter, friend, adult) and in the case of children, their ages and gender.

According to BERA participants anonymity can be waived if "they or their guardians or responsible other, specifically and willingly waive that right" (2011). In the case of my own family I waived that right seeing no risk in using their names. As with other participants I clearly explained my research to my family and gained their permission to cite our conversations. Despite giving my children choice with activities once at a museum, sometimes they did not have the choice to come in the first instance, as they were too young to be left at home alone. In a family of six, if one child does not want to come out for the day a compromise has to be reached, and often they have to come. Perhaps this could be seen to be coercion? The suggestion of coercion was avoided by prioritising our usual motivations for family visits, authentic experience (Linko, 2003) and purposive leisure (Shaw & Dawson, 2010) (see chapter one). I did not prioritise my research for all our visits to museums, however some visits provided significant instances of family learning presenting particularly relevant data. This aligns with the idea of opportunistic sampling (see above). It is my opinion that from an emic, autoethnographic perspective it is acceptable to use my own family for two reasons. First because of the significance of my own family in the inception and development of this research project, to lose the input of times with my family would risk not being able to base much of my thinking in real-life situations. Second I am not seeking to produce generalisable results but to represent the phenomena of family learning in several situations.

Some data from Discovery did not come from discrete times of research but from times of reflection during my time working there (2012-2015). In my role as an Explainer (see chapter four) I could not help but study the family learning experience in which I played a part; I could be said to have a *dual role* (The Research Ethics Guidebook). Dual role research is usually associated with *action research* (Cohen, Manion & Morrison, 2011), a form of practitioner based research. "Researchers have sometimes taken on social roles, in order to fit into the world they are researching. Often this approach is used when behaviours are secretive, or when groups of people or their activities are stigmatised in some way. At other times researchers may wish to study organisations, or other groups of which they are already a part - such as their workplace" (The Research Ethics Guidebook, online). The associated ethical risks of having a dual role are usually to do with power relations and in carrying out covert observation. Whilst cases can be made for covert observation (Cohen, Manion & Morrison, 2011), my research observation whilst working as an Explainer was part of my general professional reflexive practice. "Reflexivity is an integral element and epistemological

basis of (emancipatory) action research because it takes as its basis the view of the construction of knowledge in which: (a) data are authentic and reflect the experiences of all participants; (b) democratic relations exist between all participants in the research; the researchers views do not hold precedence over the views of the participants" (Cohen, Manion & Morrison, 2011: 359). For both researching and working in Discovery participant observation was used to gain an insight into visitors' understanding of their learning experience. BERA (2011) state that researchers are to employ methods that are fit for purpose for the research they undertake. If, as occasionally happened when working as an Explainer, I deemed an observation or conversation significant to include in my field notes, I always obtained consent from the family visitors clearly explaining the research project (as above) outlining exactly what I would like to document, I appreciate that this informed consent was after the event. No one in this study refused their consent.

Museum Staff Participants

In the Horniman I considered the extent to which my research might impact my colleagues who were part of the context rather than the subject of my research. Informed consent was obtained (see below) and care was taken to explain that I was observing the family learning experience rather than their role as facilitators. I considered the impact of my dual role upon them and the possible negative consequences, but did not perceived there to be any risk as I was not in any position of authority over them which *The Research Ethics Guidebook* (online) puts forward as a primary cause for concern. The Horniman's Community Learning officer was interviewed and recorded having obtained informed consent. I set out my intention of not portraying her or the Horniman in a bad light and gave her the opportunity to retract data collected during the interview and ensured anonymity.

Concerns

An issue found to be problematic for some family participants was one of taking too much time out of their family visit. Whilst all families agreed to be interviewed and parents appeared to be very willing to talk, for some children this took too long. This was generally due to parents' interest in the study and wanting to continue talking whilst their children did not. It was always made clear to participants that they could end the interview when they wished. Researchers should be at pains to ensure that participants will experience no detrimental effects (BERA, 2011). I was aware that for

some children, interviews were taking time out of their planned family visit which they did not want. Some children asked their parents if they (all) could move on, at this point interviewing ceased.

An aspect of the interview that parents were not happy with was spending time completing informed consent forms. The time taken and having to complete them at the expense of spending time with their family appeared to be problematic. Therefore, to avoid detriment to participants, the process of seeking informed consent was changed to a verbal agreement, this was done with my supervisor's agreement.

Informed Consent

Cohen, Manion and Morrison's guidelines for reasonably informed consent were adopted which involve:

- *A fair explanation of the procedures to be followed and their purposes.*

- *A description of the benefits reasonably to be expected.*

- *An offer to answer any enquiries concerning the procedures.*

- *An instruction that the person is free to withdraw their consent and to discontinue participation in the project* at any time without prejudice to the participant.

(2011, 78)

Qualitative interpretive research into family learning within the museum and gallery sector has been undertaken in order to better understand the distinctiveness of family learning. The purpose of this project has been to understand family experiences of learning in museums and galleries. As such the research question is: How does museum interpretation support family learning?

Chapter 4:

An Exploration of Family Learning in the Handling Collections at the Horniman Museum

This chapter focuses on one aspect of museum learning; families' use of museum interpretation. I explore how the Horniman Museum provides information for the family visitor, the ethos behind it, how it works and whether it is effective. That is, I look at what forms museum interpretation takes and what in form learning might take place.

This chapter presents the primary case study for this research undertaken at the Horniman Museum and gardens, London (Horniman) in the Discovery for All (Discovery) session in the Hands on Base (HOB), looking at the Object Handling Trolley in the Natural History gallery. This is where I have developed ideas, observed them in practice and begun to conceptualise family learning in this context; see below for a description of the Discovery in the HOB and the Object Handling Trolley. First I volunteered at the Horniman in the learning department as part of the Engage Volunteer Programme (appendix 7). In this role I worked in the Natural History gallery, primarily with the Object Handling Trolley providing opportunities for visitors to handle objects. I then worked as an Explainer for the Discovery session in the HOB (see chapter one). The HOB contains the Horniman's handling collection. The aim of both roles was to help visitors engage with handling collections. The role of the Explainer includes: "4.1 Encourages and facilitates visitors to explore the handling collection" (The Role of the Explainer, appendix 33). Data was collected using participant observation, observations and interviews (see chapter three). I gathered data in the Horniman as a researcher (being present solely for research purposes), whilst working as an Explainer and when volunteering with the Object Handling Trolley. I also draw on policy documents given to me during my role as an Explainer.

This study examines experiences of object handling in the Horniman in the context of how information is presented alongside objects to explore family learning, in particular looking at the role museum interpretation (text, labels and information) plays in family learning.

Data Collection

This chapter presents and analyses the findings of the data collected through interviews and observations of family museum visitors, interviews with museum staff,

and analysis of textual information provided by the Horniman in the forms of policy documents, training aides, website copy and wall text offered to the visitors. Nine post-observation interviews were carried out with families in the HOB during Discovery sessions. In addition I carried out a number of observations whilst working there as an Explainer, taking advantage of the times I was working there, able to observe and take note of events that were pertinent to this research (opportunistic sampling, Creswell, 2007; Patton, 1990). Interviews were carried out with the Community Learning Officer at the time and one Explainer. Descriptive data from each of the sources above are used to examine the Horniman's approach to interpretation, of providing information about the handling collection in the HOB and on the Object handling Trolley in the Natural History Galleries, and what form learning takes in these settings.

1. Observations and Interviews: Families

Observations and interviews took the form of participant observation. The interviews with nine families in Discovery followed times of observation. Families were asked if they could be observed as they entered the HOB(see chapter three). Their behaviour and dialogue in the gallery was recorded via field note taking. At times it was difficult to hear everything that was being said due to the noise in the gallery and I did not want to get so near to them as to be obtrusive, every effort was made to limit the effect my presence as researcher, on the families (see chapter three). Despite being an observer, in one instance I became part of one family group's experience as they included me in the exploration of the China Discovery box. (See below for a description of the Discovery boxes). The mother said that she was Chinese and the father appeared to be white British; they had both lived in China. They initiated a conversation with me, sharing what they knew about each object and its place in Chinese life. Through listening to them one learnt information about Chinese life that I could not possibly have learnt from just looking at and handling the objects themselves, about the prayer crescents and money envelopes for example.

After the observations families were interviewed. These interviews lasted a few minutes. A case is made for framing these as interviews in the context of participant observation, despite being short length, in chapter three. Interviews focused mainly on the adults but included the child(ren) in the conversation if they were willing. The interviews were semi-structured (see chapter three), with questions based on observations of their behaviour.

Working in Discovery I had the chance to carry out opportunistic sampling (Creswell, 2007; Patton, 1990), observing and recording families experience in the HOB as germane events occurred.

2. Interviews: Museum Staff

One Explainer was interviewed about working in Discovery discussing the impact of the Horniman's approach to interpretation on how she worked with visitors in the HOB and her view of how this approach fared with visitors themselves. The Community Learning Officer was interviewed specifically to discuss the Horniman's approach to interpretation in the HOB. Both of these were semi-structured interviews, using pre-determined prompts to guide the conversation.

3. Documents

Documents in the form of policy documents, training aides (materials), website copy, wall text and museum interpretation in the HOB with a particular focus on the Discovery session were examined. Some of this documentation I have been party to as a member of staff, being given documents as part of my training as an Explainer. Other text and museum interpretation is publicly available, produced for visitors, such as copy on the Horniman's website and wall text in the HOB.

The findings are discussed below presenting data from each of the three categories above to explore family leaning in the Horniman, looking at how museum interpretation supports family learning.

Discovery for All (Discovery)

Discovery is listed as a family event, as well an event for children, on the Horniman's website, described below in table four.

Table 4: Description of Discovery on the Horniman's website.

About this event

How sharp are shark's teeth? How do you wear a sari? Have you ever played a West African thumb piano, balanced a gourd on your head or stroked a badger?

Drop in to explore our Hands On Base and the thousands of real objects from around the world that it holds. Our team of Explainers will help you discover these fascinating objects and make connections between them. This session is for everyone and you don't need to be a child or visiting with children to enjoy it – come and find out for yourself.

Photo 5: Exploring the Toys Discovery Box in the Hands on Base, Horniman Museum.

Discovery is a drop-in session in the HOB where visitors handle the available objects at will. The HOB contains over 3,700 objects, displayed floor to ceiling, many in cases, a number hanging from the ceiling, some on shelves and various objects grouped in accessible plastic boxes, *Discovery Boxes*. Almost all of the objects are available to be handled, larger objects out of reach cannot be handled.

Objects in the HOB come from the Horniman's three collections: anthropology, natural history and musical instruments. Discovery is run by three members of staff called *Explainers*. Explainers make themselves available to answer visitor questions and

encourage visitors to engage with the objects. During the general introduction at the beginning of the session Explainers are expected to "6.1 Encourage participation; include participants in demonstration of objects" (Supervision Checklist-The Role of the Explainer, appendix 33). Explainers are required to "6.2 Ask questions of the visitor and validate their input" (Supervision Checklist-The Role of the Explainer, appendix 33). Interaction with staff can be brief, dependent on visitor numbers and staff motivation. Objects handling is not directed by staff, visitors are encouraged to explore the artefacts for themselves. Explainers are expected to, "3.1 Model good object handling skills, and 3.2 Communicate these skills ensuring objects are handled properly by visitors" (Supervision Checklist-The Role of the Explainer, appendix 33). Visitors decide for themselves what they would like to look at, touch, play with or dress up in and for how long.

The Hands on Base (HOB)

It is important to say that the HOB is used for many different activities. As well as Discovery on Sundays and occasionally during the summer holidays. It is also used for school sessions, hands-on family workshops and story-telling. Below is a description of the HOB from the Horniman's website. Visitors are encouraged to explore, investigate and find things out.

Description of the Hands on Base on the Horniman's website

In our Hands on Base Gallery, you can explore thousands of fascinating objects from our Handling Collection through touching, wearing and discovering them for yourself!

Much of our Handling Collection contains real objects and not reproductions, providing a special opportunity to investigate up close, collections similar to those in the other Horniman Galleries.

Whether you're interested in Mexican masks, instruments from India, endangered animals or simply want to be surprised, you'll find inspiration in the Hands on Base. You might find treasures that spark memories of your past experiences.

See our What's On page to find out when you can explore the Hands on Base on the weekends and during school holidays. During the week our Hands on Base gallery is booked for School and Community Group sessions.

Two wall panels at the entrance explain the gallery, see photo six and tables five and six below.

Photo 6: Two wall panels at the entrance to the Hands on Base, Horniman Museum.
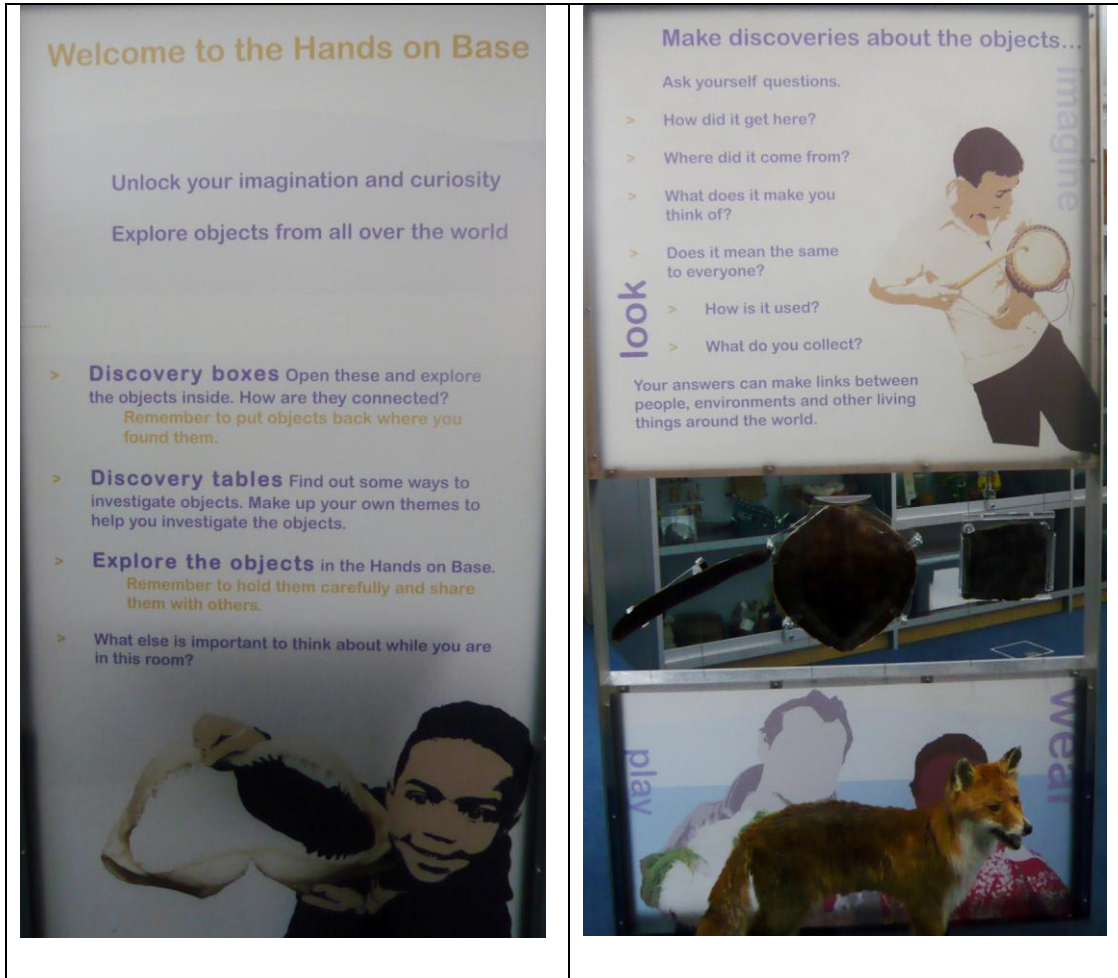
Table 5: Board 1

Welcome to the Hands on Base
Unlock your imagination and curiosity
Explore objects from all over the world
➢ **Discovery boxes** Open these and explore the objects inside. How are they connected?
Remember to put objects back where you found them.
➢ **Discovery tables** Find out some ways to investigate objects. Make up your own themes to help you investigate the objects.
➢ **Explore the objects** in the Hands on base. Remember to hold them carefully and share them with others.
➢ What else is important to think about while you are in this room?

Table 6: Board 2

Make discoveries about the objects…
Ask yourself questions.
➢ How did it get here?
➢ Where did it come from?
➢ What does it make you think of?
➢ Does it mean the same to everyone?
➢ How is it used?
➢ What do you collect?
Your answers can make links between people, environments and other living things around the world.
LOOK PLAY WEAR IMAGINE

Objects in the HOB are arranged to offer two levels of object handling needing different amounts of staff support. The most accessible, not requiring any staff support, are in twenty-four Discovery Boxes at floor level. These are large plastic boxes which contain objects grouped around themes, some of these objects contain folders, see table seven below. Explainers encourage visitors to explore the boxes, work out the themes and *make connections between the objects* (Table 4). Another level of object handling is with the objects in display cabinets which requires a member of staff to be present. Staff can get one object at a time from the cabinets, and must stay with the object to oversee visitor handling. These objects are often more fragile, such as a birds skull for example. To the back of the room there is (low-level) staging, a performance area, around which puppets, costumes and masks are displayed, either in Discovery Boxes, on open shelves and in cabinets.

Table 7: Discovery Boxes (*folder* indicates which boxes have them)

Kathputli String Puppets: *folder*	Mexican masks: *folder*	Musical Instruments	Little Red Riding Hood, pig and wolf puppets: *folder*
Punch and Judy: *folder*	Red	Teeth: *folder*	Shells: *folder*
Structures from the natural World	Rod Puppets from Java: *folder*	The Life of a Gourd: *folder*	Indonesian Masks: *folder*
Trade: *folder*	Useful Plants	Adornment: *folder*	Shoes
Hats	China	Chinese masks: *folder*	Balinese Masks
Chinese Costume	Indian Costume	Toys and Games	Japanese Costume

The contents of each Discovery Box only become apparent when the lid is removed, as each box looks the same and is not labelled. Discovery boxes contain objects relating to a theme, for example the *Teeth* box includes a fossilised mammoth's tooth, a fork, the mechanics of a musical box and a shark's jaw. Approximately half the boxes (at the time of the research) contain a folder offering some interpretive material which primarily make suggestions of things to do and think about, rather than contextual information.

Suggestions include, asking questions about the objects and prompts to look for connected objects in the permanent galleries. Some boxes contain books (both fiction and non-fiction) relating to the content, including the; *China* (the country), *Musical Instruments* and *Life of a Gourd* boxes. Around half the boxes contain no interpretive material or information at all.

Photo 7: Family with the China Discovery Box, Hands on Base, Horniman Museum. (Courtesy of Megan Taylor, 2016)

Learning Ethos of the Hands on Base

On the walls of store room in the HOB, also acting as a cloakroom for Explainers during the Discovery session, are the four statements below outlining the aims of the HOB, reflecting the learning ethos of the Horniman. Three were produced by the Horniman, the fourth is a definition of learning by the Campaign for Learning (appendix 34) (a national charity working towards social inclusion through learning) and Museums, libraries and Archives Council (MLA), (non-departmental public body and registered charity in England with a remit to promote improvement and innovation in the area of museums, libraries and archives, now closed). They outline the ethos of the HOB. I comment on these and the Summary of Hands on Base Aims and Principles document (table 8) later in this chapter. These statements were not made explicit to me when I began my work as an Explainer, I came upon them myself during my course of duty as an Explainer.

Aims of the Hands on Base

- *The **Hands on Base** aims to help children to understand themselves, other people and the world around them, complementing learning in school, the home and elsewhere.*

- *The **Hands on Base** aims to help children to develop their full potential and inspire a love of learning, fostering curiosity, imagination and creativity, new ways of thinking and learning, positive social interaction, self-esteem and motivation.*

- *The **Hands on Base** is a gallery that provides maximum physical, sensory, intellectual, cultural and emotional access to its **unique Education Handling Collection** which serves as an introduction to the Museum's main collections and to ways of relating to those collections.*

- *Learning is a process of active engagement with experience. It is what people do when they want to make sense of the world. It may involve the development or deepening of **skills, knowledge, understanding, awareness, values, ideas** and **feelings**, or an increase in capacity to reflect. Effective learning leads to change, development and the **desire to learn more**.' (Campaign for Learning and MLA)*

These aims are summarised in the document outlined below Summary of HOB Aims and principles (Table 8). This policy document was given to staff starting work there. I received it in June 2012.

Table 8: Summary of Hands on Base Aims and principles.

Summary of HOB Aims and Principles
The HOB holds over 3000 designated Education Handling Collection (H.C) objects that mirror the diversity of the museum's accessioned and displayed collections across Natural History, Musical Instruments and Anthropology.   *In the HOB, however, these collections are displayed side by side, thematically juxtaposed or in some cases randomly mixed. This approach aims to stimulate interdisciplinary, multiple, creative and personal interpretations and connections between objects. Text and labelling interpretation is also deliberately light to avoid setting one or limited meanings and allow facilitated adaptations to appeal to a broad*

range of learning styles and audiences.

The HOB aims to act as an intellectual and emotional gateway to the rest of the Museum and through self-led and facilitated activities, provide a toolkit and vocabulary for how to 'discover' objects throughout the Museum, Gardens and Nature Trail.

Self led and facilitated sessions introduce Schools, families and general visitors to objects in the HOB through:

> *1. Handling and interaction*
>
> *2. Activities*
>
> *3. Question and answer*
>
> *4. Secondary research (via progression activities or the forthcoming Hands-Online website)*

Visitors can follow connections we have made between objects in themed Discovery boxes (with associated activities) entitled 'Teeth', or 'Red', or 'Structures in the Natural World' for example. Alternatively, they can make their own connections between the objects

The Horniman's Learning Policy

When I began working at the Horniman in 2012, I was given a copy of the Horniman's Learning Policy 2010 (Draft) (appendix 35). This was the policy in place when I left the role in 2015. The policy contains 8 learning principles (table 9).

Table 9: Learning principles from the Horniman's learning policy, 2010 (draft).

Learning Principles

These principles inform learning provision across the museum and website.

- Learning opportunities will use our collections to provide **unique** and **stimulating** experiences for the **enjoyment** of all our audiences.

- Learning opportunities will recognise that **people learn in different ways** and **have different strengths and interests**, so multiple ways of **participating** will be offered.

- Learning opportunities will support and empower visitors to make their own **choices** about their learning and ensure **personal experience** is built upon and celebrated.

- A visit to the museum should **inspire** all our audiences about learning and **motivate** them to continue learning and supporting others to **learn beyond the visit**.

- Our learning experiences **will** reflect the **diversity** of cultures locally and globally. They aim to increase **inter-cultural respect and may also challenge** discrimination and racism.

- We will listen to our visitors and also our non-visitors and respond to their feedback. We will **evaluate** the impact of our learning services and always seek ways in which to **improve**.

- We will actively **facilitate self-representation** by all groups within the Horniman's community, both in museum decision-making but also showcased through public activities and events.

- We will strive towards **access for all** regardless of age, sex, social status, ethnic origin or ability and find ways of **removing barriers to participation**.

The Role of the Explainer: Questions

The Horniman aims to "*introduce … visitors to objects in the HOB through "3. Question and answer*" (table 8). Eliciting questions as a means for learning is a primary aim of Discovery. Explainers are given of two lists of questions as part of their training (appendices 36 & 37). First: *The ultimate object questioning sheet* (appendix 36). This list contains generic questions covering different aspects of objects; physical features and materials, production, use, aesthetic value, environmental relevance, history of object and value. The questions are put forward as a means for finding out about objects and answers are not given. Second: *A very comprehensive list of questions for natural history objects...* (appendix 37). These questions with their focus on natural history objects, were grouped in themes; animals, food, habitat, ethics, plants and minerals. Visitors are first asked to decide whether an object came from an animal, plant or mineral, then questions are narrowed down under the specific themes above. Most questions require subject specific knowledge, for example whether an animal has a skeleton or not, whether it is predator or prey, or whether it is extinct or still alive today. Only three answers are provided to a total of thirty-three questions, i.e. vertebrate, invertebrate, exoskeleton.

Explainers are explicitly told that they do not need to know the answers. Visitors are encouraged to reach conclusions, find answers, by using their senses, through making personal judgement, guess work, comparison and using their imagination (appendix 36). The Explainers' role is to "*encourage and facilitate visitors to explore the handling collection*" (Supervision checklist- The Role of the Explainer, appendix 33) primarily through facilitating questions and these question sheets (appendices 36, 37) offer examples of types of questions and how they can be answered.

In terms of information about the handling collection in the HOB provided by the Horniman, there are three (Explainer) folders, primarily for staff, which name most, but not all, of the objects in the cabinets. This information is limited to the name of an objects and its country of origin (if given). Objects are listed according to the cabinet numbers. Visitors may use these folders but they are not promoted or conspicuously displayed. The objects in the HOB are not labelled, either individually or by display case.

Museum Interpretation in the HOB 1: Text and Labelling

The *Light* Approach to Interpretation in the HOB

Here the ethos behind the interpretation in the HOB set out in the Summary of HOB *Aims and Principles* (Table 8) in the context of their *Learning Principles* (Table 9) is discussed. Both sets of principles are common to all sessions held in the HOB, not just Discovery. I was given these policy documents when I started paid work there, June 2012. It is the intention of the Horniman that the HOB appeals "*to a broad range of learning styles and audiences*" (Table 8). As such the Horniman has adopted a "*light*" approach to text and labelling "*to avoid setting one or limited meanings and allow facilitated adaptations*" (Table 8). The intention is to facilitate multiple meanings, and in many ways visitor engagement, with no one way of learning to dominate. The Horniman's deliberate *light* approach to interpretation in the HOB manifests itself in the absence of contextual information; objects are not labelled in the HOB. For information three folders are provided for the Explainers (see above) which can be used to find the name of an object and perhaps its country of origin if it is given. It appears that the Horniman does not to want to convey particular meanings about objects, i.e. one way of understanding them, and therefore possibly limiting visitor engagement. This seems to support a view that museum interpretation in the form of text and labelling has the potential to hinder the visitors thinking for themselves (see chapter two, Storr, 2006).

The Horniman's approach to display of the objects in the HOB is diverse. *Collections are displayed side by side, thematically juxtaposed or in some cases randomly mixed* with the purpose of stimulating *interdisciplinary, multiple, creative and personal interpretations and connections between objects* (Table 8) See chapter two, for more on connections (Adams, Luke and Ancelet, 2010). Embracing both the idea of themes and randomness in their approach to display, the Horniman hopes to stimulate wide-ranging interpretation and connections. This appears to be founded on the thinking that unrestrictive display methods will promote unrestrictive learning. In wanting to stimulate personal interpretations, consequently learning, it could be said here that the experience of the objects in the HOB is prioritised over the provision of information via labels.

The idea of prioritising of experience as a means for interpretation has been discussed in chapter two (Dudley 2012a, 2012b; Serota, 2000), where the expectation is that the ways in art objects are displayed facilitate visitor interpretation rather than the provision of contextual information. Experience is favoured over the provision of historical and

contextual knowledge. The Horniman could be said to be relying on the pedagogy of display (Meszaros, Gibson & Carter, 2011), the idea of objects being organised and presented with the intention of communicating certain messages, believing that objects speak for themselves. The pedagogy of display negates the need for any other methods of interpretation such as labels. "This pedagogy is thought to foster an autonomous viewer, one who is not subject to the influence or weight of the museum's authoritative power" (Meszaros, Gibson & Carter, 2011: 36). Rather than stimulating personal interpretations and connections, I concur with Mezsaros, Gibson and Carter (2011), who suggest that rather than fostering an autonomous viewer, this approach restricts and curtails the public's interpretive possibilities.

 "We figure things out with traditions of meaning making, by making relationships between things, rather than just making things up and honouring personal opinion" (Meszaros, Gibson & Carter, 2011: 48). We bring our past experience of meaning making to the process of personal interpretation. Whilst this fits with the idea of constructivist learning (Hein, 1998), Meszaros, Gibson and Carter (2011) argue for art museums to stop "positing a thin notion of constructivist learning as an excuse for maintaining a pedagogy of display as the sole or even primary interface between art and the public – a pedagogy that repeatedly inscribes a binary relationship between its own authority and the autonomy of the public" (2011: 37). The Horniman appears to be using a pedagogy of display as the primary, if not only, means to *stimulate interdisciplinary, multiple, creative and personal interpretations and connections* (table 8). The idea of constructivist learning can be taken to extremes, where the concept of visitors being able to make whatever meanings they might, and can perhaps get it wrong, can be viewed as a paragon of learner autonomy (Meszaros, 2006). I put forward that museum learning is not dependent on one or the other; not purely on the museum's authority or the visitors' autonomy but somewhere between the two. Mezsaros, Gibson and Carter (2011) call for museum interpretation to be made meaningful to various audiences. In chapter five I put forward the idea of museum interpretation not only providing information about the objects on display but also facilitating the means by which personal interpretation can happen.

From principles outlined in the Horniman's Learning Policy 2010 (Draft) (table 9) we see that:

- *Learning opportunities will recognise that people learn in different ways and have different strengths and interests, so multiple ways of participating will be offered.*

- *Learning opportunities will support and empower visitors to make their own choices about their learning and ensure personal experience is built upon and celebrated.*

The Horniman sets out to offer multiple ways of participating, acknowledging that visitors learn in diverse ways and are motivated by their varying interests. Learning is seen as being rooted in personal experience, driven by personal choice. I suggest though, based on my own observations, that the lack of text and labels in the HOB is limiting learning rather than supporting it. Nina Simon (2010) argues that in creating places where visitors are free to express their own ideas, the museum needs to structure the event by providing scaffolding (Vygotsky, 1978, see chapter two). She uses the example of giving people a blank piece of paper and asking them to draw something, but not tell them what to draw. "Visitors don't want a blank slate for participation" (Simon, 2010: 25). She advocates for structured participatory experiences. She proposes using instructional scaffolding which underpins contemporary learning theory, arguing against the idea of open-ended self-expression as the ideal environment for visitor participation. The Horniman appears to be advocating for open-ended learning in not wanting to set one or limited meanings, but relies on the visitor to make meaning, often with minimal assistance.

Later in this chapter Simon's (2010) ideas about participatory experiences are applied to the idea of scaffolding visitor meaning making through museum interpretation. Participation is often thought of in terms of visitor experience (Falk, 2009), however Simon's (2010) ideas can be applied to meaning making. She writes that the remit of participation is broad and can include [visitor] dialogue, which is determined by the visitors themselves (Falk, 2009). When it comes to labels, visitors are not seen a mere readers but interpreters (Schaffner, 2006). This is not something necessarily seen as participation with the museum, particularly when the dialogue can be confined to the family group and not shared with the museum. Interpretive participation as discussed by (Novak-Leonard and Brown, Wolfbrown, 2011), supports the idea that people add value to objects in museums through either expressing their thoughts and ideas, or through the activity of learning. Interpretation can be seen to be seen as a participatory activity.

Interview with the Community Learning Officer to Discuss the Ethos behind the *Light* Interpretative Approach

The Community Learning Officer, at the time of carrying out this research, said that the HOB was conceived by the Head of Learning in 2003. It was set up by a member of staff who has subsequently left the Horniman and this made for some difficulties in ascertaining where its ethos had originally come from. The set-up of the gallery had involved working with all three of the Horniman's collections; natural history, musical instruments and anthropology to create a handling collection. The Discovery Boxes were put together by members of both the community and schools learning teams.

The Community Learning Officer said that the *light* approach to interpretation in the HOB was intended to be one of not limiting the experience, but of appealing to a broad audience and their learning styles. It was done with the aim of avoiding a situation where visitors are presented with one view of an object which they may accept as the only way of reading and connecting with that object, therefore not making their own connections and creating alternative meanings. This approach aims to give visitors optimal potential to create their own meanings and not limit them to simply accepting the information presented by the museum. This concurs with the *Summary of HOB Aims and Principles* (table 8) discussed above.

She contrasted the HOB with other galleries in the Horniman which do contain interpretative material, labels and text. A unique feature of Discovery is that it is facilitated by Explainers whose role it is to facilitate visitor exploration of the objects. She spoke of the Explainer's role as one of, "*to be there, and rather than having printed out material in the boxes, they're there helping people explore the objects and make connections, so that's a person replacing the need for text and interpretation*" (interview with Community Learning Officer, April 2013). This would imply that an Explainer's role is to provide an interpretive framework for objects in the HOB. I would say that she is suggesting in one sense that the Explainer acts as a label.

However, Explainers are explicitly told that it is not a prerequisite to know about the three thousand plus objects in the HOB but rather facilitate questions. The Community Learning Officer told me that questions can be answered in many different ways. "Some can be answered using your sense, some are personal judgements, some you might need to guess, some are based on what you know about similar objects and some are just up to your imagination" (interview with Community Learning Officer, April 2013). However, it has been my experience that not having sufficient information to be able to answer questions curbs engagement. At times this has been frustrating (see below).

Below I use a Number of Examples to Discuss the Impact of the Limited Amount of Contextual Information in the HOB.

This research is not looking at how *correct* conclusions about museum objects might be reached, but more at how families *are able to reach* meaningful, personal and relevant conclusions at all. The focus is on the process of family learning, rather than outcomes, looking closely at the process of meaning making and at the role museum interpretation plays in the practice of family learning. The idea of museum interpretation is not limited to text and labels but includes other features of the settings where family learning occurs, such as the part Explainer's play at the Horniman and the nature of display.

Example 1:

When visiting with my family, looking at a wooden *flip-flop* style foot ware in the Shoes Discovery box, we wanted to know what country it was from. Using the information available, which in this instance was our existing knowledge and that of the Explainer's, we ascertained that it was from a country in the Far East but no more. At the time our experience with the shoe was frustrated by not knowing something as simple as where it came from, and our enquiries came to a halt. It transpires that in the same Discovery box there is a white sock with a separate big toe to be worn with the flip-flop which we completely missed. Missing the connection, not putting the shoe with the sock, was this our oversight or a failure on the part of the Horniman to structure the experience in a way that ensured we made "*connections between objects*" (Table 8)? Very little support had been provided by the museum and on asking our first question our engagement was cut short, despite the Horniman's intentions to "*stimulate …connections between objects*" (Table 8). Our experience was limited and connections were missed, despite handling the shoe and discussing it.

Example 2:

When working as an Explainer I helped one family engage with a bird skull. We recognised that it was a bird skull, but had no idea as to what bird it was. We were at a loss as to whether it was a sea-bird, native to Britain or perhaps an exotic bird. Therefore the family could not ascertain whether they had they ever seen one live, in the wild, and perhaps make connections to similar birds. They made physical material connections, felt the weight of the skull, felt the contrast between the surfaces of the beak and the skull, saw where the eye sockets were but could not determine any more

about the life of the bird and what type of bird it was. The family asked questions of me and each other that we could not answer and as such connections and meanings were limited. These frustrations were exacerbated by the fact that the thirteen year old boy in this family group was blind. His grandparents had wanted to give him information to supplement touch, but it was not available beyond what we knew already.

Example 3:

Photo 8: Squirrel in the Hands on Base, Horniman Museum.

This is an example of how the most basic of information such as the title of an object, its label, can facilitate meaning making. I believe that without labelling the squirrel in the instance below, meaning making would have been limited, and personal connections would not have been made. In this example, we see that simply naming the object was enough to facilitate meaning making. Working with the same family above, having failed to help the blind boy engage with a talking drum, a rain stick and the bird skull (evidenced by his lack of interest and excitement), I asked him if he would like to *see* a squirrel. I use the word *see* as he spoke of *seeing* objects; I therefore felt that it was appropriate for me to use the word *see*. On introducing the stuffed squirrel, he became very animated and excited, talking about his dog that was forever chasing squirrels in the park but "had never caught one*"* (conversation with teenage boy who is blind, 2013). When he handled the squirrel he described it "like a rat with bushy tail" (conversation with teenage boy who is blind, 2013). He told me that he had "never

seen a squirrel before" (conversation with teenage boy who is blind, 2013). He seemed to be in awe of the experience, spending much more time touching it than he had the other objects mentioned above. Having begun by chatting animatedly about his dog, he became silent and concentrated on handling the squirrel. From his prior experience and understanding, he knew what a squirrel was and through this he made connections with the squirrel in his hands. He spoke of walking his dog in the park and what he knew about squirrels, that they ran away "fast and up trees" (conversation with teenage boy who is blind, 2013). However, what appeared to challenge and amaze him was his idea of what a squirrel *looked like*, up until that moment, he told me he had been "wrong" (conversation with teenage boy who is blind, 2013). He had "always thought that they were the same size as mice" (conversation with teenage boy who is blind, 2013). This was a revelation to him.

This boy had been given one piece of information about the object, its name, its label. Being told that it was a squirrel was enough to facilitate and encourage personal meaning making, enabling him to connect it to his prior knowledge and experience. If he had handled the squirrel without knowing what it was, would he have made these connections, other than the physical sensory ones such as weight, texture etc? In this instance being told what it was provided the support for learning and initiated dialogue. Julia Cassim (2007), researching the skills and needs of blind people in art museums in Japan, puts forward that along with tactile images as a tool for interpretation, "good verbal description is crucial if the [tactile] interpretation is to succeed" (2007: 181). She argues that tactile interpretation, which in her case are raised images of two dimensional artworks, are not enough on their own, verbal description is essential too. Cassim (2007) talks about tactile literacy and puts forward that touch is a visual literacy which develops through practice, and is used, like other senses such as hearing, to make sense of the world. (see chapter two, multisensory learning). This case at the Horniman also illustrates the importance of being given information in a structured way in order to scaffold the experience. Having sight removed from the handling experience in this instance emphasised the importance of labels and information, worded interpretation which serve to "*facilitate adaptations*" (Table 8). As an Explainer I had replaced the need for text but also demonstrated that information, museum interpretation, plays an important role in scaffolding visitor learning.

The HOB's approach to learning is centred on the objects offering a high level of physical engagement and participation. Learning theory emphasises the importance of both children and adults being given the freedom to explore objects in their own way

(Hein 1998). One of the ways in which museums have sought to widen their appeal, and their audiences, is through hands-on activities in the museum with increased access to objects (Pye, 2007). Many families I interviewed experienced frustration with the lack of information in the HOB, with one parent expressing "*but I just want something to tell the children*" (interview with mother, family four, 2012)**.** Parents are prepared to act as interpreters (Riedinger, 2012) but in the HOB, they can only do this within the realm of their own experience.

Museum Interpretation in the HOB 2: Using Questions to Facilitate Learning

Museum interpretation, text and labelling, in the HOB is limited, mainly restricted to large wall panels at the entrance, introducing visitors to the idea of the room (tables 5 & 6, photo 6). The boards present the visitor with these questions:

- *How did it get here?*
- *Where did it come from?*
- *What does it make you think of?*
- *Does it mean the same to everyone?*
- *How is it used?*
- *What do you collect?*

In the HOB these questions rely on personal knowledge (of the visitor or Explainer) for answers. Some need specific knowledge pertaining to individual objects, others are asking for ideas and opinion. However I would argue that opinion and ideas are informed by information, interplay of information and interpretation (Burnham & Kai-Kee, 2011, chapter 2). Unlike Tate (Cutler, 2013, chapter 2), which seems to prioritise visitors being able to ask questions for themselves, the Horniman offers some preset questions.

Questions

The use of questions to facilitate visitor engagement with objects in the HOB is advocated by the training given to Explainers in the form of The Ultimate Object Questioning Sheet (appendix 36) and A Very Comprehensive List of Questions for Natural History Objects (appendix 37). Using as a means of engaging with objects fits with museum learning theory where learning is said to occur through *active*

participation (Black 2005, chapter 3). The Horniman leans heavily on the use of questions as a means to learning in the HOB, discussed below. Explainers are often asked questions by visitors, particularly; *what is it?* and *where is it from?* Generally these can only be answered if they happen to know the answer. Occasionally the *what is it?* question can be answered if the object is named in the Explainer's background folder (discussed above). However the name of an object is not usually sufficient answer to this question. Visitors want to know what the object actually is, i.e. its function or place on the world, as with the *Shabti* discussed later in this in chapter. For example when looking at the *thumb pianos*, popular with visitors, I have very limited information. I do not know their proper name, nor do I know where they come from, beyond saying (vaguely), east Africa. I can see that they are made from gourds, but how are they tuned, when are they played and by who? I am often asked these questions.

The HOB elicits questions but offers little in return in terms of answers. Hein (1998) points out that, explicitly or otherwise, museums always send out educational messages which are not limited to planned learning activities. Every aspect of the museum visit sends out educational messages; from the layout, the atmosphere through to the interpretive material. How the museum is organised communicates a point of view about education, and sometimes "these may be mixed and/or contradictory and visitors may be confused" (Hein, 1998: 14-15). The HOB could be said to be sending out mixed educational messages: a disparity between the high levels of engagement through being able to handle objects and minimal interpretation and information given about them. In my experience as both as visitor and Explainer, the message can be read as *welcome, come in and get close to our objects, have you any questions?* but that is where it can end. This thesis asks whether the Horniman is limiting the learning experience to that of visitors' prior knowledge and deductive abilities with that of the Explainer (if available, not all visitors will speak to an Explainer when attending Discovery, see below).

The emphasis on Explainers to facilitate visitors' exploration of the Hob through the use of questions can be seen to put the Explainer in a similar position to that of visitor; i.e. asking questions as part of the exploration process. Whilst the benefits of using questions as a means to help visitors to engage are clear, a problem arises as to where to find the answers, which I have given examples of throughout this chapter (as both Explainer and visitor). Scott Pattison, a research and evaluation strategist Oregon Museum of Science and Industry, and Lynn Dierking, associate dean for research,

College of Education, Oregon State University, recognise that "staff potentially play a powerful role in mediating learning in museums, fostering personal connections, tailoring content and the depth of experiences for different visitors" (2013: 117) and as such they "need support and professional development to effectively facilitate learning for the diversity of visitors to free-choice and informal learning settings" (2013: 118). Offering example questions to trainee Explainers only addresses one style of learning, which the Horniman say they have explicitly set out not to do (table 8). Other strategies for facilitating family learning using conversation to make meaning, such as modelling and prompting (Riedinger, 2012), are not part of Explainer training.

The HOB intentionally invites questions; good questions that seek to bring about understanding and create personal meaning for visitors as they discover objects, little is done to join in the dialogue and provide answers. The approach does work at some level, visitors often comment that they *love it* and they spend time with the objects, but not much *flow* (see chapter five) takes place. There is little deepening of the learning experience; it can be a series of frustrations or limited learning experiences which soon curtail the motivation to go further beyond dressing up and taking photos. Having experience of handling objects does not necessarily mean that learning has taken place. "Not all experiences are genuinely or equally educative. Experience and education cannot be directly equated to each other" (Dewey, 1938: 25).

Museum Interpretation in the HOB 3: Using Explainers to Provide Museum Interpretation

Interview with an Explainer

The Explainer discussed times of *not knowing* what objects were when working with visitors and the impact it had on the experience. She said that at first it was *weird* to acknowledge to visitors that she did not know enough to answer their questions. However coming to realise that her role was more to facilitate exploration, she spoke of a *suspension of the pressure of knowledge*. "Here [in the HOB] it is all suspended, there is a suspension of this kind of pressure. There should be a suspension of this pressure on the knowledge and more about, ' let's have a look and let's see what it is'" (interview with Explainer, 2013). This revealed how she perceived her role as an Explainer. Discussing questions that visitors had asked her, she said "the first thing they actually ask you, 'so what is that? Or where it comes from?' and you say, 'actually I don't know. I have to find out or I think it from this place. [You say] to the people, 'OK

so we both don't know'. And then maybe you might start a conversation saying, 'OK I think it's probably from that area because of that' and they feel more free to say, 'oh yes, [or] I think…', or they then talk about [the objects] as well because they feel more free because you're not the authority in the field, you're not the one that knows, so we are at the same level and we can find out what is ..." (interview with Explainer, 2013).

Nevertheless, she did express some frustration about times of not knowing. "If you really want to know what it is, you get frustrated if you don't have the way to find out. The problem is that we don't know how to find out the answer for the people when they really want to know the answers" (interview with Explainer, 2013). Not knowing was not a concern. Her problem was not having the means to find out.

The issue here is the lack of information, for both the Explainer and the visitor. Burnham and Kai-Kee (2011) discuss information in gallery teaching. Discussing the idea of educators, working directly with the public, inviting multiple interpretations about artworks, they say that the "museum educator must decide how to use information, …there can never be fixed rules or rigid methods prescribing the appropriate role of information" (2011: 115). They say that information used, should be determined by the visitors paths of inquiry. This supports the methods expected of Explainers in facilitating personal connections, however it does not account for the absence of information. Falk (2009), referring to adults facilitating children's experience, says that there should be sufficient information to support the needs of the children. In Rika Burnham's own experience of leading visitors in Gallery Conversations at the Metropolitan Museum of Art, New York, she discusses listening to "questions, stated or unstated, that would tell me how and when to deploy information in each dialogue as it was unfolding" (Burnham & Kai-Kee, 2011: 122). She talks about the importance of information, of it being vital, and using knowledge strategically and carefully in a shared interpretative process with visitors, "acutely aware of the power of information to constrict or to enlarge the visitors' experience" (Burnham & Kai-Kee, 2011: 122).

Dialogue with Explainers

As well as using questions, I also prompted and made suggestions to visitors, particularly on the Object Handling trolley, such as *look underneath*, etc. It is often not enough to ask questions. Scaffolding in the form of prompts and invitations, for example, can be needed to help visitors explore. Focussing on how museum interpretation can engender family learning, we ask how this can be done without an

Explainer (who is able to react to specific needs in the moment through unstructured conversations (Pattison & Dierking, 2012)) and only through museum interpretation.

Family learning fosters social learning interactions which Riedinger refers to as "Learning Conversations" (2012: 126). Learning conversations can happen when groups (such as families) socially interact and engage with one another to make meaning and sense of content presented in informal learning environments (Riedinger, 2012). On the object handling trolley learning conversations often consisted of visitors sharing what they knew about the objects and their past experiences with them. There were many personal stories relating to the objects, revealing the personal context of learning (Falk and Dierking, 1992).

Examples are shown in the following blog posts:

- Taxidermy Tales: http://artefactsobjects.blogspot.co.uk/2014/07/taxidermy-tales.html
- The Ostrich Egg: http://artefactsobjects.blogspot.co.uk/2014/12/the-ostrich-egg_12.html

I heard about a friend of a visitor in Australia bitten by a snake whilst asleep in bed, "and in Australia you are rushed straight to hospital as most snakes are venomous" (conversation with woman 1 on the Object Handling Trolley, 2012). Another visitor told of rats in their garden as they "live by a river" (conversation with woman 2 on the Object Handling Trolley, 2012). These conversations were learning opportunities for me, arming me with information to share with future visitors. On the trolley, conversations were generally two sided, between volunteers and visitors. However, some volunteers *talked at* visitors, telling them facts and using rhetorical questions, such as, "you know brazil nuts? Well this is how they grow" (Engage volunteer, 2011). In this instance visitors were not invited to explore for themselves, and there was no invitation to take part in dialogue. This is not a criticism of the volunteers in question, merely an observation. I was able to use my previous school teaching experience and my research studies to inform how I spoke with visitors. I used strategies such as invitations to touch, open-ended questions, prompts and left space for visitors to think, share ideas and ask questions. Using volunteers on the Object Handling Trolley allows for all sorts approaches to visitor handling, however a concern would be to verify the information offered, especially when offered as fact. The Horniman's reasoning for the provision of information for volunteers working with the object handling trolley is discussed below.

Some questions visitors ask are plainly unanswerable but nevertheless promote dialogue and further questioning. For example a number of children asked, when looking at the turtle shell, where the turtle body was now, a question that could not be directly answered. Nevertheless we explored the turtle shell together to see how the body may have been joined to it, however I was working on assumptions, as I could not guarantee that I was correct. This fits with what the Community Learning Officer said about using your imagination to answer questions (see above). Whether correct or not, the key thing is to prompt further looking and investigation. Lucy Trench (2013), interpretation editor at the V&A, endorses the idea of admitting uncertainty. "There is no harm in showing the boundaries of our knowledge. To do so dissolves the barrier between the 'expert' and the public, and engages the visitor in the debate that might exist about an object" (Trench, 2013: 22).

Modelling

Falk and Dierking tell us that sociocultural learning happens through modelling, "learning through observation and imitation" (2000: 49). Simon (2010) discusses modelling in terms of visitor participation, visitors modelling behaviour to other visitors, showing each other what to do. This is what happened with the Brazil nut pod as visitors scaffolded others' learning experience imitating my example, discussed below. Features of modelling are drawn from the writing of Nina Simon (2010) below.

Modelling:

- *helps visitors to see and understand*
- *acts as cues*
- *influences behaviour*
- *makes participation more likely*
- *demonstrates what is expected of visitors*

Kelly Riedinger (2012), lecturer in education, University of North Carolina, lists modelling as a strategy for engaging families in learning conversations in informal learning settings. Staff can support "the many communities of learners present at any one time at the museum by modelling effective enquiry strategies" (Falk and Dierking, 2000: 107). Explainers modelled enquiry strategies for learning, often learning more about the objects ourselves, with the emphasis on questioning. Whilst Simon (2010) discusses modelling in terms of influencing (demonstrating) participation, I would like to take the features of modelling (above) and apply them to how the museum communicates (information). These features of modelling could be used to develop

strategies for museum interpretation, text and labelling, where no Explainer is present. As well as presenting information, museum interpretation could help visitors to learn by modelling enquiry strategies; in turn helping them develop learning skills. This is elaborated on in chapter six.

Despite the personal frustration of not knowing the answers to visitor questions, the Horniman clearly communicates that they do not expect Explainers to know all the answers. Therefore in terms of the Explainer's job description, there is no conflict. However, each time I explained I was asked for information about objects, particularly those in the Discovery Boxes. As one mother said to me, "I just want to be able to tell my children about the objects" (interview with mother, family 4, 2012). It could be argued that the lack of interpretation is having the opposite effect of what the Horniman's interpretive approach intends. Their *light* approach may be seen to limit the meanings and connections visitors make.

The Explainer's role is that of facilitation, that of providing a *way in* to the object, which be seen as one of *modelling* learning with objects. Csikszentmihalyi and Robinson (1990) discussing flow, talk of a *way in* to objects. Explainers can provide scaffolding, a *way in* to objects, helping with the *how* of engagement through promoting and asking questions. Scaffolding though, can require information, and as seen in the case of the boy who was blind with the squirrel above, where it was enough to name the object. In the chapter six I look at what makes for a successful *way in* to an object using the ideas of Csikszentmihalyi and Robinson (1990) and Claxton (2006).

Below is a summary of visitor and Explainer behaviour seen when visitors appeared to be actively engaged. The criteria promotes effective meaning making using the idea of modelling. This is a list of what people do, conditions under which leaning happens, where conclusions can be reached.

Table 10: Behaviour during the research to support learning.

Behaviour during the research to support learning	
Touch	Especially the boy who was blind (chapter 4). Said to benefit both blind and sighted people (Spence, 2007).
Dialogue	Initiated by volunteers/Explainers, and also between visitors in the same group. Problem solving (chapter 4). Questions to prompt discussion, the V&A Silver Gallery

	trail (chapter 2).
Visitor questions	Direct questions such as, *What is that? Where's it from?* etc. Visitors with the Puffer fish (chapter 2).
Volunteer/Explainer questions	Facilitating unstructured engagement and investigation, open-ended. Object Handling Trolley and Discovery, Horniman (chapter 4).
Prompts (to explore)	By both volunteers and family members for each other. Object handling Trolley (chapter 4).
Identifying objects	The Brazil nut pod, Horniman (chapter 4). HMS Belfast mannequins modelling crew behaviour (chapter 5).
Recognition	Brazil nut pod, Horniman (chapter 4).
Emotional responses	Wonderment, fear, affection, astonishment. Personal responses to Earth exhibition, RA (chapter 2).
Curiosity	Wanting to find out more, using the audio-guide on HMS Belfast (chapter 5).
Knowledge connections	Connecting to and building upon prior knowledge. The shabti, Horniman (chapter 4).
Personal connections	Personal stories, memories. The boy who is blind connecting the idea of a squirrel to taking his dog to the park (chapter 4).
Invitation to explore, by volunteers/Explainers	Object handling Trolley, HOB, Horniman (chapter 4).
Further exploration of the museum	Directing visitors to the Agouti in the Natural History gallery, Horniman, after looking at the Brazil nut pod (chapter 4). Exploring HMS Belfast with the children's audio-guide (chapter 5).
Feel safe	The need for visitors to feel safe, comfortable and free from fear.

Museum Interpretation in the HOB 4: Using Labels and Text to Provide Information

Providing Information

Comparisons can be made between my time as an Explainer and working as a volunteer on the Object Handling Trolley, particularly with reference to how information is provided for museum staff. This thesis contrasts the two approaches; similar situations offering object handling. The Object Handling Trolley is used in the Natural History gallery and staffed by volunteers. It is small and portable, holding approximately eight objects which are changed every few months. Contained within it, though not on display, are information sheets on each of the handling objects.

The trolley was set up in the Natural History Gallery as part of the Engage Volunteer Programme (appendix 7). This gallery was thought to be the most appropriate place in which to develop a volunteer programme (interview with Community Learning Officer, April 2013) as 1: "the natural history gallery is quite an old gallery and people felt that it was quite inaccessible" and 2: "partly because the people involved in it, their interests lay more in science and natural history" (interview with Community Learning Officer, April 2013). "A handling trolley seemed a good idea because obviously a lot of what's in the Natural History gallery is behind glass. So the idea was a little bit like the HOB, a gateway into the gallery, then people would use the objects on the trolley, then go off and explore connections in the gallery" (interview with Community Learning Officer, April 2013). The trolley, like the HOB, was designed to act as a *gateway,* a launch into the rest of the museum (Adams, Luke & Ancelet, 2010). It was set up by the Head of Learning at the museum with the head of volunteering, a different team to the one that set up the HOB.

Volunteers are trained to use the trolley which includes how to set it up and the process of recording visitor numbers. No specific training is given about the objects themselves, but safe handling is discussed, particularly for objects that pose a health and safety risk to the visitor, such as the stuffed hedgehog, and for delicate objects that could be damaged by mishandling. Having information sheets for each object on the trolley is a different interpretive strategy to that of the HOB. Information was provided for the trolley as it was facilitated by volunteers, who would seemingly not necessarily have any experience in object handling, nor have background knowledge of the natural history objects. "It's an open volunteer programme, it's meant to be for non-experts. Some people wouldn't know how to deal with it if you gave them the objects and didn't

give them the background knowledge… whereas in the Hands-on Base, the freelancers that are working here are people that are experienced in object handling" (interview with Community Learning Officer, April 2013). I used the information sheets to answer visitor questions and showed them to interested visitors who demonstrated a desire to know more. Another reason for producing these sheets, as suggested by the Community Learning Officer, was that they were easier to put together as the trolley only contained eight objects as opposed to the three thousand plus in the HOB.

Drawing conclusions between these two strategies, it appears that the Horniman's decision to provide information or not depends on the perceived skill and training given to the facilitators involved. Explainers are interviewed for their role, establishing their skills, and are then trained. Explainers are expected to facilitate object handling, but not necessarily to have knowledge about the objects. Volunteers however are not recruited because of the skills they bring to role. The Object Handling Trolley was specifically created to be managed by volunteers and to be managed by them. It appears that the volunteer programme has a different idea of how to facilitate visitor engagement with objects than the HOB. Having information is considered necessary to support the volunteers. It could be perhaps the volunteer programme team, who put the trolley together, favour the idea of conveying authoritative knowledge (Wehner and Sear, 2010). Also, as suggested by the Community Learning Officer, researching and providing information for eight objects was a feasible task.

Examples of Visitor Meaning Making on the Object Handling Trolley and Discovery

One object I worked with was a Brazil nut pod, (the pod in which Brazil nuts grow). It is slightly larger than a cricket ball with a solid brown shell, not too dissimilar to a coconut. There is a hole in the top through which individual nuts can just be seen. Despite not being instantly recognisable, this proved to be a good object with which to engage visitors. I often challenged visitors as to what it could be. Very few visitors knew what it was. It was a good object to encourage adult visitors (without children) to interact with objects on the trolley. Generally they did not approach the trolley without being invited, and often commented they thought the trolley was designed for children. Adults with children generally appeared not to need an invitation.

Identifying the Brazil nut pod presented an appropriate challenge for adults and children alike. Csikszentmihalyi and Robinson (1990) discuss the *challenge* of the object (see chapter six). When prompting visitors to look inside the pod, I often saw a

light-bulb moment of realisation when they recognised the Brazil nuts. Only one visitor recognised it, and she used to pick them up off the ground in Brazil when she was a child. She had prior knowledge and experience of the object. Identifying the Brazil nut pod often provided the right balance between challenge (Csikszentmihalyi and Robinson, 1990, chapter six) and skill (in terms of visitors' prior knowledge). However it usually took staff prompts to explore the object as the *way in* (entry points; chapter six, Csikszentmihalyi and Robinson, 1990) to the pod. Volunteers scaffolded that experience by inviting visitors to explore in the first instance, then prompting them to look inside. There were a number of children who did not know what a Brazil nut was. Without prior knowledge of Brazil nuts, there was no moment of recognition, no connecting of information. Having worked out what the Brazil nut pod was for themselves, visitors often went on to show it to someone else in their group, encouraging others to discover it in the same way.

An Agouti is the only animal that is capable of opening the Brazil nut pod, and there is one in the Natural History gallery. Making the connection between the pod on the trolley and the Agouti in the gallery, I often pointed people in the direction of the Agouti after they had seen the Brazil nut pod, encouraging visitors to make this connection. I had not been asked to do this by the Horniman; I acted on my own initiative. As a volunteer, and likewise an Explainer, I became the means through which information is transferred to visitors, modelling and making connections.

From the above observations, we see that information is used to support visitor engagement, serving to scaffold the learning experience. Scaffolding is discussed in chapter two, (Vygotsky, 1978). Available information about part of an object, helped to identify the object as a whole, as in recognising Brazil nuts to be able to identify the Brazil not pod. Prior knowledge can help visitors put new learning into context and scaffold the learning experience for themselves. The visitors who did not know what a Brazil nut was, struggled to understand what the Brazil nut pod was.

Discovery can hold up to fifty or so visitors and is managed by three Explainers, one of whom is always on the door to welcome visitors. Explainers do not have time to work with all visitors, therefore the majority of visitors facilitate their own experience and manage their own interpretation. In this free-choice learning environment, family learning is therefore primarily dependent on their prior knowledge rather than on information provided by the museum.

Three families interviewed, either discussed or alluded to using their prior knowledge, discussing things they knew already with their children. The mother in family four when talking about the objects in the Discovery Boxes with her son said "most of them I knew what they were. So I could tell him what they were or I could hazard a guess at what they were" (interview with mother, family four, 2012), she was using what she knew and made informed guesses when she needed to.

The father in family two said, when talking about objects in the Trade Box that he did not recognise, "we try and talk about them anyway, so the bits I know about where coffee comes and things, we just use that" (interview with father, family two, 2012). However he also said that he thought that it was wrong to use what he knew, rather than what he assumed the museum knew, which he thought would be in the Discovery box folder. This could imply that he perceived the museum as a site of intellectual authority, even over his own ideas and understanding. However he did not choose to access the museum information.

Not Knowing

Most revealing about the learning experience was meeting visitors who spoke of their ignorance. As mentioned above, adults without children in their party often needed encouragement to engage with objects on the trolley. On one occasion I invited two women (seniors) over to look at the trolley, they tentatively approached and one of them said to me, "I don't want to show my ignorance" (conversation with woman 3, 2011). She appeared to think that through engaging with the trolley and discussing the objects, she would appear ignorant. I reassured her that the point of the trolley was to explore the objects first hand and no prerequisite knowledge was needed. Questions can be asked about her response, about feeling ignorant. Did she see the museum and hence staff on the trolley as *experts* or authority figures (in terms of knowledge), was it because of her age (assuming the trolley was for children) or was it because of a didactic school learning experience where knowing correct facts is key? This highlights how visitors come with preconceived ideas about the participatory experience, the environment, and their skills and abilities.

Prior Knowledge

Falk and Dierking (2000) discuss the difficulties of determining what visitors learn in museums but say that much of what is learnt depends on prior knowledge and experience. "What individuals learn depends upon their prior knowledge, experience,

and interest; what they actually see, do, and talk and think about during the experience; and equally important, what happens subsequently in their lives relates to these initial experiences" (Falk and Dierking, 2000: 153). Burnham and Kai-Kee (2011) tell us that how we see the world is not independent of our experience or of our knowing. On finding out that he was handling a squirrel, the boy in the example above was able to link the object to his own experience and relate it to stories about his life.

I acknowledge that learning does not solely concern prior knowledge. Information can also come from observing and interacting with an object, from the materiality of an object (Wehner and Sear, 2010). "Objects provide us with information about how the world looks, feels, smells and even tastes, which we can organise and analyse to create knowledge of the form of the world" (Wehner and Sear, 2010: 152). Wehner and Sear (2010), curators at the National Museum of Australia, talk about *object knowledge* which they propose is *embodied knowledge*. "When we encounter an object, we observe its size, shape and proximity. We notice its colours and register its textures. We may respond, perhaps subconsciously, to its smell, and, if we can touch it, we catalogue how it feels, how much it weighs and perhaps how it tastes. These sensory engagements are relational and interactional" (Wehner and Sear, 2010: 152). Whilst I agree with the idea of embodied knowledge, of knowing through observing and interacting with an object, I would argue that for the most part we bring prior knowledge to each new sensory experience. Wehner and Sear (2010) say that objects do more than reveal the reveal the form of the material world, as we engage with objects we use questions to lead our interrogation of them. For example, questions about what an object is made from, how it is made, who made it and what it does? To answer these questions we bring what we know already, to be able to make comparisons to other objects perhaps, to "understand the material conditions of existence in particular times and places and further to imagine the meanings, sensibilities and experiences produced as people engage with those material conditions" (Wehner and Sear, 2010: 153). Chapter two discusses the role of presupposed knowledge and how understanding is influenced by what we already know (Gadamer, 2013).

Facilitating Meaning Making

The focus of this research is not that visitors reach correct conclusions (although I am not advocating that *any old* conclusion will do (Meszaros, 2006) but that visitors are able to reach conclusions. By this the process of visitor meaning making should be actively facilitated by the museum rather than thinking that is enough to remove

barriers, leaving them free to learn. A lack of information does not give visitors freedom to unfettered meaning making but can limit learning to what they already know. Barriers are more usually discussed in terms of access. Sylvia Lahav (2011), writer and lecturer on museum education, writes about the museums responsibility for providing physical, cultural and intellectual access. Her focus is on interpretative materials, including wall captions, teaching materials, leaflets, audio guides, etc. She discusses conflict in the art museum putting forward the idea that interpretive text has divided loyalties. It needs to effectively serve the visitor, describing, elucidating, explaining works of art, whilst also "allowing space for the work of art to have a life of its own" (Lahav, 2011: 81). She tells us that in aiming to be more relevant and welcoming, thereby increasing access, museums have sought to change their methods of communication and increase the production of all types of interpretative materials. Simon (2016) tells us that if museums require too much effort to access, they become irrelevant. From this it can be argued that it is not so much about removing intellectual barriers, but about making museums more accessible by making them relevant through the ways in which they communicate.

Contextual Information in the Context of the Handling Experience in the HOB

In wanting to promote personal response and allow for many possible understandings of objects, the Horniman has decided against the use of labels for the objects in the HOB. See chapter two (Schaffner, 2006; Storr, 2006; Trench, 2013). Information comes primarily from handling objects (Gardner, 2013). The Horniman does not want to hinder visitor engagement by perhaps presenting one possible way of looking at and engaging with objects that may preclude others. In support of this approach, Lahav (2011) tells us that text is always interventionist and therefore in some sense it may reduce visitor interpretation to a singular way of reading an object or even shut down the process of interpretation altogether. There are many ways to respond to an object, take for example, the Puffer fish discussed earlier in chapter two. Information about the taxonomy of a Puffer fish would not necessarily stop visitors discussing it as food or clothing, its behaviour, where they come from, or the damage sharp fish spike can do to your bare feet on the beach.

Discussing the lack of labels in the HOB with the Community Learning Officer, she said that there is a lot to be learnt from touch. Touch is a valuable and fruitful way of engaging with objects (Spence, 2007, chapter two). Elizabeth Pye (2007), senior lecturer at the University College London Institute of Archaeology, discusses the

benefits of touch for enriching learning, saying that touching real museum objects can lead to meaning making. Touch can be used to verify and investigate (Candlin, 2007). It has been my experience as an Explainer that whilst touch can engender the most surprising ideas, understanding and responses, not actually knowing what an object is, can bring engagement with it to a halt.

I support this claim of *coming to a halt* with an example from my work as an Explainer when a mother and daughter (aged 10) asked if they could see objects from Egypt. I showed them a piece of wood from a coffin painted with hieroglyphics and pattern. Then a Perspex frame that contained a piece of papyrus on which had been drawn hieroglyphics and a carved, stone scarab beetle. The girl told me that she was studying the Egyptians at school and they had come to the Horniman hoping to see Egyptian artefacts. She told me what she knew about the objects and the Egyptians, so did her mother, and I contributed too. We discussed how things felt to touch, how old we thought the objects were and that we were holding the same objects held by the people who made them. Then they asked me what the terracotta clay figure (12cm high) displayed with the other objects was. Not knowing, I consulted the *Explainer* folder and found out that it was a *Shabti*. Apart from what the object was called, we were none the wiser as to what it was for, why it existed, whether it was decorative or functional, toy or ornament. The other two Explainers on duty did not know either. We were stuck, yet we could feel its weight, we knew that it was Egyptian because of the objects it was displayed alongside and we could see what it was made from clay.

The only option we had was to *Google* it at home, which I did. Shabtis are funerary figurines, buried with the deceased to act as servants in the afterlife. At the time we had discussed the afterlife and burial whilst looking at the piece of wood from the coffin, we could have put the two ideas together. Not knowing what the Shabti was brought the experience to a halt and we were unable to make connections with the other objects.

Presupposing Visitor Knowledge

Objects have both physical and non-material qualities. "Aesthetics in material culture refer to the quality of physical characteristics of objects: the effects on the senses and on their perception. Such qualities include physical properties, such as colour, size, symmetry and balance, and non-material attributes, such as age, sense of distant place and magical substance. While many of the physical attributes are understood cross-culturally, the non-material attributes presuppose cultural knowledge" (Monti &

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Keene: 2013: 73). With the Shabti, above, we did not have the presupposed cultural knowledge, we were unable to understand some of its non-material attributes, we were unable to go beyond what we already knew. It could be said that presupposed cultural knowledge was at play in Dudley's (2012) *spellbinding* encounter with a bronze horse in Compton Verney (see chapter two). She puts forward that her powerful encounter with the horse would have been diminished if she had read the contextual information, however I argue that as senior lecturer in museum studies she may well have possessed a significant amount of presupposed cultural knowledge. I suggest that the Horniman is presupposing visitor knowledge in the HOB privileging visitors with a certain level of understanding, and that correct answers (Cutler, 2013) can scaffold greater possibilities of meaning making.

Whilst I have argued above that knowledge can serve to scaffold the learning experience, some visitors preferred to simply handle the objects in the Discovery Boxes and did not want information (in this context). This is supported by a father and his five year old daughter looking at the Adornment Discovery box who said she was *"*more interested in the actual objects than reading all about them at this stage*"* (interview with father, family three, 2012). With reference to his daughter's age, he told me that *"*she's more interested in touching and feeling rather than listening about it all*"* (interview with father, family three, 2012)*.* The preference for handling objects rather than hearing about them was predicated on his daughter's age, implying that he thought handling objects was more suitable for a younger child than hearing about them (the assumption here is that by *listening about it all*, he was referring to finding out information). When asked about exploring the contents of the Adornment Discovery box, he replied "we're just exploring and seeing what we can find" (interview with father, family 3, 2012). Handling is seen as part of the process of exploring objects.

One family consisting of mother and father and two daughters aged four and eight also expressed a preference for simply handling objects over finding out information about them from written text (provided in the Discovery box folders). The parents made a choice to ignore the folders, what they perceived as information, as the mother "presumed the folder was going to be about telling us and I didn't feel that that's what we were here for" (interview with mother, family seven, 2012). They did not see the need for information in the context of the handling collection. "This is our last stop. So we've done the museum, read all the different bits, we've done our bit of reading. This is where we just come and we experience it based on what we see, touch and what we

can make out of it ourselves" (interview with mother, family seven, 2012). They did not feel the need for information, their concerns towards the end of their visit, were more about being able to handle objects. However this approach was not taken to their entire visit, as prior to coming into Discovery they had read museum interpretation. From these examples, more research would need to be done into what kinds of information families want.

Two families discussed interpretive text. With "my son's age [aged between 5- 7] and smaller, it is more about playing with it and seeing what it does as opposed to necessarily reading about it" (interview with mother, family eight, 2012). "We had a very quick flick through [the folders] but we were more interested in the actual objects than reading all about them at this stage (with daughter age five)" (interview with father, family three, 2012). Both families cited the age of their children (ages 5-7) as the reason for not being interested in written interpretation.

Optimal Conditions for Learning: Flow

Nakamura and Csikszentmihalyi (2002) put forward the idea of *optimal challenge* for engaging with *objects* where activity is at a level which sustains attention and absorption. In contrast, a lack of challenge leads to boredom, activities cease to be absorbing and engagement stops. The state of being absorbed is described as *Flow* (Csikszentmihalyi and Robinson, 1990). The following chapter discusses *flow* (Csikszentmihalyi and Robinson, 1990) applying it to learning in the non-art museum. "Entering flow is largely a function of how attention has been focussed in the past and how it is focussed in the present by the activity's structural conditions. …Clear proximal goals, immediate feedback, and just manageable levels of challenge orient the organism, in a unified and coordinated way, so that attention becomes completely absorbed into the stimulus field defined by the activity" (Nakamura and Csikszentmihalyi, 2002: 92).

The structural conditions of any activity have a bearing on how attention is focussed. Using ideas put forward by Csikszentmihalyi and Robinson (1990), discussed further in chapter five, and from observing visitors' experience, below is a list of optimal conditions for flow; of what appeared to generate visitor attention and absorption, provided a just manageable level of challenge, where there were clear goals and immediate feedback (table 11).

Table 11: Optimal conditions for flow on the Object Handling Trolley.

Optimal conditions for flow on the Object Handling Trolley	
Scaffolding / Interventions to foster flow	Museum creating opportunities for possible '*entry points*' and '*challenges'* (Chapter five). Created through facilitation by volunteers and opportunity to handle objects.
Rewards	The experience is a rewarding activity in and of itself. There are no set goals.
Choice	Engaging with the Object Handling Trolley is a free-choice activity.
Limited field of attention (lack of distractions)	Engaging with Object Handling Trolley can be an opportunity to focus attention in a limited number of objects (in contrast to the whole museum or Natural History gallery).
Personal interest	Selection of what to engage with based on personal interest. Visitors able to make personal connections.
Opportunity for immediate feedback (from staff, other visitors, museum information)	Feedback provided through dialogue with knowledgeable (although limited), more experienced volunteers and other visitors. Visitor ideas and understanding can be corroborated and supported by informational sheets.

Labelling and text, as part of the learning experience, contribute to the conditions for learning, and as such could serve to scaffold the meaning making process, not just in terms of providing information but as part of creating optimal (optional) conditions for engagement as part of a supporting learning environment.

The Horniman sets out to *appeal to a broad range of learning styles and audiences* (Table 8). Instances above highlight where a lack of information has limited visitor

learning, they include times with the Brazil nut pod and the squirrel, where both objects needed exact identification in order to promote engagement. Simply pointing out what the object was, was enough to provide an entry point and challenge for the visitor. *Entry points* and *challenges* are two concepts discussed by Csikszentmihalyi and Robinson (1990) in terms of *Flow Theory* discussed in the next chapter.

Using the two tables above (tables 10 & 11) looking at visitor *behaviour* and *optimal conditions* under which learning was observed to happen, the next question is: if this is what visitors do in the meaning making process and these are optimal conditions, what are museums doing to facilitate learning through their approach to interpretation (with a particular focus on how information is presented)? Through the HOB, the Horniman aims to provide a *toolkit and vocabulary for how to discover objects* (Table 8). Chapter five addresses ways in which museum interpretation, text and labelling, can be part of that toolkit.

Finding Out More Versus Explaining Things Away

Visitor needs and desires can motivate them to find out more about objects, and in writing about labels, Storr (2006) discusses the need for exhibition-makers to honour their needs and desires. In wanting to promote active engagement Storr writes that "exhibition-makers should refrain whenever possible from pre-empting that process (of finding out more), …by explaining the work away before viewers have had the chance to see it with their own eyes, and engage it with their own minds" (2006: 24). He writes with specific reference to art galleries but this illustrates the desire by the museum not to (and the belief that it is possible to) explain things away before the visitor engages with an object, perhaps negating the need for the visitor to work things out for themselves. This suggests that there are set meanings and responses to an object that the museum can work out in advance of the visitor seeing the object, and that these responses are communicable. As Storr (2006) suggests, objects can be *explained away*. I speculatively put forward the notion that this is the thinking behind the reasoning for minimal written interpretation in the HOB in the Horniman, particularly in terms of labels. The Horniman does not want to pre-empt the process of finding out more, before visitors have had the chance to engage with the collection on their own terms.

The tension between *explaining things away* and *finding out more* could support the creation of museum interpretation. The tension between museum produced

interpretation and visitor made meanings underpins the idea of the prevalent theory of constructivist learning in museums (Hein, 1998). However, if taken to extremes (Meszaros, 2006), believing that visitors will think what they like irrespective of museum interpretation, it could be seen that there is little point in museums providing any information at all. Museum learning can be seen to be rooted in the idea of experience and engagement, where the visitor, like the museum, undergoes a process of interpretation in the creation of knowledge and understanding. The museum, however, has a wealth of academic resources to draw from and is responsible for (Burnham & Kai-Kee, 2011) sharing that in such a way as that acknowledges their own acts of interpretation and facilitates those of the visitor.

Museums could take responsibility for facilitating visitor meaning making through providing optimal conditions for learning. Family learning could be scaffolded through guided, shared interpretation (Burnham & Kai-Kee, 2011), where the museum lends its voice to the dialogue in which meanings are created. The next chapter discusses conditions for the museum learning experience looking at visitor skills and the setting and looks at how museum interpretation can perhaps create a setting in which visitors can learn the skills to learn in a museum.

Chapter 5: Further Understanding Museum Learning

This chapter explores family learning using the idea of *Flow Theory* (Csikszentmihalyi and Robinson, 1990). A case study looking at the family learning on board HMS Belfast is used to examine the impact of the setting and visitor skills on the family learning experience.

Flow

"It is not enough to insist upon the necessity of experience, nor even the activity in experience, everything depends upon the *quality* of the experience which is had" (Dewey: 1938, 27). The theory of *flow* (outlined below) is particularly appropriate within this context. I use different elements of *flow* theory to analyse the family learning experience, to begin to reconceptualise the learning experience and the concepts that underpin it. In this thesis the term *quality* is not used in terms of value, but used to describe the *characteristics* of museum learning. The theory of *flow* has helped to reconceptualise ideas behind meaning making. *Flow* theory is useful as a lens through which to explore how learning occurs in museums for family visitors and to look at the conditions and criteria that facilitate visitor interpretation.

In the 1990s Csikszentmihalyi and Robinson carried out research at the Getty Centre for Education and the Arts, California, USA, looking at finding ways of helping non-specialists understand and enjoy art. They used the model of the *flow* experience to better understand the aesthetic experience, setting out to "contribute to the understanding of how to make looking at works of art more enjoyable" (Csikszentmihalyi & Robinson, 1990: 1). In this thesis however, the structures that are seen to engender flow are applied to looking at, and learning from, objects in the non-art museum.

What is Flow?

The experience of *flow* is used to describe the quality of the experience of intrinsically motivated people, who are absorbed and engaged in an activity perceived as worth doing for its own sake rather than as a means to an end (Csikszentmihalyi & Robinson, 1990). Flow theory is not concerned with outcomes but the qualities and characteristics of the activities that people are intrinsically motivated to pursue. The *flow* experience is characterised by focused concentration on the task in hand, when people are thoroughly engrossed and lose track of time.

Csikszentmihalyi and Robinson's (1990) study of *flow* focussed on the aesthetic experience, "derived from hundreds of persons deeply involved in activities that had few or no external rewards" (2009: 7). Acknowledging that *flow* is not peculiar to the aesthetic experience, they looked at the structural elements of the aesthetic experience and examined their function in the flow experience. Despite elements of *flow* being attributed to the aesthetic experience, (i.e. looking at and enjoying works of art), structural elements of flow are used here to help understand the unmediated family learning experience in the museum; that of looking at and enjoying objects.

Aesthetic Encounter

I examine what Csikszentmihalyi and Robinson (1990) say regarding facilitating the aesthetic experience and seek to discover whether their findings, with their focus on the conventions of the art world, can be applied to encounters in the (non-art) museum from the *viewer's* perspective. Csikszentmihalyi and Robinson (1990) discuss the practice of *viewing*; not simply a cursory glance but time spent looking at an object, in meaningful engagement. "The experience of flow is possible under certain circumstances: when individuals find the activities challenging and also believe they have the skills to accomplish them" (Schweinle & Bjornestad, 2009). The setting in which *flow* takes place is made up of both the activity and the learner. For *flow* to occur in a museum visit, not only do the visitors and their skills have a bearing on the experience, but also the settings and the challenges within.

Visitor Skills and the Setting

For the purposes of this research, the family learning experience is divided into two elements:

- The skills of the visitor (in terms of participation)
- The setting (the museum)

The *skills* the visitor brings to the aesthetic encounter where *flow* is experienced, and the conditions of the *setting,* both contribute to the optimal experience. However, neither of these can act in isolation. Learning requires a person, a learner, and an object or situation with which that learner engages; it also operates within a specific setting. The skills of the visitor and the setting act as component parts of the learning event, shaping how learning happens. In this chapter the learner and the setting are examined in the context of the theory of *flow*.

HMS Belfast: a Case Study

A family visit to HMS Belfast (2014), part of Imperial War Museums (IWM) on the Thames in London, provides a case study to illustrate *flow* theory and how the learner and the setting contribute to optimal experience. Both the skills of the visitor and the museum setting are examined using this case study.

HMS Belfast was launched in 1939 and went straight into active service in the Second World War. It is now a decommissioned war ship, once owned by the Royal Navy, and opened to the public in 1971. Sitting on the River Thames, in service until 1963, the ship has since been modified and preserved to show how it was kitted out during different periods. For example mess decks are presented as they were during the Second World War with hammocks, and later with bunks (post 1950).

In 2015 I worked at IWM as a Fee Paid Educator in both the informal and formal learning programmes, working with families and schools, and at the time of this case study, I had just had my training on board. I took my family, my husband Daniel, my two sons (Jesse age seventeen and Tom, eleven) and two daughters (Kate, fourteen and Miriam, eleven). They were not particularly keen and reluctantly agreed to come with me. Family time can be idealised and is "often uncritically accepted as a uniform, coherent concept and a universally desirable goal" (Daly, 2001: 283). Whilst I was motivated by wanting a "positive experience of togetherness" (Daly, 2001), past experience has taught both my husband and myself not to expect our children to be motivated by the same things. Other motivations for taking my children to museums are discussed in chapter one (Purposive leisure, Shaw & Dawson, 2010; authentic experience, Linko, 2003; learning for fun, Cara & Brookes, 2012, Packer, 2006). Our visit included audio-guides, which only two of us used, and a pre-set route including archive film.

Photo 9: Gun Turret, HMS Belfast.

Visitor Participation and Skills in the Family Learning Experience

Whatever form the aesthetic experience takes, it depends "on the interaction between the skills of the viewer and the challenges that the work presents" (Csikszentmihalyi & Robinson, 1990: 139). Two variables are at play; the skills of the viewer and the challenge of the work, which interact at the point of visitor participation. Participation is at the core of Lave and Wenger's (1991) theory of learning. "Participation is always based on situated negotiation and renegotiation of meaning in the world. This implies that understanding and experience are in constant interface – indeed, are mutually constitutive" (Lave & Wenger, 1991: 51-52). Understanding and experience are *mutually constitutive*. Participation and meaning making cannot be separated, one constitutes the other.

Visitors come with skills to the museum learning experience, and so meanings are developed through participation. Strategies for participatory experiences invite visitors to respond, present multiple stories and voices and "help audiences prioritise and understand their own view in the context of diverse perspectives" (Simon, 2010: iv). Simon suggests that participatory techniques which design for "explicit opportunities for interpersonal dialogue" (2012) can help make museums more relevant for visitors.

Active Discovery

Discovery of an object/work of art is an activity that requires skills; skills for looking and engaging. In general museums assume that visitors have these skills. Help for the visitor is implicit, but I am arguing for explicit help for visitors. Museums are places that not only require skills but are also places where people can learn and develop these skills. Can museums teach and develop these skills through their interpretation alone? Csikszentmihalyi and Robinson (1990) write about the challenge of the object working in balance with the viewer's skills. Drawing on the characteristics of the aesthetic experience, a feature of flow used, is *active discovery,* where "the person becomes cognitively involved in the challenges presented by the stimulus and derives a sense of exhilaration from the involvement" (Csikszentmihalyi & Robinson, 1990: 7). "Active discovery: [is an] Active exercise of powers to meet environmental challenges" (Csikszentmihalyi & Robinson, 1990: 8). Visitors need skills to meet the challenge of the object and neither of these are fixed. "As [students'] skill levels increase, so must the level of challenge, maintaining an optimal balance that encourages continuous learning" (Schweinle & Bjornestad, 2009). As discussed later, the challenge of the object or the way in to the object, is determined and constituted by the visitor through their skills, knowledge and interests. Therefore the challenges objects present to the visitor can be ever present.

To account for the many and varying skills that visitors bring to the museum learning experience, a layered approach to museum interpretation could be adopted (Black, 2005; Hooper-Greenhill, 2007). A*ctive discovery* requires the acquisition and development of learning skills. The skills that visitors need for active discovery are fluid. The challenges objects present to the visitor and the meanings they make are potentially infinite, dependent on visitor skills and the setting. Therefore, museums could, in their approach to display and interpretation, take into consideration visitor skills and ask themselves how they might help visitors acquire and develop the skills needed for active discovery.

Focussing of Attention

The focussing of attention also thought of as object directedness, can be understood in terms of the flow as "the merging of attention and awareness on the art object and the bringing of the viewer's skills to bear on the challenges that the work presents" (Csikszentmihalyi & Robinson, 1990: 118).

Focussing of attention and *awareness* are concepts that might sound natural and that are inherent in the viewer. One could assume that visitors come to a museum with the

intention of paying attention and making themselves aware of museum collections. Csikszentmihalyi and Robinson (1990) discuss this as a skill, a key feature of the aesthetic experience. "One of the central features of the aesthetic experience is a focussing of attention on the object." (Csikszentmihalyi & Robinson, 1990: 119). They acknowledge this is a truism, because the purpose of visiting museums is generally to look at things, but speak of this focusing of attention as different to the focus and paying of attention in everyday life: "It is a kind of attentional focus that, perhaps paradoxically, makes its presence felt" (Csikszentmihalyi & Robinson, 1990; 119). This can take many forms but cannot be taken for granted by museums. To help visitors focus their attention beyond a mere cursory glance, directing them towards the challenges of an object, museum interpretation might concern itself with object directedness. "Clearly the concentration of attention is the fundamental process through which the aesthetic experience is achieved. Yet how is this concentration itself brought about?" (Csikszentmihalyi & Robinson, 1990: 122).

Triggers for *Attentional Focus* on HMS Belfast, a Case Study

Csikszentmihalyi and Robinson (1990) suggest skills to aid visitor concentration, to help with object directedness. Two of these skills are used to examine our family experience on board HMS Belfast in trying to understand particular elements of the visit that caused us to pay attention. These are:

- Curiosity
- Informed experience

Curiosity: focus and motivation

Curiosity is seen as contributing to successful learning experiences, the visitor being surprised and intrigued (Hein, 1998: 152). Museums provide novel settings, environments in which visitors can be surprised and intrigued by objects, supporting conceptual understanding (Hein, 1998). Curiosity, finding something new, is relative to the individual visitor and changes with each museum visit. "Curiosity is directly tied to learning. Curiosity and learning represent a feedback loop: curiosity evolved in order to facilitate learning, learning occurs in order to satisfy curiosity" (Falk & Dierking, 2000: 115). Csikszentmihalyi and Robinson tell us that *curiosity* is "a condition for experience; one must want to find out about the object, to explore it, …Yet in another sense curiosity is a skill that the viewer both has in some measure from the start and develops over the years" (1990, 159). Curiosity has to be focussed, "with the kind of

focus that follows from knowledge and experience. …the encounter with works of art needs to motivated from within" (Csikszentmihalyi & Robinson, 1990, 160). Curiosity is relative, determined by the individual, and serves to facilitate meaning making (Falk & Dierking, 2000).

For Tom, our visit to HMS Belfast began with an explicit intention not to pay any attention to the ship. He began the tour by refusing an audio-guide. Tom was most definitely not motivated from within. Arguably, Tom's behaviour was a protest about visiting HMS Belfast against his will (seen as a possible ethical concern, chapter three). This could be seen to throw up ethical issues such as, whether he was powerless (Cohen, Manion & Morrison, 2011), or coerced into the research situation, as he did not have a choice as to whether to take part (Cohen, Manion & Morrison, 2011). From an ethical perspective, research should not damage participants, no harm should be done to them, as was the case for this research. The original intention for the visit was not to carry out research but to have a family day out together in a museum (Daly, 2001). In this instance my family became research participants accidentally (accidental sampling, Cohen, Manion & Morrison, 2011: 155), our day out together became an opportunity to collect rich data on family learning. However, within twenty minutes of being on board Tom changed, becoming engaged, keenly sharing information and pointing things out to the rest of us. What caused Tom to become curious?

We had not been on board long before Tom asked for and took the audio-guide from his father. On hearing information shared by his sister who was using the audio-guide, he became interested and motivated. Two factors aroused his curiosity; *modelling* (use of the audio-guide by his sister and father) and the idea that he was missing out. His father and sister appeared to be enjoying themselves, evidenced by their behaviour; discussing and sharing information that intrigued them. The audio-guide (as museum interpretation) acted to motivate and arouse curiosity. This draws on Falk and Dierking's (1992) notion of the *social* context for learning. Tom accessed the ship through the social nature of the visit, drawn in by the behaviour modelled by others in the family. Audio-guides can be antisocial (see chapter two), but this one promoted family conversation as it illuminated its surroundings, the ship. "Curiosity is a major factor in determining whether environments are appealing. Environments that have mystery provide a moderate sense of the unknown, are complex and invite exploration" (Falk & Dierking, 2000: 115). The environment of the ship was a novel one for us, yet the initial decks on the visitor route were laid out in ways that we could connect with, addressing three concepts; eating, sleeping and spare time on board. Tom found the

ship interesting, becoming intrinsically motivated to learn rather than see the need to acquire knowledge with extrinsic benefits (Rounds, 2004).

Informed Experience: developing skills to see and understand through exposure

Informed experience involves the skills visitors bring with them for looking as well as the knowledge they already have about the subject matter. It is the process of acquiring "the ability to see as well as developing understanding" (Csikszentmihalyi & Robinson: 1990, 152).

> "*Informed experience is a good term to characterise the process by which exposure to works of art gradually transforms the nature –and experience- of aesthetic interactions. Informed experience involves developing the ability to see as well as developing understanding.*" (Csikszentmihalyi & Robinson: 1990, 152).

Informed experience shapes a visitor's capacity to interact. However, Csikszentmihalyi and Robinson (1990) are keen to stress that this is not hierarchical, nor a progressive experience from worse to better, but the basis of *different* experiences. Being informed shapes our experiences and influences our responses. What shaped our experience on HMS Belfast? What were we exposed to that prompted our seeing and understanding? These questions are addressed below.

Seeing and understanding necessitates skills and knowledge. The idea of *informed experience* is explored as a process in which visitors develop the ability to see as well as understand through *exposure* (Csikszentmihalyi & Robinson: 1990: 152) rather than a determined effort on the part of the visitor to get better at looking at objects in museums. In terms of free-choice learning, this research is concerned with *exposure* (to objects). With this in mind, this thesis examines events and situations on board HMS Belfast that brought about engagement and learning. In particular the types of museum interpretation we were exposed to, that caused us to focus our attention and aroused our curiosity.

Interpretation on HMS Belfast that Caused *Attentional Focus*:

- **Audio-Guides for Children and Adults**

We used the free children's audio-guides. They provided opportunities to hear specific information at numbered stations. The audio-guide encouraged visitors to explore designated areas, described the ship and also told personal stories of life on board. For

example, we heard about the time when rat bones were found at the bottom of a pot of soup as the last portion was being served. (These audio-guides have subsequently been changed, 2017). The audio-guide also asked questions of the visitor asking for their opinion. Information was presented in context, in ways that related to children's experience enabling us to make connections. For example my younger two were excited to tell me that each shell weighed as much as two small children. They could comprehend that weight, as they were two small children (twins).

- **Discrete Information Panels**

Discrete information panels were positioned around the ship. They were approximately A3 size, each with a photograph and a couple of paragraphs of written text. We found these panels accessible and manageable, and most importantly for us, as parents, they did not take too long to read.

Photo 10: Information panel on HMS Belfast.
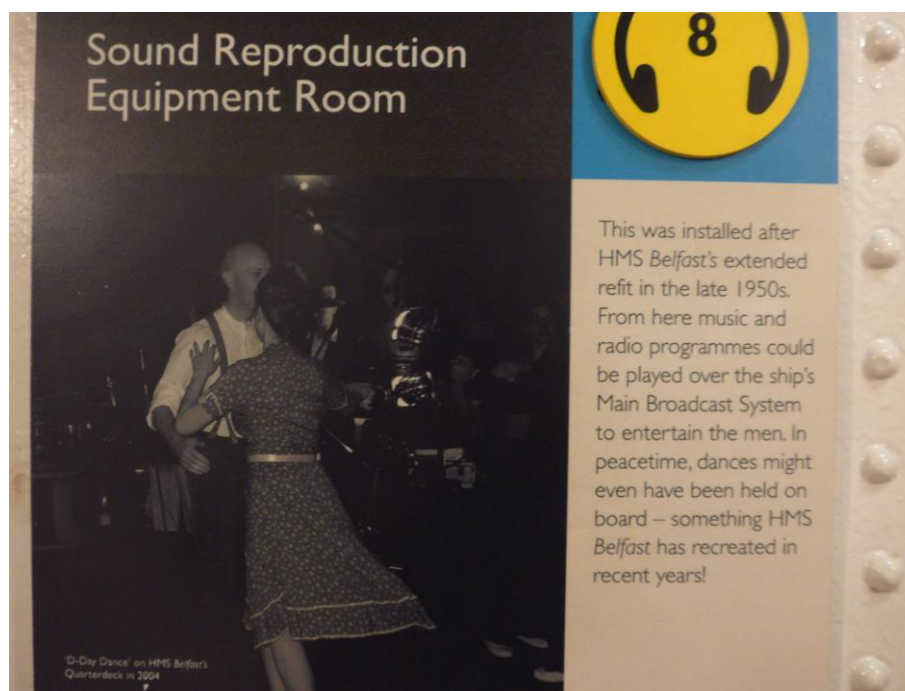
- **Live Interpretation: Volunteers and Handling Objects**

Volunteers were on hand in the sick-bay to talk to visitors encouraging them to handle objects on a medical trolley; to discuss them and the implications they had for life on board. Why was medical equipment needed? Not just for war injuries, but for everyday medical conditions too, such as dental treatment. We were able to ask questions, building on our own experience and understanding. We experienced objects in the sick bay at first-hand; all but the blood was real. We tied each other into an original Neil

Robertson stretcher quite unlike stretchers used nowadays. Made of bamboo and smaller than regular stretchers, they were designed to strap the injured firmly in place so they could be transported, often vertically, through the ship's hatches. This was an enjoyable experience and (although not asked to) involved a little role play, pretending to be injured.

Photo 11: Using a Neil Robertson Stretcher on board HMS Belfast.

- **Museum Mannequins Modelling Jobs and Life on Board**

Museum mannequins were a surprising source of information with no need for text, used to demonstrate jobs, how the ship worked and life on board. They demonstrated how particular areas of the ship functioned. Mannequins fired guns, prepared food, did the laundry, were asleep in the hammocks and operated on the injured in the sick bay. The surgeon was gowned up and the patients are in their pyjamas. Despite the freezing temperatures outside in the Arctic, the cooks wear short sleeved T-shirts and the men in the mess deck wear warm civilian clothes. Seeing a man taking huge trays of bread rolls out of the ovens gave us a sense of how many crew were on board at

any one time. In 1959 over 200 rolls were baked every day! It became apparent that the crew ate fresh food and did not just rely on the huge tins of food we saw. Mannequins demonstrated what the crew did in their spare time, such as playing cards, writing letters, sleeping and even getting dressed, straight out of the shower wrapped only in a towel. Mannequins told us a lot about Navy uniforms and the protective gear needed for certain jobs such as *flash* gear, to protect them from the heat and sparks when working with guns. They helped build a narrative about life on board. The ship's taxidermy cat introduced us to the idea of mice and rats on board that could contaminate and eat stored food, helping to convey the idea that large quantities of food were needed as it was difficult to replenish stocks at sea.

Mannequins conveyed emotion. The post-master did not look particularly pleased to see us and the man in the dentist's chair seemed in pain. They were expressive, not just facially, but also with body language (one did really look as if he was about to vomit), conveying much about the experience of life on board which was readily understandable and accessible without the need for text.

Initially the mannequins were a source of amusement, described by my daughter as "kind of spooky" (conversation with Kate, May 2014), yet they provided access to information that perhaps would have required a lot of text to describe. For Tom these were very important in his enjoyment of our visit, he said, "I like them, they were in good positions so you could imagine them doing stuff in real life, actually moving, like in the kitchen. They showed you what things were, otherwise it would be boring" (conversation with Tom, 2014).

Photo 12: Mannequin in the Galley, HMS Belfast.

Summary of the Findings of HMS Belfast, a Case Study

These examples showed the ways in which we engaged with the content of HMS Belfast and what aroused our curiosity and skills (to see and understand). The instances discussed prompted *object directedness.* We used skills to focus our attention. However they were scaffolded through the use of museum interpretation. Each experience served to *expose* us to skills for seeing and understanding, and in the process, continued to develop the skills for doing so, i.e. *informed experience* (Csikszentmihalyi & Robinson: 1990).

Museum interpretation, in particular the mannequins and audio-guides, provided examples of how Falk and Dierking's (1992) contexts for learning operate; the *personal*, *social* and *physical* contexts (see chapter two). We were able to personalise

the visit enabling us to relate to how crew on board ate, slept and spent their spare time. In the social context, we shared information heard in the audio-guides and worked together to use the Neil Robertson stretcher and talked to volunteers as a family. The handling of objects and the layout of the ship, spread over nine decks, accessed through hatches and ladders, engaged us in the physical context.

We visited HMS Belfast with little knowledge of military history but with some school experience of learning about the Second World War. Not knowing much about ships, we relied on HMS Belfast to fill the gaps in our knowledge. Many terms were unfamiliar to us. For example, hearing about six-inch guns on board made no sense at first. It was only during our visit that we learned that *six inches* referred to the diameter of the shell which was put into the gun. Also the word shell, needed to be translated, as a very large bullet. We relied on museum interpretation to present us with information we could easily access and quickly assimilate to develop *informed experience*, our seeing and understanding.

Not everything that causes the visitor to focus their attention is the result of museum planning. Blog post, B.O.R.I.N.G. (Appendix 38), is an example of behaviour in an exhibition with an unpredicted course of *attentional focus*, where Tom, subverted any attempts to help him engage with the Wildlife Photographer of the Year exhibition at the Natural History Exhibition (March 2014).

The setting: Environmental Conditions

The Object

 "It is not enough, apparently, simply to be affected by an object, to be initially captivated by it; it is important that it serve, in some sense, as *provocation* as well, an *opportunity* [my italics] for the viewer to enter into the work and deal with it over time, not feel that a cursory involvement is sufficient" (Csikszentmihalyi & Robinson, 1990: 149). There are possibilities of interpretation in the object-viewer relationship; focus is not on the object alone, but on engagement (Dudley, 2010). In terms of *provocation* and *opportunity* the main points to consider here are:

- Determinability: the perceived opportunity to find point of entry into object. Dependent on challenge (possibilities of meaning) of the object and skills of the visitor.
- Entry points: indeterminate in number, opportunities to communicate.

Determinability

Objects are seen as containing challenges for the viewer; the challenge being something to respond to, creating emotion, reaching the viewer with inexhaustible meanings. "Throughout each of these ideas, runs not only the broadly conceived idea of expression but also that of communication, the idea that the condition for aesthetic experience here is bound up with relating to and interacting with a fundamentally human creation" (Csikszentmihalyi & Robinson, 1990: 149). Objects are seen as having opportunities to communicate through *relating* and *interacting*, involving two parties, the object and the viewer. Objects hold many possibilities of meaning. For Csikszentmihalyi and Robinson (1990), this is discussed in terms of challenges and determinability. Csikszentmihalyi and Robinson (1990) acknowledge that communication is also dependent on the nature of *how* the object is presented, which brings a third party into the communication, i.e. the museum, and its approach to interpretation.

"Determinability might best be understood as the perceived opportunity to find, on a fairly direct level, some point of entry into the object." (Csikszentmihalyi & Robinson, 1990: 147). From the constructivist position, there are an indeterminate number of entry points into an object and they are dependent on the viewer. There is no true, intended meaning inherent in an object to be found by the viewer, no one *correct* answer to be reached (see chapter two). Meanings are constructed and therefore many interpretive possibilities. Using the notion of *flow* to understand *determinability*, "we might best think of it as the relative balance of challenges and skills at the level of meaning, intention, and interpretation" (Csikszentmihalyi & Robinson, 1990: 147). Entry points into the object, therefore, are not inherent in objects; but determined by the balance of the challenge (of the object) and skills (of the viewer). An example of this is the Brazil Nut Pod discussed in chapter four. The ways in which visitors are supported by the museum to find a point of entry into the object is, in many ways, what the crux of this research is about, looking at the role of museum interpretation (in its various forms) in family learning.

There are alternative approaches to the process of interpreting objects. Rather than the idea of being able to enter an object (Csikszentmihalyi & Robinson, 1990), it could be said that people extract information from the object. Jules Prown, material culture and applied arts theorist, USA, puts forward the theory we retrieve information using "three stages of analysis: description, deduction and speculation" (1994: 133). These are

three distinct sequential stages beginning with observation, emphatic links between the viewer and the object. Then hypothesising and finally exploring cultural context for the object (Prown, 1994). Whilst this approach to interpretation appears to be aimed at museum and gallery professionals, it could be argued that, particularly for the visitor, engaging with objects is not a sequential process. We can respond to objects without undertaking "comprehensive observations" (Prown, 1994: 134); that is, without having described an object's physical dimensions and their materiality as Prown (1994) suggests. Entry points may not even acknowledge the materiality of an object. Sometimes it's as simple as recognising a pressure cooker from the 1930s and responding with delight, "my mum had one of those" (Conversation with a visitor, Teign Heritage Centre, 2014).

Entry Points

Black tells us that "the engaging museum is not embodied in its collections, displays and programming but lies in the encounter between these and the audience. …an exhibition becomes more valuable the more it encourages people to join a dialogue around it and to construct new meanings among themselves" (Black, 2012: 143). The nature of the challenge and the entry points that objects present are dependent on the viewer's encounter with the object, they are not pre-set. The entry points which we perceived and realised during our visit to HMS Belfast were, generally speaking, unique to us. G*enerally speaking*, despite being dependent on and shaped by our family's prior experience and knowledge; we could perhaps share many common entry points with other families with similar profiles and experiences to us. Entry points were found in the connections (Adams, Luke, & Ancelet, 2010) we made with HMS Belfast which were in turn affected by prior knowledge of the context, our previous *museum learning* experience and expectations about family learning. We came with skills to interpret and engage. These had a bearing on the challenges and the entry points available to us.

Challenge

Here the term *object* is used to include the situation in which it is placed, the way it is displayed and accompanying interpretative materials. "Since interaction between the object and the skills that the viewer brings to it determines the nature of the challenges presented by a work of art, then the staggering diversity of possible challenges immediately becomes apparent" (Csikszentmihalyi & Robinson, 1990: 127). The challenge of an object does not arise until the viewer confrontation. This can be

problematic for museums planning their interpretation. "The level and type of challenge will be different for every viewer and every work; they are integral parts of the aesthetic encounter, regardless of its specific content" (Csikszentmihalyi & Robinson, 1990: 127). The idea of indeterminate challenge of an object can be addressed by the museum in adopting an interpretive approach that allows for, encourages and acknowledges the possibility of multiple entry points.

Objects *provoke* by providing challenges for visitors. Challenges can be defined by the following principles (Csikszentmihalyi & Robinson, 1990):

- Challenges see the object as something to respond to, reaching the visitor with inexhaustible meanings.
- Challenges are determined by both the object and the skills the visitor brings.
- Challenges are different for every visitor regardless of specific content (of the object). Acknowledgement of diversity of possible meanings.

Making the Object Accessible (Meaning, Intention and Interpretation)

Didactic information is often available for objects in museums, although meaning and understanding are created by the visitor through active participation (discovery), drawing on both the information provided by the museum and their own prior knowledge. Objects hold possibilities of meaning and these possibilities are influenced by the museum setting through the act of being selected (Dudley, 2012), the manner in which they are displayed and the development of written interpretation, or at times, lack of information. It is the museum's responsibility to ensure that objects are accessible to visitors, and therefore open to interpretation. This is highly problematic as the visitor is not a defined entity and interpretation is a subjective activity (see chapter two). This presents a challenge as there could be as many, if not more, meanings for an object as there are viewers, which exist in terms of possibilities. Objects can be made accessible by creating settings that engender possibilities of meaning, through the manner in which they are interpreted and displayed, that is through scaffolding (see chapter two).

So the visitor is not a defined entity. However, research has been carried out to establish different cultural segments and their motivations for engaging with culture and heritage (appendix 19). For instance, visitors who are identified by the *affirmation segment* "welcome cultural consumption as a way of enjoying quality time with friends and family, as well as developing their children's knowledge and improving themselves as individuals" (Morris, Hargreaves & McIntyre, 2013: 28). The *affirmation segment*

make up around 11% of the adult population, thirty-eight percent of them have children at home, and learning experiences are valued as part of their leisure time (Morris, Hargreaves & McIntyre, 2013). This group like museums and galleries and see them as spaces to learn as well as places to spend free time. However, this audience segmentation produced by Morris, Hargreaves and McIntyre (2013) looking to understand culture segments can only demonstrate types of visitors who may be motivated to learn, and not how they actually learn.

The experience of looking at an object can only be facilitated by the museum, rather than dictated, with the aim of enabling viewers to meet the challenges of objects and find entry points. Museums can plan for learning to happen, but not the specifics of how it will happen. Objects contain a number of diverse challenges and it is the responsibility of museums to create conditions that facilitate these challenges rather than predetermine them, or in some cases stop them happening at all. This research suggests that it should be the intention of the museum that their collections are cognitively accessible for all, aiming for visitors to find entry points and construct meanings around objects. An interpretive approach that recognises the idea of multiple possibilities of meaning would also acknowledge the individual visitor and their potential points of entry to an object. Objects are seen to provoke and provide opportunities for learning; that is, they *will* challenge.

Schweinle and Bjornestad assessed levels of motivation, cognition and effect associated with activities people are intrinsically motivated to pursue, investigating "both the environment and persons within the setting" (2009 Online). Schweinle and Bjornestad tell us that "one benefit of flow theory is that it presumes that motivation, cognition, and effect are situational, …flow theory presumes that these psychological processes are made meaningful by the environment" (2009 Online). The challenge of an object is not only shaped by the skills of the viewer but also by the environment.

In this case study (our visit to HMS Belfast), the conditions and characteristics of the environment and the objects we engaged with served as opportunities and provocation and provided triggers for active engagement.

Presented below are the features of the setting of HMS Belfast that provided entry points and opportunities for learning during our visit.

The Challenges (Entry Points) on Board HMS Belfast were:

- **Facilitated by audio-guides**. The children's audio tour helped make personal connections (Falk & Dierking, 2000). Both children and adults shared information heard on the audio guide with those who did not have one, instigating 'd*id you know…*' conversations.

- **Shaped by the physical environment**. The setting provided both motivation and information; in particular, the Punishment Cells and the Sick Bay. These spaces aroused our curiosity, demonstrated by our behaviour. For example physically trying things out such as the wooden bed in the punishment cell, and discussing what the crew would have done to have been punished. Active bodily engagement encourages greater understanding and generates enjoyment (Hooper-Greenhill, 2007).
The focus of the quarter deck is *Life on Board*; sleeping, eating and spare time. This includes a mail room, laundry, chapel, galley, cafeteria, dentist, sick bay and mess decks. These spaces, original to the ship, are *brought to life* with mannequins and props. This deck representing everyday life is one which all visitors can potentially connect to through their own *everyday life* experience. Here we made personal connections, comparing life on board to our own lives, discussing food preparation, sleeping in a hammock and living with a cat.
The physical nature of our visit, exploring each deck and was in itself a meaningful learning experience, climbing the same ladders as crew had done. The environment was *real,* or rather a composite reconstruction of reality (Simon, 2014, discussed below). We climbed through hatches and squeezed along raised walkways in the boiler room. These are ways of moving around, not designed for the visitor, but for its function as a war ship. Physically moving differently became part of the learning experience (sensory learning, Spence, 2007, chapter 2).

"Learning is not all in our heads. Learning is a dialogue, a coming together of internal and external reality" (Falk & Dierking, 2000: 195). There are strong interrelationships between learning and setting. Physical settings can facilitate learning. Being physically immersed in a context enables learners to "see how things are connected, to understand visually, aurally, and even through smell and touch what something looks and feels like, is a tremendous learning tool" (Falk & Dierking, 2000: 195-6). Falk and Dierking tell us the physical setting can not only create a context which affords learning

opportunities that text cannot duplicate, but also "has the potential to create a desire to learn more" (2000: 196). The physical context can encourage exploration and foster curiosity (Falk & Dierking, 2000; Hein, 1998).

Csikszentmihalyi and Robinson (1990) tell us that motivation, cognition and effect are made meaningful by environment. The environment of HMS Belfast provided a sensory experience; a place where, through interaction with its materiality, we gained knowledge (Wehner and Sear, 2010). We experienced the *environment* of HMS Belfast both physically and visually. There are areas that use smell; clove oil used by the dentist and antiseptic in the sick bay, serving to increase our motivation, wanting to find out more. Hooper-Greenhill tells us that it "is quite inescapable that in learning in the museum, mind and body work together. It is crystal clear from what the pupils tell us that they learn best when their bodies are immersed in physical experiences which engage their feelings and emotions" (2007: 165). During this visit our bodies and minds worked together, embodying learning (Wehner & Sear, 2010), as we were immersed in the physical environment of the ship. Sensory learning can be thought of in terms of embodied learning. "The research data shows the power of active bodily engagement to generate enjoyment, knowledge, understanding, and enhanced self-confidence. …The embodied character of learning in museums which results from immersion in physical experiences is essential to the development of knowledge and understanding" Hooper-Greenhill, 2007: 171).

Challenges on HMS Belfast were shaped by being on board, through being immersed in the physical context. HMS Belfast was not only the subject of our visit, but the venue too. As a museum, the ship has spaces that represent its life over different time-frames, making it in one respect, *un-real*. It never existed in the form it does today. Despite this, many things we experienced on board were authentic. "Some of the museum exhibitions that feel the most real are composite reconstructions of reality- - true stories told well, with fake bits supporting the narrative" (Simon, 2014). HMS Belfast felt real, holding true to its narrative as a warship. As a warship, it presents challenges and entry points, authentic to its original purpose. There are visual clues as to its purpose and history; guns, flags, turrets, machinery, port-holes, anchors and dazzle paint.

Active bodily engagement can engender enjoyment, knowledge, understanding and enhanced self-confidence (Hooper-Greenhill, 2007). Embodied learning, physical immersion in the museum "is essential to the development of knowledge and

understanding." (Hooper-Greenhill, 2007: 172). Hooper-Greenhill suggests that active bodily engagement helped pupils ask *better* questions, "more genuine and more real" questions (2007: 171). Motivation, cognition and effect are situational, made meaningful by the environment (Hooper-Greenhill, 2007; Schweinle & Bjornestad, 2009). We experienced high levels of motivation demonstrated by an enthusiasm for sharing knowledge and also by our physical engagement (trying out the punishment cells and sick bay). We were cognitively involved, comparing our lives, sleeping, eating and spare time, to that of the crew. "How long would it take to peel all those potatoes?" (conversation with Tom, 2014) was asked as we looked at a mannequin peeling a huge of pile of potatoes. The effect the environment had on us was one of enjoyment, demonstrated by my eleven year old son taking and keeping the audio-guide after first refusing to get involved. Using it made him keen to visit the next points on the audio-tour. He became engrossed, demonstrated by his conversation.

The challenges that objects present are not solely dependent on visitor perception of them but are also dependent on environmental conditions. Optimal conditions set the experience in motion and enhance the skills of the visitor (Csikszentmihalyi & Robinson, 1990). The nature of the viewing environment can affect how the challenge is perceived. The entire environment (the object and surrounding museum interpretation) contributes to the viewing experience. Csikszentmihalyi and Robinson say that the gallery must provide "fertile enough conditions" (1990: 141) to facilitate challenge.

The nature of the challenge of an object does not occur until the object is encountered by the visitor. Museums can offer support with this process, facilitating the encounter. Csikszentmihalyi and Robinson (1990) discuss the need for support for the visitor in the art gallery. "Given that the encounter with art often requires both considerable work and the use of a whole range of skills, it should come as no surprise to learn that support is also necessary, some form of encouragement and direction that might lead viewers to engage themselves with a measure of conviction" (Csikszentmihalyi & Robinson, 1990: 161). Conditions to engender the challenge can be enhanced through support, encouragement and direction, providing a *fertile environment* created by the museum.

Conditions that support the learning experience are discussed later in chapter six, in the context of Claxton's *learning dispositions* (2006). This research looks at how museums support the learning experience, at the types of conditions that facilitate active participation. Csikszentmihalyi and Robinson (1990) put forward ways in which

visitors can be supported with the aesthetic experience, which can be applied to the museum learning experience. Here are examples:

Conditions that…

- *Take visitors on their own terms.*
- *Acknowledge and adopt an interpretive approach for differing levels and types of challenge which have no ranking order of hierarchy.*
- *Set clear goals and give feedback.*
- *Make information available to visitors who want it.*
- *Acknowledge the possibility of meaning, there are no right or wrong responses.*
- *Minimise distraction. Create an environment in which skills can be developed, making room for active discovery.*
- *Make the object familiar.* (Determinability and entry points).

(Csikszentmihalyi & Robinson, 1990)

Chapter 6: Conclusion

This final chapter puts forward what my idea of family learning in museums should be, making recommendations for an interpretive approach as a result of having explored the conditions of, and criteria for family learning.

Informal Learning

I began this research thinking that the phenomena of meaning making by the family in a museum belonged in the category of *informal learning*. Informal learning is a term used by many museums, such as the IWM, to describe all learning that happens outside *formal* school (and sometimes higher education) framework. The main subdivisions of learning departments are usually *formal,* addressing schools learning and *informal,* catering for *everything else*. Therefore, the remit of informal learning generally includes families, youth, adults and communities. On beginning this research, with the focus on family learning, it was placed it firmly in the realm of informal learning.

The informal learning remit is often seen by museum learning departments to take place in programmed activity, in planned activities, not necessarily in the unmediated family visit. The informal learning offer in museums includes programmes, such as making a poppy for Remembrance Sunday at the IWM; *Hands On Our Puppets* at the Horniman; and hearing from a costumed interpreter, *Character Encounter*, in the NMM (appendix 39). However the focus is on family learning as a free-choice activity, mediated not by programming but by museum interpretation.

Through looking at visitor engagement with museum interpretation, this research addresses how museums create the conditions for visitor meaning making and it is not clear that it only applies to *informal learning*. I am not convinced that in creating interpretation for visitors, museums are clear about what learning is, how it happens and how best to facilitate it. This is where questions lie, about where to situate this research, which I thought at first belonged to the world of informal learning.

As this research progressed, categorising family learning as *informal learning* proved to be problematic. I saw that school children in *formal* learning sessions make meaning in much the same way as families. They both draw on what they already know, using prior understanding to make connections and create meaning. For example, when teaching primary schools students at IWM, I observed that they handled objects and made discoveries about them in very similar ways to that of people in the Discovery

session in the Hands on Base, Horniman. They make connections to what they already know and to their own lives. For example, I observed one student expressing empathy for a girl in the Second World War through an investigation of objects that related to her life at the time (June 2015).

Having seen how visitors make meaning in both *formal* and *informal* settings, I think there is a case for applying my findings concerning meaning making to the remit of formal learning. At least, not limiting them to the realm of informal learning. In the report*, Learning to Live: Museums, Young People and Education* (Bellamy & Oppenheim, 2009) produced by the *Institute for Public Policy Research* and the *National Museum Directors' Conference*, museums are seen to be places that can support learning in its widest sense for everyone. The report calls for museums to "embrace a more holistic approach to learning: valuing informal and formal learning equally" (Bellamy & Oppenheim, 2009: 9). Museums are seen as places able to provide inspiration and learning for all children and young people (Bellamy & Oppenheim, 2009: 9). This infers that the focus is on learning for all children and young people without distinguishing between formal and informal learning.

Where does Informal Learning Fit in the Museum?

This is a debate about *formal* versus *informal* learning. Much of this is political and driven by funding and restructuring; it is also informed by questions as to whether *learning* (as opposed to enjoyment and engagement, Cara & Brookes, 2012) is an outcome of family visits. "Isn't learning something you do at school?" (conversation with fee paid educator, IWM, December 2015). As a fee paid educator at IWM (2015) in the *formal* and *informal* learning teams, I suggest that the informal learning programme is at risk of not being taken seriously in terms of learning, at the time of this research. There is a debate as to what counts as learning and questions are being asked as to whether it should be categorised as such.

Outside of the learning departments of IWM, some staff do not "really understand what informal learning is" (conversation with head of National and International Learning and Engagement, IWM, December 2015) and struggle to accept that *informal learning* is learning. "*Learning is seen as something that schools do, it is to do with children*" (conversation with head of National and International Learning and Engagement, IWM, December 2015). These opinions appear to be founded in the idea that the schools audience is easier to conceptualise. Schools are a "contained audience [and] therefore easier to understand" (conversation with head of National and International Learning

and Engagement, IWM, December 2015). However the learning teams at IWM (2015) accept that learning happens across all areas of the museum with adults, young people, children, veterans and volunteers across all audiences and in all types of activities. I have been told by museum learning staff at IWM (2015) that there is a misconception that learning is not about visitors having fun which may then account for the difficulty people have in accepting that learning takes place when for example, designing *Tattoo T-shirts*, making poppies or contributing to a *peace camp* (family activities that have taken place at IWM). I suggest that outside of the learning department, families, although a target audience for IWM, are not regarded as a core learning audience. This is not the case now, 2018.

Neuroscientists would argue that "there is no formal learning and no informal learning to be had. There is only one type (just learning), and it is simply the settings and approaches that differ" (Cutler, 2010). "Neuroscience casts light on how the brain acquires, stores and uses information, and what intrinsic and extrinsic factors can limit us from optimising this process. …Our brains develop neural networks that embed and store our learning. You have neural networks for every conceivable object, person, animal and situation you have ever encountered. Your neural connections occur thousands of times each day as you experience your world - at both conscious and subconscious levels" (Vorhauser-Smith, 2011: 4). We are always involved in the process learning (Wenger, 1998), intentionally or otherwise and Neuroscience appears not to differentiate between types of leaning. As discussed in the introduction, Cutler at Tate tells us that informal learning has been measured against the standards set for formal learning. "Given that our society prioritises formal learning, the informal tends to be labelled as self-improvement or leisure, implying a lack of necessity or seriousness" (Cutler, 2010).

From my position as a fee paid educator at IWM (2015), this appears to put the idea of informal learning and its programme at risk. There is some debate as to where to situate informal learning and the informal learning activities. Some tours, which people book and pay for, are situated in *engagement* rather than learning and, at the time of writing, this comes under a commercial remit. I suggest that there is a threat to informal learning if decision makers and planners in museums do not see for themselves, acknowledge and value the learning that happens outside of the *formal* remit. Informal learning is the *everything else* learning that happens in museums and appears to be suffering as a consequence of a misunderstanding of how people learn in museums; of

knowing where to position it and how to evaluate and value it (outside of visitor numbers and commercial framework).

Learning as Meaning Making

Museum learning, the focus of this research, is not something I define in terms of (academic) self-improvement and the desire to consciously gain knowledge. This research looks at one aspect of the family learning experience in museums, the meaning making process. This chapter looks at the learning experience in terms of *flow* (Csikszentmihalyi & Robinson, 1990) and the *setting* (Claxton, 2006). This thesis has looked at learning in museums in terms of meaning making, and discussed knowledge, not in terms of *what* is known and understood but *how* things come to be known and how understandings are generated. With my focus on free-choice family visits (Falk & Dierking, 1992), it could be said that meaning making, therefore learning, is largely driven by individual visitor interest. The previous chapters have explored the part museum interpretation plays in the learning experience putting forward that learning in the museum can require motivation and scaffolding.

Museum interpretation can be seen as information for visitors to consume (Lahav, 2011), rather than serve to motivate and scaffold learning. Museum interpretation is seen to have and also to communicate institutional meaning (Lahav, 2011) which can be dominant, be read as one way of seeing things. I have proposed that this idea is perhaps where the Horniman Museum's *light* (Table 8) approach to interpretation (see chapter four) is rooted, taking the view that interpretation, in terms of information and labels, may limit visitors responses.

"Knowledge cannot be divorced from its circumstances, nor can it be separated from action." (Hein, 1998: 19). The Hands on Base (HOB) in the Horniman offers a particular circumstance for museum learning, and all circumstances have a bearing on visitor meaning making and cannot be divorced from the knowledge that is constructed within them (Hein, 1998). The Horniman has created a situation in the HOB where information about the objects is largely supplied by the visitors themselves.

This research looks at *circumstances* of family learning in museums and explores conditions which engender optimal meaning making, looking at the part museum information plays in learning for family visitors. This thesis explores how information might be conveyed through museum interpretation to engender fruitful meaning making, developing criteria for an interpretive approach that best does this.

If museums comprehend the understandings (of their objects) to be contingent, and partly or largely dependent on visitors, their approach to interpretation will acknowledge that the visitor is as much a part of the process of meaning making as the museum itself. From a constructivist perspective the museum could plan "an exhibition so that it allows visitors to draw various conclusions from their interactions with it" (Hein, 1998: 21). As such the museum has a responsibility to create circumstances and the optimal conditions for learning. This research looks at how the museum affects visitor learning through the ways they manage interpretation in terms of content and perspective.

The Learning Experience

Visiting the museum is an experience but the experience of engaging with objects in museums does not automatically mean that learning has taken place. Dewey writes about the learning experience, telling us that "not all experiences are genuinely or equally educative. Experience and education cannot be directly equated to each other" (1938: 25). Dewey (1938) even describes some experiences as *mis-educative*. I use Dewey to argue that it is not enough to present objects and assume that visitors will simply get on with the business of learning. The experience of being in a museum and engaging with collections is not enough; it has to be planned for. I would argue that the opportunity to learn has to be designed into the experience.

Evaluating Family Flotilla

Continuing to look at conditions of settings that facilitate active participation, I present a final case study, *Family Flotilla*, a making workshop for families at the National Maritime Museum, Greenwich (NMM), which I evaluated as part of a volunteer programme (2012). It was a free, drop-in, family workshop suitable for all ages where visitors were given the materials to make a boat to contribute to a collaborative display. A flotilla of visitor-created boats was displayed on a paper river across the floor of the upper-deck (a large central atrium in the NMM). This workshop ran twice a day during the school holidays in June 2012 to mark the Queen's Diamond Jubilee with reference to the flotilla on the Thames held in her honour. Family Flotilla was facilitated by a freelancer, assisted by a volunteer. The NMM advertised this event on their website (see appendix 40). The primary reason for carrying out research into the Family Flotilla workshop was part of a larger project to evaluate the family learning programme at the NMM, to understand the needs of their family visitors. The criteria for evaluation were developed from the general aims in the informal learning programme (appendix 41).

The aim of the evaluation project was to find out about the visitors, who they were and what they thought, not to evaluate the success of any particular workshop. Using the idea of opportunistic sampling, sometimes called accidental sampling, (Cohen, Manion & Morrison, 2011) and with permission from NMM, I was able to use the evaluation as a case study for this research.

On behalf of the NMM I interviewed and observed families about Family Flotilla, also keeping a record of the data (with agreement from the NMM) for this research. Every participant in the workshop, 100% of the families I interviewed, said that Family Flotilla met their expectations and over half said that it exceeded their expectations. It was a popular, well attended activity with queues to take part. Every family I spoke to enjoyed the activity, with both adults and children involved in making their boat together. Having produced the evaluation report for the NMM, analysing visitor responses, the conclusion was that the workshop had been successful. This thesis examines why from a theoretical perspective and reflects on the criteria for its success.

The majority of families interviewed said that Family Flotilla was the best aspect of their visit to the NMM. Many reasons were given for this including: *Sharing your work on display, seeing other children's work, great materials, sharing of making skills amongst parents, being creative, hands-on, making things is very important, making things, everyone working together, parents remembering to cut and stick again, it's a free workshop* and *making boats* (visitor comments NMM, 2012).

This workshop provided the opportunity for children and adults to make a boat together using craft materials. Elsewhere I have been to workshops in museums where children get to join in and adults wait whilst they do so (see chapter one). In this instance family visitors said that having the opportunity to participate and contribute through the process of *making* something together was a rewarding experience and one of the best aspects of their visit. Participating in a making activity involves both process and outcome. Four findings about the organisation of Family Flotilla can be attributed to its success. These are four conditions of the setting that visitors were exposed to:

- Modelling
- Meaningful Constraints
- Scaffolding
- Rewarding Experience

The conditions are discussed below.

Modelling

A key to Family Flotilla's success was that expectations were clearly communicated, not just through marketing, but through *modelling* (Hohenstein & Moussouri, 2018; Simon, 2010), which can be thought of as "learning through observation and imitation" (Falk & Dierking, 2000: 49). A lack of communication can be a barrier to participation; visitors may not choose to join in if they do not have a clear enough idea of the activity and what it entails. Expectations of participatory activities must be clearly communicated; visitors need to know what it is and what is expected of them.

Adjacent to the activity *making* area was the display, the outcome, a flotilla of visitor-made boats sailing down a paper river across the floor of the upper deck. The connection between the visitor-made flotilla and the workshop situated next to it was obvious and immediate. It was apparent the visitors were making boats to be displayed. The link between process and outcome was made obvious by the proximity and immediacy of the display. Simon (2010) discussing good participatory practice, says that museums should have a "workable process to display, integrate, or distribute the participatory content – and ideally, inform participants when their work is shared" (Simon, 2010: 19-20). In Family Flotilla there was a clear workable, communicated process to both the making and display of the activity. Visitors work was purposefully shared in creating a display for the NMM.

The visitor-made boats in the display modelled expectations of the skills required to participate in the activity, they acted as cues to the nature of the workshop, demonstrating the concept and ideas, and the materials on offer. These cues helped visitors to choose whether to participate or not. The visitor-made flotilla on display made the participants' role and expectations of their contribution clear. "The easiest way to make contributors' roles clear and appealing to would-be participants is through modelling. When a visitor sees a handwritten comment on a board, she understands that she too can put up her own comment. She takes cues from the length and tone of other comments. The models on display influence both her behaviour and the likeliness of her participation" (Simon, 2010: 213-214). The display modelled the materials available, the skills required, the theme and expectations that boats were to be made to contribute to a collaborative piece of work. Putting the activity next to the display contributed to its success in communicating to visitors through modelling. Visitors had the information with which to decide whether to participate or not, seeing exactly what

they were choosing to be involved in, from the materials and skills required, to the expected outcome.

Meaningful Constraints

Modelled activity served to let visitors know what was expected and how to be successful in this activity, the boundaries were clear. Simon (2010) discusses participation in creative experiences and what enables visitors to be confident in doing so. She discusses "counter-intuitive design principles" (Simon, 2010: 22) and tells us that open-ended activities do not lead to self-expression, but, contrary to much museum programming, "constraints" (Simon, 2010: 22) are needed to help visitors participate confidently and succeed. In this case Family Flotilla had been planned to celebrate the Queen's Diamond Jubilee, linking to nearby celebrations on the River Thames. Meaningful constraints, are not seen here as restrictions and control imposed on the visitor in a negative way. This is not about the museum over-controlling the visitor (like a parent helping a toddler with a painting to make sure it looks like what it is supposed to, and consequently nobody believes the child really did it). Meaningful constraints are concerned with setting out the expectations about the activity so that visitors can make informed choices and are clear about what to do. Simon (2010) likens a situation without constraints to being given a blank sheet of paper and being asked to draw (see chapter four). Without guidelines this can be confusing and overwhelming in terms of knowing what to draw and where to start. Here the clear theme gave coherence to both the activity and the display. With guidance, visitors made complex structures with simple art materials (card, paper and tape) as they explored the qualities of these materials to make complex three-dimensional shapes, such as funnels, sails, etc.

The compelling nature of the display, the opportunity to be part of a shared experience relating to timely events, would have been lost if visitors had perhaps made random models, lacking overall coherence. The idea of making a boat to add to a flotilla provided meaningful constraints, setting out clear expectations of the activity as a whole. Constraints provided the boundaries, underpinning the instructions for the activity, allowing visitors to understand their role and play their part: "meaningful constraints motivate and focus participation" (Simon, 2010: 23). Constraints provided structure and enabled the experience to be scaffolded.

Scaffolding

Scaffolding (Vygotsky 1978, 1986, chapter two) provides a structure for visitor participation. Tasks can be scaffolded without prescribing specific outcomes. Aiming for optimum creativity, some museums have misguidedly offered open-ended activities so as not to dictate outcome, whether in making activities or meaning making. Similarly meaning making in the HOB at the Horniman can be seen as an open-ended activity (see chapter four). Open-ended activities have been perceived by some museums as the optimum way of facilitating visitor self expression, allowing visitors to express themselves freely without undue influence from the museum. In an attempt to allow visitors to participate and be fully in control of their own experience, museums have sometimes favoured open-ended environments and activities with no instructional scaffolding for fear of prescribing outcomes. "The misguided perception is that it's more respectful to allow visitors to do their own thing – that the highest-value participatory experiences will emerge from unfettered self-expression" (Simon, 2010: 25). However, scaffolding can guide visitors with starting points, prompts and instructions and therefore facilitate confident engagement in an activity or environment where visitors know how to succeed. A clear starting point and structured framework enables visitors to feel comfortable and confident making them more likely to participate. Comfort and confidence are among the prerequisites for effective museum learning (Hooper-Greenhill 1991, 2007).

Simon (2010) writes that in order for visitors to be fully in control of their own experience and allow for self expression, it is not an open ended approach but scaffolding that is needed. Scaffolding can structure participation helping visitors to contribute. Knowing their role and what is expected of them enables visitors to participate and express themselves creatively making unique personal contributions.

The Family Flotilla workshop with adjacent, visitor-made, display, modelled the activity, provided cues and scaffolding for the visitor. The workshop facilitator scaffolded the activity with clear instructions. Visitors were warmly welcomed and introduced to the activity. The facilitator was on hand at all times and was actively involved with visitors; discussing their ideas and providing feedback. Having had clear expectations and instructions communicated, visitors were able to make their own decisions and direct their own learning and creativity. Scaffolding can help visitors to feel confident and know how to succeed. Manageable tasks with understandable directions provide guidance so that participants know what to do. Open-ended tasks can lead to visitor

frustration. Visitors may not want to take part in events where they risk failure or experience frustration.

Rewarding Experience

Participants found the Family Flotilla workshop a rewarding experience, as revealed in their interviews. When questioned about the best aspect of their visit, their answers included: "being able to share your work on display" (interview with child, June 2012), and, "seeing other children's work" (interview with child, June 2012). The collaborative visitor-made display not only served to scaffold the activity but also provided a meaningful context and purpose for the task. As an outcome of the workshop, the flotilla was usable and useful to the NMM. The prominence of the flotilla demonstrated that the NMM esteemed and respected the visitors' work, put on display for participants and non-participants alike. As Simon quite simply puts it, "if the museum doesn't care about the outcomes of visitors' participation, why should visitors participate?" (2010: 17). This workshop provided a genuine opportunity to contribute to the work of the museum. It was rewarding for participants to not only have their work meaningfully displayed, but also to see what other visitors had made.

Simon (2010) discusses the value of giving visitors *real work*. Real work is useful to the museum and has value for both the museum and the visitors. Participatory projects provide:

1. Learning Value. *Visitors learn research or creative skills.*
2. Social value. *Visitors feel more connected to the institution and more confident of their ability to contribute to the institution (or project).*
3. Work Value. *Visitors produce work that is useful to the institution.*

(Simon, 2010: 195)

The *learning value* was demonstrated through the creative skills used to make the boats. The *work value* was demonstrated by the nature of the display. There was also a *social value* to the activity, not just in terms of connection to the museum (Simon, 2010), but a social benefit amongst the visitors themselves. Visitors talked about the social aspect of the workshop as having value in terms of being part of a collaborative project made with other visitors as well as within the family group, working together and seeing what others had made. One visitor mentioned that she had seen the "sharing of making skills between parents" (interview with parent, June 2012). Families

helped other families in the workshop as well as working together in family groups themselves, discussing ideas and sharing skills.

Findings from Family Flotilla

As part of a larger evaluation project for the informal learning programme at the NMM, my task was to establish family visitor motivations, outcomes and their relationship with the NMM.

From observation and interviews with visitors, it can be said that, from the visitor perspective, the activity was rewarding. I put forward that the four elements which contributed to its success - *modelling, meaningful constraints, scaffolding* and *rewarding experience* - can be applied to designing successful, participatory activities for families. From this evaluation with the family audience at the NMM, it became evident that the museum has a reputation for putting on activities that families can confidently participate in. The NMM also has a reputation for providing good family events. Most family visitors come to the NMM expecting there to be quality activities on offer. This case study looked at a programmed activity (as a useful comparison with the *free choice* remit of my research), and I suggest that these four criteria can be applied to the development of museum interpretation, creating a setting that facilitates learning, structuring meaning making as a family activity.

Part one of this chapter has looked at learning in terms of visitor skills, whereas previous chapters have explored meaning making in the context of museum learning seen as active participation, the visitor with the object. The second part of this chapter explores the conditions which help people to learn in museums. Drawing on Csikszentmihalyi and Robinson's (1990) idea of *informed experience*, developing the ability to see and understand, of learning in museums by means of being exposed to engaging with objects, the ways in which museums create conditions for learning are explored. At this point in this thesis, the focus shifts a little from how museums engender meaning making to the idea of how conditions for learning in museums can possibly teach (through exposure) more generic skills for learning. The term *teach* is used advisedly, not meaning instruction but modelling.

The Museum Environment as a Place to Learn

"It would seem that a primary role of the museum is to provide the kind of environment, both physically and educationally, that can supply the viewer with the support and confidence to confront (objects) works of art openly and honestly"

(Csikszentmihalyi & Robinson, 1990: 162).

This thesis focuses on the idea of the museum environment providing the visitor with the support and confidence to learn. Csikszentmihalyi and Robinson discuss the idea of visitors being able to trust their own instincts, to engage with a measure of conviction, and of being "open to known and unknown experiences" (1990: 161). It is the idea of the visitor having the confidence to face the unknown in a museum, and even be prepared at times to be in a place of not knowing as well as knowing, yet still engage.

The museum setting, the object in its surroundings and all that goes with it, such as the manner in which it is displayed and any accompanying interpretation, facilitates the challenge. The exact nature of the challenge of an object cannot be planned for in advance; it is determined by the visitor within the setting as they engage with the object, autonomous to the visitor. The exact nature of the challenge of a particular object at a particular time cannot be predicted nor replicated (Csikszentmihalyi & Robinson, 1990).

However museums do have control over settings, creating conditions which provoke challenge (though not necessarily specific challenges). The environments in which objects are placed play a significant part in promoting active discovery, in the physical context (see chapter two). How museums choose to display objects affects how visitors engage with their collections. Settings can assist, or even impede, visitor engagement, discussed earlier in relation to the HOB in the Horniman (see chapter four).

Csikszentmihalyi and Robinson (1990) draw conclusions about how the setting can provide support for the visitor, presenting general guidelines. These include:

- **Providing challenge and purpose** (discussed earlier in this chapter): "and depending on the viewer's level of skills, a number of more specific and graduated challenges might be provided, in recognition of the fact that without a

sense of purpose the encounter with objects, and therefore the entire museum visit, is bound to be diffused and unsatisfying." (1990: 174)

- **Optimal Installation**: "of art objects would help induce the flow experience in the viewer by promoting concentration and avoiding distractions." (1990: 175)

Purposefully providing support for the visitor involves consideration of the environment including object, museum interpretation, practical layout and general atmosphere. Consideration should be given to how the environment provokes challenge, facilitates engagement, engenders responses and encourages learning. Guy Claxton (2008) who (with a focus on learning in schools) discusses the idea of cultivating positive learning dispositions. I look at how strategies for cultivating learning dispositions in the classroom can be brought into the learning experience in the museum for informal learners such as families. Csikszentmihalyi and Robinson (1990) and Claxton (2006) both discuss the culture of engagement rather than looking at the practice of learning in isolation.

Learning to Learn

In order to create environments that support visitor responses museums need to be aware of the skills they use, such as Claxton's (2006) *learning dispositions*, which he also calls *habits of mind*. Csikszentmihalyi and Robinson (1990) talk of providing an environment which supports and provides the confidence to respond. To respond necessitates skills. Skills to see and understand and I suggest, *learning dispositions*.

Are museums expecting visitors to come with the skills to see and understand, and/or do they expect to support the development of these skills? Csikszentmihalyi and Robinson (1990) describe *informed experience* as a process of developing skills to see and understand through *exposure*. By its very nature the idea of *exposure* suggests that the development of these skills is a tacit process, not one of explicit intention, but something that results as a consequence of engagement. From observation visitors tend to talk about the things they are learning about, not about how they are learning these things, despite developing skills for learning them. Talking is a means by which families learn (Burnham & Kai-Kee, 2011; Falk & Dierking, 1992; Silverman, 1990). "Through learning conversations, explanations are constructed and revised as the family or group attempts to interpret exhibits and make meaning. Individual family or group members contribute to the conversation as part of a shared understanding and collaborative negotiation of meaning" (Riedinger, 2012: 126). Positive attitudes about

learning can be fostered by a supportive informal learning environment (Riedinger, 2012). How museums support learning for the family visitor, might as a consequence, enable the visitor to develop skills for learning through *exposure*.

I therefore put forward the idea that through active participation visitors not only create meaning, but, through exposure, also develop skills for seeing and understanding. That is, they develop skills for learning in a museum context. This concerns generic learning skills, skills of looking and understanding rather than specific skills, for example making skills. "Exhibitions must provide opportunities for all visitors, not just children, to participate …and [for visitors] to begin to apply the new understanding and skills that they have gained" (Black, 2005: 150). There is an argument for museums to not only consider interpretation in terms of content knowledge but also to recognise the skills needed to respond and connect to the interpretation. Museums could consider how they might provide support for the visitor, through exposing visitors to an environment in which they can develop skills for learning in the museum.

Through learning in a museum, visitors can develop the skills for learning. There is no suggestion that this always happens and is the same for every visitor. This is a kind of *chicken and egg* situation: which comes first, learning or the skills for learning? Visitors do not usually prepare for a museum visit (except perhaps for teachers and students) by brushing up on museum learning skills. I suggest that there is a more evolutionary process to the museum visit, where visitors *get on with* the learning experience and perhaps on reflection realise the impact the visit has had on them, although for many this may never be articulated. However, the process of learning has to start somewhere and it would be naive to believe that this kind of learning starts as visitors cross the threshold of a museum, but it would also be wrong for museums to deny their part, perhaps responsibility, in the process. Museums could provide an environment which supports the visitor with the task of learning. Learning is a transformative affective process (Falk & Dierking, 2000), which I suggest could be one of being transformed ideally into more effective learners. Claxton's (2008) learning dispositions, discussed below, is an example of the types of skills visitors bring to and develop in the museum learning experience.

Learning Dispositions: Skills for Learning

The setting of the museum is usually a rich, unique place, with objects that may be familiar or unfamiliar to the visitor. Museums could take an to display, particularly the use of museum interpretation, which sees the setting as a learning space and

therefore consider how this setting might promote learning. Museum environments could encourage learning dispositions such as curiosity, questioning, play evaluation and paying attention. For a full list, see table twelve (Claxton, 2006).

Learning happens within a space, whether the classroom, the museum or at home and that setting has a bearing on how the learning happens. Learning cannot be seen purely in cognitive terms (Hooper-Greenhill, 2007). Discussing learning dispositions, Claxton starts with the premise that "it is the job of education not to assume that learning will take place, but to do everything possible to help it to do so." (2006: 8) Just because learning has been planned for, will learning necessarily take place? To better understand how learning takes place, how the act of learning happens, this thesis looks at the part the setting plays, with a particular focus on *learning dispositions* (Claxton, 2006). With its focus on museum interpretation, it examines *how* it is presented as opposed to *what* (information) is offered. Museums cannot predict how the visitor will interpret their collection.

With learning at the heart of museum intentions (Hooper-Greenhill, 1991). Providing for visitors (including families) on general museum visits presents the museum with a unique opportunity to plan for learning, adopting approaches to interpretation that facilitate the learning experience and can increase visitors' learning capabilities. Claxton's (2006) focus is on improving and developing young people's capabilities for learning and describes the benefits of being an effective learner. "Being an effective learner …is not just a means – enabling students to learn more knowledge more efficiently – but a valuable end" (2006: 1). In planning for learning, promoting engagement, the museum can perhaps ask how they can also help their visitors become more capable learners. In becoming a better learner, Claxton's focus is not on outcomes (the focus of school learning), but on acquiring the capabilities for learning. "Becoming capable learner - …is not the same thing as being a successful student." (2006: 5). Museums, in planning for learning, could adopt approaches that seek to help visitors improve their capabilities for learning, expanding their capacity for learning. This being done through the act of learning itself through *exposure*.

Habits of Mind

Becoming a capable learner involves developing learning dispositions. Claxton (2006) discusses these in terms of habits of mind. Below I present them as Claxton (2006) does:

Table 12: Claxton's Habits of Mind (2006).

Curious (proactive)	Questioning ("How come?")	Clear-thinking (logical)	Collaborative (team member)
Adventurous (up for a challenge)	Open-minded ('negative capability')	Thoughtful (Where else could I use this?)	Independent (can I work alone)
Determined (persistent)	Playful ("Let's try…")	Self-knowing (own habits)	Open to feedback
Flexible (trying other ways)	Imaginative (could be…)	Methodical (strategic)	Attentive (to others)
Observant (details/patterns)	Integrating ((making links)	Opportunistic (serendipity)	Empathic (other people's shoes)
Focused (distractions)	Intuitive (reverie)	Self-evaluative ("How's it going?")	Imitative (contagious)

From this table, it can be identified the learning dispositions that came into play during our visit to HMS Belfast described in part one of this chapter. Many were also seen in Discovery in the Horniman (see chapter four). I discuss the triggers that prompted different learning dispositions during our visit to HMS Belfast. They can also be said to be triggers that engendered challenge in determining entry points (above).

These triggers can be used to identify the skills and learning dispositions that visitors use to make meaning in museums, with the idea that in designing museum interpretation, museums can not only consider how information is presented but also the idea of the museum as a space to learn, the skills for learning. Using the learning dispositions above, museums have the opportunity to create learning spaces that not only enable visitors to make meaning about their collections, but that also help the visitor develop the skills required to learn in the museum. This is a shift from simply discussing learning as meaning making to thinking about how best to help visitors learn skills to learn.

- **Museum Interpretation:** audio-guides

For a description of the audio guide see earlier in this chapter. To add though, despite the audio-guides being for individual use, we widely shared the information amongst ourselves, making them very much part of the social context of learning (Falk & Dierking, 1992). From using the audio-guide the following learning dispositions came into play:

Table 13: Claxton's learning dispositions present with our use of the audio-guide.

Curious (proactive)	On hearing information, the children wanted to find out more.
Collaborative (team member)	Sharing of information either through re-telling or passing on the audio-guide, "you must listen to this" (conversation with Miriam, 2014).
Imaginative (could be…)	Comparative information, being able to understanding through own experience i.e. weight of shells.
Attentive (to others)	Attentive to the audio-guide, we used them for the entire visit.
Integrating (making links)	Comparative information to make personal connections
Focussed (distractions)	Using the audio-guide, we spent longer in each area of the ship than our older children who did not have them.
Imitative (contagious)	Enthusiasm for sharing information and showing things to each other. "Have you seen…?" "Look at …" This resulted in Tom wanting to use the audio-guide that he had initially rejected.

- **Museum Interpretation:** discrete information panels

As well as audio-guides, museum interpretation came in the form of information panels.

Table 14: Claxton's learning dispositions present in our engagement with museum interpretation.

Curious (proactive)	Wanting to find out more.
Collaborative (team member)	Sharing of information amongst ourselves.

Imaginative (could be…)	Comparative information-understanding through own experience. We imagined being on board the ship in active service, guns firing, being shot at for example.
Attentive (to others)	We supplemented the audio-guide with information from the information panels. The experience prompted genuine questions and we listened to each others' answers.
Integrating (making links)	Comparative information. We were able to make personal connections, particularly to the deck showing life on board.

- **Museum Interpretation:** mannequins

Mannequins (described above) were in every area of the *Life on Board* deck, from the post room, to the kitchens. This includes replica objects, such as food, mail and even blood in what looked like a blood transfusion in the sick bay.

Table 15: Claxton's learning dispositions present when engaging with the mannequins and replica objects.

Curious (proactive)	Wanting to find out more.
Collaborative (team member)	Using the stretcher together.
Imaginative (could be…)	Clear visuals information (with no text). Mannequins helped Tom imagine *real life* on board, without them, "it would be boring" (conversation with Tom, 2014).
Attentive (to others)	Asking and answering each other's questions.
Integrating (making links)	Comparative information enabled us to make personal connections, particularly to *life on board*.
Focussed (distractions)	The mannequins enhanced the physical environment providing visual information. Few distractions, an immersive environment.

- **Live Interpretation:** handling objects and meeting volunteers

In the sick bay there were objects to experience firsthand, facilitated by volunteers. Time spent with the volunteers encouraged social interaction, not only with them but also amongst ourselves a family unit. They helped to create a social shared experience (Burnham and Kai-Kee, 2011; Riedinger, 2012).

Table 16: Claxton's learning dispositions present when engaging with museum volunteers.

Curious (proactive)	Being invited by volunteers to find out…
Collaborative (team member)	Problem solving as a family (stretcher).
Imaginative (could be…)	Trying out the stretcher as both patient and medic.
Attentive (to others)	Asking and answering questions amongst ourselves and volunteers.
Integrating (making links)	Connections with *Life on Board.*
Focussed (distractions)	Visual information, few distractions, an immersive environment. Focussed through the use of authentic and relevant handling objects and conversations with knowledgeable volunteers.
Imitative (contagious)	The desire to share information between ourselves.
Playful (let's try)	The experience of handling objects.

- **Museum Interpretation:** The physical environment of the ship itself

The make-up of the ship gave visual clues as to its purpose and function. From accessing the ship via a gang-plank, the ship's environment provides a context for learning. This meant that some aspects of the ship could be experienced physically not just looked at or read about. This was particularly true for the punishment cells with a wooden bunk and block for a pillow that you could lie down on. All nine decks were accessed through hatches using the original ladders and space was very tight with narrow platforms and walkways through the boiler room. This was not then a distraction, (one of negotiating other visitors) but an experience that made the visit more meaningful.

Table 17: Claxton's learning dispositions engendered by the physical environment.

Methodical (strategic)	We were able to make meaning through orientating ourselves in the space, making sense of the physical environment. We were able to navigate the space and the information. (Falk and Dierking, 2000).
Adventurous (up for a challenge)	HMS Belfast provided a sense of *mystery*, a moderate sense of the unknown encouraged exploration. (Falk and Dierking, 2000).
Focussed (distractions)	The physical environment, visual information, drew us in. Due to the immersive nature of the experience of being on board, there were few distractions.
Imitative (contagious)	Enthusiasm for sharing information and showing things to each other. "Have you seen…?" "Look at …".

The tables above are not exhaustive, many other learning dispositions came into play as well. Such as *empathetic* (other people's shoes) in the way we imagined life on board.

Our experience on HMS Belfast is examined in terms of *Flow* and the idea of *optimal installation* (Csikszentmihalyi & Robinson, 1990) as a means to support visitors both with engagement with museum collections and with the skills required to do so. Below is a list of other features of the museum setting that Csikszentmihalyi and Robinson (1990) discuss in creating optimal conditions for engagement. These being evidenced in our trip to HMS Belfast. The setting should:

- *Set the experience in motion, and enhance the skills of the visitor*
- *Take visitors on their own terms*
- *Set clear goals and give feedback*
- *Make information available to visitors who want it*
- *Acknowledge the possibility of meaning, and no right or wrong responses*

<div align="right">(Csikszentmihalyi & Robinson, 1990)</div>

The Practice of Museum Learning

I have suggested that optimal learning environments could be created in museums for family learning in a free-choice context by having an approach to interpretation that focuses on developing visitor learning through looking to expand their capacity to learn. This applies to highly accomplished learners and adults as much as it goes for four year olds. However, I acknowledge that visitors visit museums with differing levels of proficiency. This involves a slight change in perspective, a shift of focus from planning for the visitor to learn about their collections, to one of asking *how do we help visitors learn better in our institution?* And *how does our approach to programming, display and interpretation promote the visitors' capacity to learn?* I see this as of primary importance. In museum learning there has been a move away from seeing outcomes in terms of knowledge acquired by the visitor (Hein, 1998; Hooper-Greenhill, 1991, 2007). In emphasising the learning experience over learning outcomes, Black (2012) stresses that museums should prioritise visitor engagement over conveying information. It is from this perspective that I put forward the idea of museums actively helping visitors learn the skills to learn in museums through *exposure*.

Exposure: learning how to learn in a museum (an analogy)

In learning how to learn in the museum you have to be doing it. This is discussed in terms of *exposure* and *informed experience* (Csikszentmihalyi & Robinson, 1990). Using an analogy of learning to swim, you cannot learn to swim in the classroom. However well someone describes the possibility of floating and how to keep your head above water, it is not possible to know if we can do it or not, to understand how to swim and know what it feels like to swim, if we don't get in the water. Many people have climbed down the steps into the water (of the museum) and not wanted to let go of the sides, unsure whether or not they can swim (that is engage; learn). Learning to swim is something that has to be done in the water, it is essential that you get in the water and experience it. Is this the case with learning in museums? Although some people are not, and never will be, interested in swimming.

I saw the fear of not knowing *how to* engage prevent visitor engagement in the Natural History Gallery in the Horniman with the woman who did not want to show her ignorance (see chapter four). The swimming analogy might sound a little overly dramatic, as if you cannot swim you may drown, but there are people who after one bad experience will not get back into the water. Also, there is the question of the depth

of the water; to start with you make sure your feet can touch the bottom of the pool. Museums could provide support for *how to* learn in their institutions, make visitors feel safe, offer (tacit) training in how to learn, provide buoyancy aids, giving them the confidence to eventually head for the deep end. This returns to the idea of seeing the museum's role to create environments that provide support and confidence for the visitor cited at the beginning of this chapter. Learning dispositions, although experienced, are not necessarily articulated, visitors may not even be conscious of them, therefore I would consider the acquisition of them to be largely tacit.

With this in mind, the intention of museum interpretation can become to consider how best to help visitors learn and develop further capabilities for learning. The museum is in a unique and privileged position, to be able to offer an immersive learning experience, an embodied learning experience (Hooper-Greenhill, 2007). Visitors cannot help but be exposed to the museum environment, and that environment will impact how they see and understand, *informed experience*, whether positive or negative. The idea of *exposure* as a means for learning implies that museums, intentionally or otherwise, at some level contribute to the museum learning experience (a transformative, affective experience: Hooper-Greenhill, 2007). With every visitor to the museum there is an opportunity to contribute to their informed experience. Whatever is learnt in the museum, whether information or skills, it "becomes part of the visitor's permanent store of knowledge, available for use long after the museum visit has ended" (Falk & Dierking, 1992: 114).

What do Museum Educators Think People Learn in Museums?

Black tells us that "learning is both process and an outcome – the process is about *how* we learn, the outcome is about *what* we gain from learning" (2012: 77). Visitors create meanings and whilst these outcomes cannot be prescribed by the museum, the museum can plan for them to happen. Learning in the museum happens through active engagement with objects, driven by visitor interests, but what do museum educators think people learn in museums? This can be answered using the research of Rebecca Herz (2015). Her research primarily looks at museum learning for school visits; however I suggest that her findings could be applied across a broader audience.

Rebecca Herz (2015) in her blog, *Museum Questions: Reflections on Museums, Programs and Visitors*, has undertaken research into the goals and value of museums for school groups. Herz has fifteen years of museum education experience and is the

director of the Peoria PlayHouse Children's Museum, Illinois, USA. She set out to answer the question, "why should school groups visit museums?" (Herz, 2015), a question she put to museum educators in the USA and UK. She examined the goals and intended outcomes of current schools programmes, planned for by museums, making them explicit. She looked at the rationale behind current schools programming in a selection of museums, bringing the aims of different museum educators together. She collected and identified formal museum learning goals from the practice of different museum educators, identifying shared themes in order to inform future programming. "We all have goals, and it is important to make these goals explicit. The more we simplify and understand what we are reaching for, the more we can think about designing toward those end games" (Herz, 2015).

Herz (2015) asked museum educators about the value of museum visits for schools, what did they think was the purpose of a *field trip*. From their responses, she identified six common learning outcomes:

- ***Understanding the world:*** *Students will understand where the world around them comes from; students will question the world around them and the decisions people make; students will learn about the community in which they live;*
- ***Asking questions:*** *Students will know how to ask questions about the past, in order to contribute to a functioning democracy and become an active participant in the world.*
- ***Self-understanding:*** *Students will understand themselves better; students will access and feel ownership of a "third space" in which students are free to be themselves; students will find role models.*
- ***Critical thinking:*** *Students will practice critical thinking skills; students will process ideas and make connections to other knowledge; students will think about abstract ideas.*
- ***Interpersonal skills:*** *Students will practice or learn interpersonal skills such as tolerance and empathy; students will learn how to articulate experiences and listen to others;*
- ***Independent museum visitors:*** *Students will learn how to be independent visitors to museums; notably, a number of people commented on this post supporting the importance of this goal.*

(Herz, 2015. Museum Questions)

It is interesting to note that these learning outcomes do not reference the school curriculum or the museum collection. Herz (2015) has identified learning outcomes, the key ideas put forward by museum educators. Without reference to the school formal learning agenda, these ideas can be transferred and applied to the goals for the family informal learning agenda. They appear to be applicable to both formal and informal experiences of museum learning, applied to all visitors who actively engage with the museum and its collection. Their concerns do not seem to be particular to any specific visitor or group of visitors, as they see the learner as an individual. *Gaining an understanding of the world and oneself, asking questions, critical thinking* and *interpersonal skills* are outcomes for learning across many types of institutions, for formal learning as well as for self directed learning in the museum. The final learning outcome on the list, that of learning "how to be independent visitors to museums" (Herz, 2015), suggests that museum educators value life-long learning; beginning at school (in this instance) and becoming informal learners as visitors become adults.

Having collated these goals for schools learning given by museum educators, Herz (2015), discusses what they reveal that museum educators deem is important. She identifies these findings:

- *Museum educators primarily see field trips as developing transferable skills.*
- *Museum educators privilege understanding over knowledge.*

Transferable Skills

"Four of these six goals are about having theoretically transferable skills – question-posing, critical thinking, interpersonal skills, and the ability to visit a museum independently. We see museums as places in which students can learn to think and feel independently" (Herz, 2015). This aligns with Claxton's (2006) ideas about promoting the learning experience, helping all to become effective learners. Learning dispositions are transferrable, not particular to one isolated learning experience. In Herz's research we see that museum educators acknowledge that museums have value as places to develop transferable learning skills, learning that goes way beyond that of the classroom and teaching to a set curriculum. Museum educators also cited the learning skills listed as important goals for the museum, but are these goals explicitly planned for in museum policy and practice?

Here are other examples of where transferrable learning skills are seen to happen in museum learning. The V&A explicitly offers secondary school and college students the

opportunity learn transferrable skills in their programme of events designed for schools. "Secondary school and college students acquire new and transferable skills, knowledge, curiosity and inspiration from our extensive programme of activities and events" (V&A website, 2017). Helen Chattergee (2008), from University College London (UCL), proposes that object based learning in university museums provides unique opportunities for the dissemination of transferable skills, as well as knowledge transfer, observational and practical skills. "Using objects in teaching not only helps students to understand their subject but also develops academic and transferable skills such as team work and communication, analytical skills, practical observation and drawing skills" (UCL website, 2017). Transferrable learning skills are seen as something that can be learnt from object handling.

The Generic Learning Outcomes (GLOs, appendix 11), (see chapter two), (Hooper-Greenhill, 2006) can also be seen to address the idea of transferrable learning skills with the outcome, *Increase in skills.*

Generic Learning Outcomes (2003)

- *Increase in knowledge and understanding*
- *Increase in skills*
- *Change in attitudes or values*
- *Evidence of enjoyment, inspiration and creativity*
- *Evidence of activity, behaviour, progression*

Privileging Understanding over Knowledge

Privileging understanding over knowledge fits with a constructivist view of learning (Hein, 1998) where visitors draw their own conclusions, whether cognitive or emotional. A constructivist view of learning is "based on a premise that learning is an active process – actively involved learners, reflecting on their experiences, will construct their own understanding of the world we live in, building from what they already know" (Black, 2012: 79-80). It is not only important that the museum acknowledges that many possible meanings can be reached by visitors concerning their collections, museums should facilitate this.

Providing information about objects does not work against the idea of allowing visitors to make their own meanings, but it needs to be done in an environment which promotes active engagement, allowing visitors to be in charge of their own learning.

Within constructivist learning, there is a place for information about objects and the visitor works with this information, but the focus is on engagement (Black, 2015) rather than the acquisition of information, creating conditions that facilitate meaning making.

In Herz's (2015) research we see that museum educators value skills for learning, skills that enable students to think and feel independently, transferable skills that are not necessarily particular to the museum experience. How can they be promoted in the museum? Are they a by-product of learning in the museum or should they be taught as a discrete subject? Or are they a result of the two? More research needs to be done into how these skills are learnt in the museum. Transferrable learning skills are seen as outcomes by museum educators but are opportunities to develop these skills explicitly incorporated into the design and planning of museum interpretation? Black (2015) speaks about broadening the idea of learning goals for museums with one outcome being, a desire to learn more. I propose that museum interpretation should be focussed on engaging the family, rather than on learning outcomes, providing support for family visitors to develop skills to see and understand using the idea of *exposure*.

How to Implement This

Although this thesis does not specifically address how these changes might be made, helping the family visitor develop skills for learning in the museum, Claxton (2006) sees the possibility of change as gradual yet possible, and not the same for all institutions. "Best practice for expanding learning capacity is more likely to look like a cloud of possible small changes that precipitates differently in different contexts" (Claxton, 2006: 14). "Educational innovation happens not by replicating good practice, but by re-growing it, under different conditions." (Claxton, 2006: 14). I do not make suggestions for change as such. There is no *one size fits all* (family learning) methodology. This research has explored conditions of, and criteria for, family learning, and developed an approach rather than a manual.

What Herz's research shows us is that museum educators see becoming a better learner as a result of learning, as Claxton (2006) does. It is therefore being acknowledged that museums have value as places to develop transferrable learning skills. This links to another learning theory, that of the *Learning Cycle* (Black, 2005: 133). The adaptation that fits here is the *virtuous cycle* (Black, 2005:134) (Table 21).

Table 18: The Virtuous Cycle.
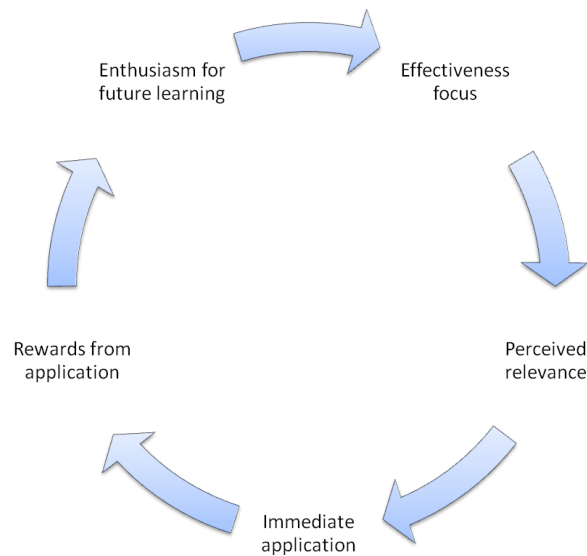
The virtuous cycle has no beginning point but the idea of developing an *enthusiasm for future learning* (table 18, top left) will keep the momentum of learning going. Visitors "can learn from the experience of their visits to the extent that they are motivated toward developing learning cycles, …thus the outcome of experiential learning can be action or learning, or even more learning" (Black, 2005: 133). "Every experience lives on in further experiences." (Dewey, 1938: 27). So one aspiration for family learning in museums is for families to leave museums with a desire to learn more, and this desire for further learning, although not necessarily articulated by families themselves as a learning outcome, would surely happen if *flow* was experienced? If absorbed in, and intrinsically motivated by the learning experience, family learning in the museum would therefore become a reward in itself. It is the responsibility of the museum to create the circumstances for this to happen, to facilitate the focussing of attention, similar to Black's (2005) *effectiveness focus*, a reward from application (Black, 2005). From this position the activity becomes a reward in itself (Csikszentmihalyi and Robinson, 1990), resulting in an enthusiasm for further learning as in Black's (2005) *virtuous cycle*.

This study has explored ways in which museum interpretation can not only support family learning, but also how it can help the family learn skills for learning in the museum. This chapter began reiterating that the focus of this research on family learning in museums was on meaning making, looking at how things come to be known. The case studies above have looked at the quality of the learning experience and this chapter has explored how visitor skills and the environment in which meanings

are created both contribute to the learning experience. Key to these findings is the idea of *informed experience* (Csikszentmihalyi & Robinson, 1990). Informed experience concerns the development of skills to see and understand through exposure. That is, the idea of the gradual transformation of visitor skills through the learning experience itself. This is a process that Csikszentmihalyi &and Robinson (1990) say happens through *exposure*.

The case-studies at the Horniman (see chapter four), National Maritime Museum, Greenwich and HMS Belfast have highlighted different ways in which the learning experiences are driven by both visitor skills (Claxton, 2006) and the setting in which they occur. The criteria that facilitated effective family learning throughout the case studies in chapters four, five and six have been explored, and this chapter ends with a discussion on the idea of creating opportunities for visitors to learn skills for learning in museum interpretation. The key means by which this can take place are largely drawn from the ways which Family Flotilla (earlier in this chapter) was presented to family visitors to the NMM. The most significant features of successful family learning are:

- Modelling
- Meaningful constraints
- Scaffolding
- Rewarding Experience

These are the main criteria for family learning, the frame upon which I would hang the smaller details. I put forward that information is essential in attending to the smaller details of family learning. In chapter four I suggested that basic information such as being able to identify an object, for example the *squirrel* and *Shabti* at the Horniman in chapter four, plays an important part in scaffolding the family learning experience. I suggest that information can equip families to learn. Visitors often come to objects with some prior knowledge, however the museum cannot know what that consists of. I put forward that museums ought not to presuppose any visitor knowledge (Monti & Keene, 2013) and the provision of information can provide opportunities and entry points for family visitors to access objects. It can act to scaffold the family learning experience, playing a part in the act of distributed meaning making (Falk & Dierking, 2000) for the family and can feature in the dialogic process of guided, shared interpretation (Burnham & Kai-Kee, 2011) between the museum and the family.

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Appendix

Chapter One

1. Examples of self-guided offers for families: The Fitzwilliam Museum, Cambridge: http://www.fitzmuseum.cam.ac.uk/learning/family and Natural History Museum, London: http://www.nhm.ac.uk/visit/galleries-and-museum-map/museum-trails.html Last accessed 14/12/17.

2. Imperial War Museums: Tickets for HMS Belfast, Children's tickets - age 5-15: http://www.iwm.org.uk/visits/hms-belfast/tickets-for-hms-belfast Last accessed 14/12/17.

3. Castell Henlyss, Pembrokeshire, Wales: http://www.pembrokeshirecoast.org.uk/default.asp?PID=261 Last accessed 14/12/17.

4. *Flexi-schooling: Part-time homeschooling:* http://www.home-education.org.uk/ http://www.home-education.org.uk/articles/article-flexi-schooling.pdf *What is Flexi Schooling? Flexi Schooling describes an arrangement between the parent and school where children are registered at the school in the usual way but attend school only part time. The rest of the time the child is home educated. The numbers of children educated under flexi-schooling arrangements are growing and there are now several schools around the UK which could be said to be specialising as flexi schooling, schools. There may be any of a number of reasons why parents may want to arrange flexi schooling for their children, for example: · Illness · A desire to home educate while making use of school for some subjects · school Phobia/refusal · A staged return to school after an absence for some reason Whatever the reason, neither local authorities nor schools are likely to agree to such arrangements unless it is clear that it is in the child's best interests.* Last accessed 14/12/17.

5. National Curriculum, Department for Education: https://www.gov.uk/government/collections/national-curriculum Last accessed 18/11/7.

6. National Curriculum and Assessment: Information for Schools, Department for Education: https://www.gov.uk/government/publications/national-curriculum-and-assessment-information-for-schools Last accessed 18/11/17.

7. Engage Volunteer Programme:
   http://www.horniman.ac.uk/get_involved/volunteering-with-our-visitors Last accessed 14/12/17.

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Chapter Two

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13. Tate Britain commission 2014: Phyllida Barlow March-October 2014:
    http://www.tate.org.uk/whats-on/tate-britain/exhibition/tate-britain-commission-2014-phyllida-barlow Last accessed 14/12/17.

14. Early Years and Families at Tate are a specific target audience group with its own learning team. *Introducing Tate Learning* (2014):
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15. Kids in Museums Website: https://kidsinmuseums.org.uk/ Last accessed 14/12/17.

16. Object Conversations at Imperial War Museum, London:
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17. Henri Matisse (1953) *The Snail*: http://www.tate.org.uk/art/artworks/matisse-the-snail-t00540 Last accessed 14/12/17.

18. Morris Hargreaves, McIntyre, Cultural strategy and Research Agency: https://mhminsight.com/ Last accessed 14/12/17.

19. Morris Hargreaves, McIntyre, *Culture Segments*: file:///C:/Users/Daniel/Downloads/culture-segments-booklet.pdf Last accessed 05/09/18.

20. *Voyage of Discovery* Trail, Imperial War Museums, HMS Belfast: http://www.iwm.org.uk/sites/default/files/documents/HMS%20Belfast%20trail%20low%20res.pdf Last accessed 01/12/17.

21. Mutimedia Guides at Tate Modern: http://www.tate.org.uk/visit/tate-modern/things-to-do/multimedia-guides Last accessed 01/12/17.

22. Silver Trail, V&A, 2009:

Family Trail

Silver can be made into all sorts of objects from swords and spoons to model leopards and lions.

Does anyone in your family own something made from silver? Yes / No

What is it?

Daphen ring

First thoughts

As you walk into the Galleries, think carefully about the silver objects you see.

Circle some of the words you think describe them.

expensive   strange   old
dull   pretty   hard
cheap   shiny   ugly   soft
lot of type of art

Make your mark

Find the case with the magnifying glasses over the objects. Look through the magnifying glasses and you will see small marks on the silver called hallmarks. They tell you about the quality of the silver and where it was made.

Look for these hallmarks.

Circle the ones you can see on the objects.
The lion tells you that the object is made of solid silver and is english.

Silver treasures

For many hundreds of years people bought silver to show how rich or important they were. If they were ever short of money they could sell it. Nowadays more people can afford to buy silver objects.

VICTORIA AND ALBERT MUSEUM

Eating and Drinking

Look at the objects in case 9.
Find the plate at the bottom of the case. Draw a picture of the food you would like to eat off it.

There is a number by each object in the case.

Write down the number of an object you think was used for...

ate steak & chips   2 9 6   drinking wine
14   eating sloppy foods
15 17 20   drinking beer
holding salt
47 49   holding sugar

Moo... ve to your right to case number 12.
Draw one of the ...
view
would like
a silver

What do you think they were used for? Clue: something to pour on your strawberries?

Silver

The Silver Galleries

V&A Learning

Animal hunt

Look in all the cases and find 4 different animals.

Write down the name of the animal and the name of the object you found it on.

animal   object
bear   plate
cow   ...
lion   bowl
lamb   ...

Put the kettle on!

There is a large water urn in case 4. It held hot water like a kettle.

Can you see a picture of a man on it? He is wearing the traditional clothes of a particular country. What country do you think he is from?

What drink comes from this country?

Clue: think about what the water in the urn might have been used for.

Describe the people on the urn to the person you are with. What are they like, what are they doing?

Look at the pictures all the way round the urn.

And the winner is...

Find a case of silver cups and trophies.

Many of these cups were used as prizes for sporting events.

Which cups do you like the best?

I dont like gold

Draw the handles and lid from your favourite cup on to the outline below to create your own sports prize.

Don't forget to...
... write the name of the winning team or person on the cup
... add the name of the sporting competition
... draw decorations on the cup

Keep it cool

Opposite the Discovery Area there is a wine cooler. It would have been filled with ice to keep bottles of wine cold.

How long did it take to make the wine cooler? (Read the label)

Circle the answer: 4 weeks   4 months   4 years

What fruit has been used to decorate it?

Why?

Find 4 small snails that are hidden in the decoration.

...and finally

Traditionally silver has been used for presents at birthdays, Christmas and weddings. Imagine you could give someone one of the silver objects in this gallery as a present.

Draw the one you would give. Write down who you would give it to.

23. Cumberland Pencil Museum, Keswick, UK. (Now Derwent Pencil Museum) (2009):
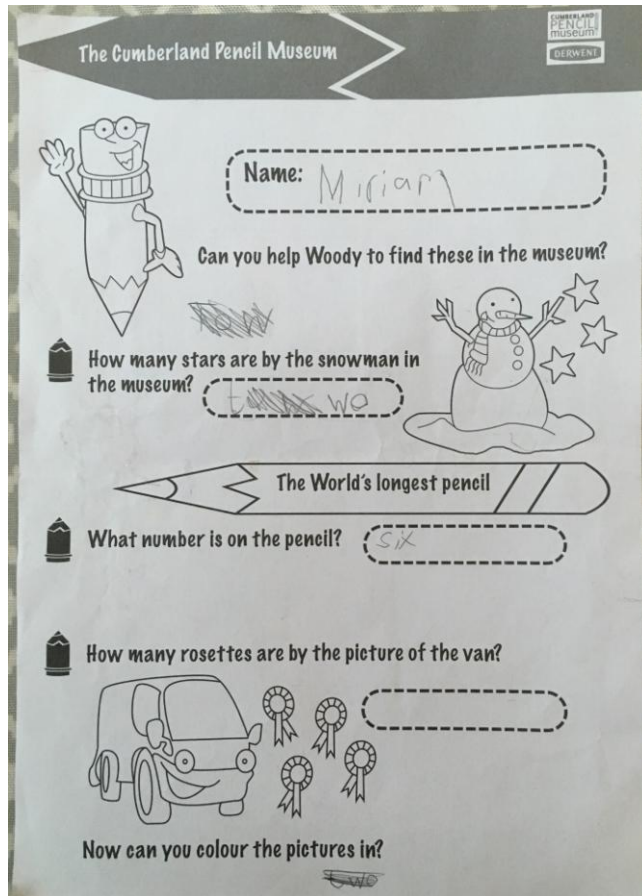
24. *Big and Small in the V&A*, blogpost, Art-e-facts: Encounters with Objects in Museums: http://artefactsobjects.blogspot.co.uk/2014/08/big-and-small-in-v.html Last accessed 17/12/17.

25. Mutimedia Guides at Tate Modern: http://www.tate.org.uk/visit/tate-modern/things-to-do/multimedia-guides Last accessed 17/12/17.

26. Howard Gardner presents the Theory of Multiple Intelligences, in which he identifies eight distinct intelligences; Interpersonal, Intrapersonal, Logical-Mathematical, Naturalist, Spatial, Bodily-Kinaesthetic, Linguistic, Musical. http://multipleintelligencesoasis.org/about/the-components-of-mi/ Last accessed 17/12/17.

27. Anthony Gormley (1992) *Amazonian Field*: http://whitecube.com/channel/in_the_museum/antony_gormley_on_amazonian_field/ Last accessed 17/12/17.

28. Cornelia parker (2004) *Heart of Darkness*:
https://www.artsy.net/artwork/cornelia-parker-heart-of-darkness Last accessed 17/12/17.

29. Tue Greenfort (2009) *Medusa Swarm*:
http://www.strozzina.org/greenplatform/e_greenfort.php Last accessed 17/12/17.

30. Darren Almond (2008) *Tide*: https://www.graysonclocks.com/projects/darren-almond-%E2%80%9Ctide-2008%E2%80%9D-project   Last accessed 17/12/17.

31. Yael Bartana (2003) *Kings of the Hill*:
http://www.tate.org.uk/art/artworks/bartana-kings-of-the-hill-t11804 Last accessed 17.12.17.

32. Tracey Moffatt (2007) *Doomed*:
http://www.roslynoxley9.com.au/news/releases/2007/07/05/130/ Last accessed 17/12/17.

Chapter Four

33. Supervision Checklist – The Role of the Explainer: Scanned document

Supervision checklist - The Role of the Explainer			
Name of supervisor: _____ Name of Explainer: _____ Date: _____			
	YES	NEEDS WORK	COMMENTS
1. Practicalities			
1.1 Signs in at reception; collects correct keys and picks up Explainer name badge in corner office			
1.2 Arrives on time i.e. 15 minutes before session starts			
1.3 Museum Orientation – aware of museum layout, toilets etc			
1.4 Health & Safety – aware of fire exits & fire procedures			
1.5 Knows what to do in case of first aid or other incidents			
1.6 Knows what to do if other Explainers don't arrive			
2. Set up of HOB			
2.1 Ensures room and discovery boxes look tidy, with display objects in boxes facing out			
2.2 Makes sure visitor comment book and stickers are out			
2.3 Sets out three chairs for participants less able to stand / sit on floor			
2.4 Moves wooden barrier to correct position			
2.5 Makes sure stage area is open and tidy and curtains are pulled back			

3. Care & conservation of objects			
3.1 Models good object handling skills			
3.2 Communicates these skills, ensuring objects are handled properly by visitors. Feels confident to intervene if they are not.			
3.3 Care is taken when objects removed from cabinets. This includes supervising the objects when out of the cabinet and using judgement on when to give objects out and to whom.			
3.4 Ensures no food or drink is consumed in the HOB and is able to explain why to the public			
3.5 Reminds people to wash hands after/before handling when appropriate			

4. During the session			
4.1 Encourages and facilitates visitors to explore the handling collection			
4.2 Understands that the session is open to all, not just children and families			
4.3 Understands that the session starts with a general introduction to whoever is waiting and what this intro should contain			
4.4 Aware that during the sessions we record figures and the age categories are 0 – 4 yrs, 5 – 15 yrs and 16+ yrs			
4.5 Aware that everyone who comes into the HOB should be greeted by either an Explainer or a volunteer who can explain the session. **This should include:** • A friendly welcome and your name • A brief explanation of what the room is *(the home of the museum object handling collection so we have lots of things you can touch. Can say what kinds of things or that they represent the 3 collecting areas of the museum)* • Point out the Discovery boxes *(tell people they can explore them and try to work*			

out what theme links objects together) • Ask them to put everything away when they are finished,*(there is a picture inside to help them)* and to handle the objects gently • It is a drop in sessions so can stay for as long or short a time as they like *(until 3.30!)* • Any questions can ask one of the explainers • Enjoy			
4.6 Crowd control at busy times: knows when to shut the door.			
4.7 Maintains control – is an authority, not authoritarian.			

5. Re-set of room			
5.1 Resets the Discovery Boxes correctly: • Checks everything that should be there is there • Everything is in the right place • Makes the boxes look tidy, welcoming and inviting • The key objects should be facing out • Puts sheets into ring binders if these have fallen out. • Knows and follows procedure for broken objects (if something is broken then it should be put on a shelf, in the corner office with broken object sheet and an object removed for repair in the gap in the Discovery box)			
5.2 Makes sure masks, costumes and puppets boxes are in the correct areas			
5.3 Resets stage area and turns tables back around			
5.4 Fills in Explainer feedback form with colleagues			

6. Learning and participation skills			
6.1 Encourages participation; includes participants in demonstrations of objects			
6.2 Asks questions of the visitors & validates their inputs			
6.3 Body language – makes good eye contact; maintains interest (upbeat performance); friendly			
6.4 Appropriate (jargon-free) language and accurate knowledge of the objects			
6.5 Accessible/approachable style – use of humour			
6.6 Addresses all age groups – toddlers to adults			
6.7 Addresses all abilities and helps to ensure equal access to the objects / session for all			

7. Equal Opportunities			
7.1 Sensitive to race, gender, class etc of members of the public			
7.1 Respectful of objects and the cultures that they originate from			
7.3 Able to challenge audience perceptions in a positive, considered way			

Any other comments

34. Campaign For Learning: https://www.campaign-for-learning.org.uk/ Last accessed 17/12/17.

The Horniman Public Museum and Public Park Trust
Learning Policy 2010

Introduction

Learning has always been at the heart of the Horniman Museum and Gardens. In 1901, Fredrick Horniman dedicated the Museum and the surrounding land as a free gift to the people of London for their recreation, instruction and enjoyment.

Today the principle activity of the trust is described as:

> The provision of a public, **educational** museum and gardens to encourage a wider **appreciation** of the world, its peoples and their cultures, and its environments'

The term *Learning* can be interpreted in many ways. The Horniman adopts the following broad definition of learning.

> 'Learning is a process of active engagement with experience. It is what people do when they want to make sense of the world. It may involve the development or deepening of skills, knowledge, understanding, awareness, values, ideas and feelings, or an increase in the capacity to reflect. Effective learning leads to change, development and the desire to learn more.'
>
> (Campaign for Learning and MLA)

Learning principles

These following principles inform learning provision across the Museum and website.

1. Learning opportunities will use our collections to provide **unique** and **stimulating** experiences for the **enjoyment** of all our audiences.

2. Learning opportunities will recognise that **people learn in different ways** and have **different strengths and interests**, so multiple ways of **participating** will be offered.

3. Learning opportunities will support and empower visitors to make their own **choices** about their learning and ensure **personal experience** is built upon and celebrated.

4. A visit to the museum should **inspire** all our audiences about learning and **motivate** them to continue learning and supporting others to **learn beyond the visit**

5. Our learning experiences **will** reflect the **diversity** of cultures locally and globally They aim to increase **inter-cultural respect and may also challenge** discrimination and racism.

6. We will listen our visitors and also our non-visitors and respond to their feedback. We will **evaluate** the impact of our learning services and always seek ways in which to **improve**.

7. We will actively **facilitate self-representation** by all groups within the Horniman's community, both in museum decision-making but also showcased through public activities and events.

8. 8. We will strive towards **access for all** regardless of age, sex, social status, ethnic origin or ability and find ways of **removing barriers to participation**.

The ultimate object questioning sheet…

A comprehensive list of questions you can ask to find out about objects. Some can be answered using your senses, some are personal judgements, some you might need to guess, some are based on what you know about similar objects and some are up to your imagination!

Physical features & materials

- What colour is it?
- What is it made of?
- How big is it?
- Is it heavy or light?
- What shape is it?
- Does it feel hard or soft, rough or smooth?
- Does it feel warm or cold?
- Does it feel fragile or strong?
- Does it make a noise
- Has it been repaired, altered or improved?
- Do you think this is the whole object or just part?
- Is it old or new?
- Does it smell of anything?
- Is it made from one material or many?

Production

- Is it a natural object or has it been made by someone?
- Is it made from natural or man-made materials?
- Who made it?
- Has it been made by lots of people or just one?
- Why did the maker choose these materials?
- How has it been made?
- Did they use a machine or a mould?
- Is it carved or hand shaped?
- Was it made all at once or over a period of time?
- How has it been joined together – glue, solder, string, wire?
- Is it made from recycled materials? If so, what was it before?
- When was it made?
- Where was it made?

Think about the constraints on the maker/s – availability, money, time etc

Use

- For what purpose was the object made?
- Has its use changed over time?

Aesthetic value

- Do you like the way it looks?
- Do you like the way it feels?
- How could it be improved,

- What is it for?
- Who might use it?
- Why might they use it?
- When might they use it?
- Where might they use it? What can it actually do?
- Why might that person own it?
- Have you ever used one, or something similar?
- Do you think it is used in conjunction with other objects?
- Is it well-used?
- Does it work?
- Is it good at doing its job?
- How could it be improved?

Things are often made for one thing and then used in another way, and most things are not made with the intention of being displayed in a museum!

Often functional objects are used decoratively, e.g. a mask on the wall of someone's house. It may be a mask which has been used in a performance, or it may be a tourist mask, designed to be displayed not to be worn.

aesthetically?
- Were the best materials chosen?
- Has it been decorated? If so, how and why?
- Do the decorations or colours mean anything?

This is a personal, subjective question however it is important to remember that in different time periods & cultures people perceived different things as beautiful

Environmental relevance
- What might be the environmental impact of this object – its use or production

History of object
- How much do you think this object is worth in monetary or social terms?
- Does it have great sentimental value or great symbolic value?
- Will this object become more or less valuable over time?
- Who would it have great value to?

37 *A very comprehensive list of questions for natural history objects*.

A very comprehensive list of questions for natural history objects…

Do you think this object comes from an animal, a plant or a mineral (e.g. a rock)?

Animals

- Is this a whole animal or part of one?
- If it just part, which part of its body does it come from?
- Does it have a skeleton?
- If it does is it on the inside or out of its body?
- What do we call animals with an internal skeleton (*vertebrate*)?
- What do we call animals with an external skeleton (*invertebrate*)?
- What is an external skeleton called? (*Exoskeleton*)
- Does it have fur, feathers, scales, etc?
- How do you think it moves?
- Can you think of any other similar creatures that might be related?
- Is this animal alive nowadays or is it extinct?
- (Taxidermy) Which parts of this do you think are from the animal itself and which do you think are artificial?

Food

- Is it predator or prey?
- What does it eat?
- How does it get its food?
- Does anything eat it?
- *If you are looking at skulls and skeletons there are often clues – look at types of teeth!*

Habitats

- Where do you think this animal might live?
- What kind of climate does it live in?
- How is it adapted for its

Ethics

- How do you think this ended up in a museum?
- Is this an endangered species?
- How has this animal been affected

Plants	Minerals
environment?	by humans?
Plants - What kind of environment might this live in? - What part of a plant do you think this might be? - How does this plant reproduce itself? (i.e. spread its seeds) - What do you link its lifecycle might be? - What uses does this plant have for humans and animals? - How has it been affected by humans? - Does it provide a food source for other life? - What part does it play in the whole eco-system? - (*Here you can use the other object questioning sheet to get some ideas*)	**Minerals** - *Some of same questions as above, but also looking at their use to humans so can use other object questioning sheet.*

Chapter Five

38 *B.O.R.I.N.G.*, blogpost, Art-e-facts: Encounters with Objects in Museums: http://artefactsobjects.blogspot.co.uk/2014/03/boring.html Last accessed 17/12/17.

Chapter Six

39 Character Encounters, National Maritime Museum, Greenwich: http://www.rmg.co.uk/see-do/exhibitions-events/character-encounters Last accessed 10/12/17.

40 National Maritime Museum, Greenwich Website: http://www.rmg.co.uk/national-maritime-museum Last accessed 17/12/17. "*Celebrate the Queen's Diamond Jubilee in style with June half-term events*

re-discovering the river at the heart of this month's festivities. Come along and explore the River Thames through the ages, to find out how people have used it as a setting for Royal parties and as a place of work. Tell us how you enjoy the Thames and take part in a range of activities exploring the Maritime London gallery." [http://www.rmg.co.uk/national-maritime-museum June 2012](http://www.rmg.co.uk/national-maritime-museum) Last accessed 31/06/2012.

41 National Maritime Museum, informal learning programme aims:

- To increase attendance. To increase repeat visits.
- To deliver high quality public programming which increases access to NMM collections and expertise.
- To generate income. To deliver value for money.
- To attract new audiences and broaden demographic.
- To deliver more relevant participatory and conversational programming.
- To raise public profile.