13

DISCUSSING MUSEUM LEARNING OPPORTUNITIES FOR CHILDREN WITH DISABILITIES

Alexander-Stamatios Antoniou[1],
Irida Ntalla[2] and Vicky Woollard[2]
[1]University of Athens, Greece
[2]City University London, UK

Introduction

The recent years, museological literature has began to analyze policies and practices that the museum offers to groups with disabilities including children, adding to the value of "new" and "potential" audience inclusion. As public institutions, the relationship between museums and social agency has become increasingly explored in recent decades and museums and galleries are seen as having the potential to "contribute towards the combating of social inequality and (have) a responsibility to do so (Sandell, 2002).

Additionally, the museum themselves claim impact on bringing people close to experience and perspectives that can change their lives. The involvement in history, arts and culture is seen to have the potential to boost a person's self-confidence and self-esteem, improve one's quality of life, build more cohesive communities, and promote learning, all of which are aimed at assisting socially excluded individuals in achieving greater chance of employment, educational attainment, social networks, and life enjoyment (DCMS, 2005). According to literature, museums are not the only mechanisms for enculturation (Coffee, 2008). They share narratives, history and knowledge which are not separated or cannot be separated from the learning experiences that emerge from new roles and new ways of working in tackling issues of social exclusion.

The goal of this chapter is to analyze the concept of museum and its implications for developing an inclusive space for children with disabilities, specifically special educational needs. It also explores current museum practice in engaging with these audiences and it discusses to what extent are these individuals enabled to commune with the muses, through handling objects, viewing exhibitions, taking part in activities all under the auspices of the museum. The first part seek to stimulate the concept of museum as inspiration and cultural process with the possibility of opening and creating new models of experience, orienting people toward continuous becoming rather than simply being.

Following, the second part seeks to analyze how museum can operate as an interactive learning space. The museum learning is a broad area, constantly developing further than just contributing to inspiration and motivation, but offering knowledge and skills with an aim to include wider learning opportunities to a wider range of audiences. The last section showcases some of the best practices that museums in UK display and develop for children with disabilities.

Many professionals in museums are now addressing social inclusion, exploring ways for museums to 'engage with and impact upon social inequality, disadvantage and discrimination' (Sandell, 2007: 96). The topic bring value to educational and health professionals, as it provides awareness and it discusses best practices which are being designed and implemented by museums for children who find learning difficult due to special needs being at risk of social exclusion. In UK, some museum institutions have being active towards shared professional and institutional responsibilities in order to respond to local community need (Bellamy, Burghes & Oppenheim, 2009). The recognition of social responsibility and the potential expressed above can contribute to positive possibilities and opportunities.

Museum and new museology

Over the past 15 years museums in the UK have gone through a process of change, physically and philosophically. This process can be demonstrated by looking

at two definitions of museums drawn up by the Museums Association (The UK's professional body for museums staff) before and after 1999: Prior to 1998 a museum '…is an institution that collects, documents, exhibits and interprets material evidence and associated information for the public benefit.' Post 1998 'Museums enable people to explore collections for inspiration, learning and enjoyment. They are institutions that collect, safeguard and make accessible artefacts and specimens which they hold in trust for society.' (Museums Association 1998 in Lang, Reeve & Woollard, 2009: p.33).

The first is descriptive of its professional activities, the importance of the staff and the collections while the second places emphasis on the purpose of museums: recognizing the importance of the visitor and the significance of their own experiences by being inspired through learning and enjoyment. The words 'make accessible' and 'learning' show a form of active collaboration between the visitors who feel empowered to construct their own meaning making.

Indeed this second definition reflects back to the Greek origins of the word museum, *mouseion[7],* which was the temple of the nine Muses that generated the creation of literature and the arts (Hein, 2000). The nine muses, born to Zeus and Mnemosyne, the goddess of memory, each had the responsibility to protect one of the following: music, poetry, dance, tragedy, comedy, mimic art, song, history and astronomy. The Muses' real potency was to alive the spirit and to enable the individual to dedicate themselves to matters that s/he admired and loved. To participate and create their own meanings, Socrates guided the young Phaedrus to a higher sense of the Muses, the true knowledge about love (Nicholson, 1999). The event is described by Plato in the dialogue Phaedrus, who is a young man full of enthusiasm, passion and curiosity. Telling the myth of cicadas, singing lusting one summer day outside the walls of Athens, Socrates introduce Phaedrus into the nature and the power of Muses, the true love, the secret of teaching and learning (Simpson, 1998).

A shrine of the Muses was the museum of Alexandria, a prominent feature of the city itself, included a crucial component, the library (Erskine, 1995). A library in its organic terms was in constant flux, having the role to sustain the work of the members of the museum and to absorb new thought as it unfolded. It is frequently referred as university, because for 200 years it was the most important centre of learning in the western world (Meskens, 2010). It was a sacred space of knowing by its special relation to the Muses, who collectively inspired the human mind, spirit or soul to dance, sign, speak or compose work of myth or reasons. Alexander housed his museum within a city, belonging to the city, which in turn belonged to the world. We can say that it was the expression of cultural policy in the true sense of the world (El-Abbadi, 2004).

However the *Muses* and their inspiration on the concept of *mouseion* or museum (Latin) fell into obscurity, as the museum turned into a showcase of what would

7 The word itself comes from mousa (αι μουσαι, hai moũsai), his root from the Indo-European men-, which is also the source of Greek Mnemosyne, English "mind", "mental" and "memory" and Sanskrit "mantra" (Wikipedia, 2010).

appear to be miscellaneous objects but which enthralled the collector. Increased trade routes, the discovery of new lands and peoples, released the potent element of enquiry and the 'cabinet of curiosities' emerged after the fifteenth century with the opportunity to embrace and comprehend mysterious objects which challenged the accepted view of the world. These collections through careful study and with the Enlightenment zeal for classification formed the public museums of the nineteenth century which became spaces where the world was ordered, realized and interpreted (Hein, 2000). Or as Foucault described these institutions as examples of heterotopias, where the accumulation of time through empires, epochs pile high and although they 'archive' time they are themselves timeless as they survive the ravages of time (Foucault, 1967).

Authors such as Neurath (1933), Vergo (1989), Van Mensch(1992) and others have put forward a ‚new museology' bringing to the fore the museum's social, cultural and educational processes that involve the visitors. These processes require space and time, where the visitor meets and interacts with ideas and concepts encapsulated by the objects. Otto Neurath in his article '*Museums of the Future',* reprinted at 1991, describes that the museum has a 'twofold task: to show processes and to bring the facts of life into some recognisable relation with social processes' (Neurath, 1933: 220). Further, the museum is confronting the reflection of place and territory, both geographically and culturally which initiates a new type of museum that was described as a "cultural process" (De Varine, 1996).

Museum as cultural interactive learning space

To understand museum as a "cultural process" helps us Foucault's (1986) definition of the museum as heterotopia that enables us to define it in terms of a philosophical and educational aspect that is part of the museum's essence. What makes the museum a heterotopia is a unity of the spatial and temporal aspects that represent a heterotopia of many spaces combined in one. The present totality of time and its isolation promise a temporally return to a past way of knowing and living that does not exist independently of our existence or our ways of knowing. In this sense, museum is a space that alters orders by combining many spaces in one site and by sharing relationships with all these spaces, though they are isolated in some way (Topinka, 2010). The focus here shifts from the importance on artefacts and collections towards the spaces or topos, which are not only representative of the culture; they suspect, neutralize or invert the set of relations that they represent (Foucault, 1986), orienting and reorienting visitors to see social reality anew. The important point is not the space itself but what it performs in relation to other sites, a fluid sense of social space and the processes which space is subject, sites of potential instability and progress (Thacker, 2003).

The investigation of heterotopias helps enrich the perception of museum as a cultural interactive space (Davis, 2004. Jenkins, 2006. Martin, McKay, Hawkins & Murthy, 2007), or as a "rhizomatic" system (Deleuze & Guattari (1987). The concept of 'rhizome' (Deleuze & Guattari (1987) helps us to reinterpret the museum as dynamic, heterogeneous space that encapsulate alternative forms of the world, physical, symbolic, real or fictional (Hein, 2000). Museum objects have "multiple lives" (Hein, 2000: 51) that project the abstract or unconscious aspect of real world; they are embedded in social relations and function as sources of information about organized human behaviour. The multiplicity of museum worlds provides clues for thinking about the changes in museum and the ways in which the focus is on museum as process, with the possibility of opening and creating new models of experience, related to continuous becoming rather than simply being. The concept of becoming is a system of relations that create possible spaces that have the capacity to affect and be affected, which can occur by means of affect (Deleuze & Guattari, 1987). The return to affect, to the love of the Muses according to Socrates (Nicholson, 1999), is seen as means to make museums more dialogic and polysemic and the new museology a practice of becoming. While museums are aware of their collections and exhibits as objects, the Muses emerge when they intersect in becoming, by shifting from object to experience (Hein, 2000).

Furthermore, Falk and Dierking (1992) introduced the 'interactive experience model' where they conceive museum participation as an interaction of three main settings: the personal, social and physical. A learning experience depends upon engagement, mental and physical participation and social activity. For Falk and Dierking (2004) children's learning in a museum is a personal activity, but it cannot be understood and produced without the objects and the social context in which the engagement takes place. The personal context is made up of each individual's interests, prior experiences and personal memory, whereas the social context recognises the importance of the group, with whom one shares one's experiences, checking against others' understanding and rationales. Lastly the physical context refers to the interaction with the tactile and visual environment of the museum space. These three contexts are framed by the dimension of time, for learning to be acquired, be tested and refined, takes time.

Proponents of museum learning refer to it as providing a range of positive learning experiences and outcomes (Rickinson, Dillon, Teamey et al., 2004). This model of learning is seen to impact upon young peoples' attitudes, beliefs and self-perceptions. It is believed that it supports the enhancement of independence, confidence, self-esteem, locus of control, self-efficacy, personal effectiveness, and coping strategies, interpersonal and social skills – such as social effectiveness, communication skills, group cohesion and teamwork (Rickinson et al., 2004).

Along with the reinforcement of the museum as 'educational' space, an important element to be considered is the difference of learning in museum from learning in school which can be understood in terms of formal systems of qualification and

measurement (Hooper-Greenhill, 2006). In order to provide a successful learning environment, the main focal point for the museum experts will be the active engagement of the learners to enrich their individual interpretation of meanings and understandings. The education and learning process cannot be perceived as an inactive appreciation of facts, information and knowledge rather as a meaning-making experience, through acting, doing and performing resulting in a powerful form of becoming by the learner-participants.

In contrast to being in school, a visit to museum is considered to offer contextual learning in an informal social space (Falk, 2004; Falk & Dierking, 2002). The contextual learning includes authentic material culture for shaping the present and determining the future through the transformation of the past. Thus, museums exist as a time space between two absences - the past and the future presenting a choreographic machine for transformation of the past into the future (Preziosi & Farago, 2004). The learning in museum settings can take into account the complex way in which children construct meaning and learn about the world. The school is associated with learning and teaching that is perceived as something that can be measured and assessed through a curriculum that regulates activities and teaching and learning goals.

Additionally, the museum education apparent from a vital alternative way of learning and complement the formal learning is also a space of excitement, wonder, inspiration and creativity that increases the awareness of the world and our place in it (Bellamy, Burghes & Oppenheim, 2009). Foucault (1986) dreamed of a new age of curiosity. He indicated that "we have the technical means for it; the desire is there; the things to be known are infinite; the people who can employ themselves at this task exist. Why do we suffer? From too little: from channels that are too narrow, skimpy, quasi-monopolistic, insufficient. There is no point in adopting the protectionist attitude, to prevent 'bad' information from invading and suffocating the 'good'. Rather, we must multiply the paths and the possibility of coming and going (p. 198-189). This concept implies a different construction of knowledge in the museum, the challenge and rejection of linear narratives, historicist arrangement.

The learning in museum settings can take into account the complex way in which children construct meaning and learn about the world. Young children create spaces for themselves in the home, under the dinner table or in their bedroom. These spaces are for play, imagination, creation, resistance or the actualization of the imagination. But these spaces are related to the home, thus according to Hjorth (2005) excludes them from becoming a heterotopia. The space within the home is not the "space that is other" nor "the space of illusion" (Foucault 1986). Although many formal education specialists view creativity and imagination as important aspects of learning, they do not leave room for creative activities (Harris, 1999). Children's creative experience in museum can help them moving from relatively simple to more complex levels of understanding, thinking and imagination.

Children with disabilities and the opportunities in the museum: An overview in UK museum institutions

Hein (2000: 106) refers to museum as an "institution with a moral function" that has at the centre of its mission education and public service. The modern museum is a vehicle for empowerment of equality by eliminating barriers of disadvantage through working with specific groups and communities (Sandell, 2002). Through the process of experiences this inclusive museum has the potential to offer spaces of 'becoming' for disadvantaged and marginalized individuals with positive outcomes, in their personal, psychological, emotional and social life (Sandell, 2003). However such involvement demands the museum to take responsibility to commit to a longer term relationships to ensure sustainability.

New museology, its theories and practices has been influenced by politician, economical and social factors, particularly within the area of disability, in terms of access, inclusion and representation. In the United Kingdom, pressures from groups of disabled people resulted in the Disability Discrimination Act (1995) which had as its main thesis the social model of disability which insists that "Disability describes how society responds to people with impairments; it is not a description of a personal characteristic." (Miller, Parker & Gillinson, 2004). The basis for what has become the social model of disability was a document produced in the US in 1976 by The Union of Physically Impaired Against Segregation (UPIAS) entitled Fundamental Principles of Disability.

'In our view, it is society which disables physically impaired people. Disability is something imposed on top of our impairments, by the way we are unnecessarily isolated and excluded from full participation in society' (UPIAS, 1976:3)

The individual therefore is disabled by the barriers and prejudices of society rather than their physical or mental impairment. Thus the social inclusion agenda of New Labour government was to 'tear 'down these barriers and ensure there is equality of opportunity in participation and engagement by these groups (DCMS, 2005) which included the promotion of multiculturalism and tackling disaffection amongst young people (Allday, 2009). The Museums, Libraries and Archives Council (MLA) in UK has created a series of guides to disability, which following the Disability Discrimination Act (DDA, 1995), that provides a range of information including guidelines, toolkits and important information for the museum, libraries and archives staff. For most museums the main challenge has been diminishing physical barriers to the collections by providing ramps, lifts, Braille labels and signed tours for those with hearing difficulties.

Although these are very important and a visible signal that museums are responding to the legislation and to their visitors, other more implicit changes have to be made such as disability policies that are museum wide, developing strategic partnerships

with other organizations, implications for the training of staff, the roles of the website, the collections and the possible negative or positive portrait of people with disabilities within them. Nevertheless, there is still space for development on the engagement of disabled people. This also derives from the fact that most museum institutions do not associate appropriately the field of social inclusion to disability and impairment even though people with intellectual impairment are amongst the most socially excluded and vulnerable groups in Britain today (Department of Health, 2001: 21).

Even though the Disability Discrimination Act (DDA) is acknowledged and has moved the apprehension forward, there are still 'natural' and 'common sense' actions and beliefs regarding disability that can be challenged by museums. There are various ways in which museums are seeking to address problems of social exclusion of disable people, with accessibility, interventions and representation. It has been an increasing effort from the museums in UK to improve the accessibility matter within the museum space with disability schemes and policies in place, access services which include AV technologies and interpretation units as well as building partnerships with organizations specialized on the field. The following examples demonstrate different ways museums in the UK have made provision for those with disabilities, particularly through developing educational programmes and spaces for visitors with additional needs to create their own becoming (Woollard, 2004).

The British Museum has for many years worked with visually impaired children and adults in both informal and formal educational groups. For example for deaf and hard of hearing audiences services include induction loops in the Clore Education Centre, portable Induction Loop system for most gallery talks, monthly sign interpreted talks as well as sign interpretation for selected high profile events and occasional special events. The inclusion of children and young audiences with special needs requires the partnership between the museum with a range of agencies (Sandell, 2003) and disability organizations (British Museum, 2010). From their experience of working with partners has shown that preparing for the visit is crucial so that the museum and staff can anticipate needs and demands, thus removing constraints and hurdles in advance.

The Museum's Schools and Young Audiences teams aim to find appropriate projects which match the needs of disabled children through collaborating with their teachers. Teachers are given the opportunity to discuss particular pupils' needs before a visit and furthermore, the team sends out support notes for all taught sessions to allow teachers and support staff to prepare fully for the nature and content of a workshop. The museum also works with consultation groups who advocate and promote equality of access for disabled people. This process takes place through either face-to-face discussions or via email or telephone calls with a number of key disabled individuals, organizations and specific disabled user groups (British Museum, 2010). Using the audio descriptive website, the Museum highlights its touch tours in the Egyptian Sculpture Gallery or touch provision for the Parthenon Gallery.

The use of the website has great potential. However, the National Library for the

Blind (NLB) estimates that less than a third of websites on the net are accessible to visually impaired people. This has been taken up by the National Museums Directors' Conference (NMDC), made up of CEOs of the largest museums and collections in the UK, who have explored offering virtual access to the collections using screen magnification through software or browser settings, audio screen readers, refreshable Braille and speech synthesizers for people with visual and hearing impairments. Both the National Maritime Museum's website and the British Museum's Compass site have won a Visionary Design Award from the NLB on the basis of their high level of accessibility for all forms of access technology (NMDC, 2010).

Once in the galleries museums can be an exciting stimulating and learning space for children with learning disabilities. Incorporating museum programming for children with learning disabilities requires special material to support learning strengths of children and to help engage their interest, personal creativity and intellectual characteristics (Woollard, 2004). Handling objects owned by Northampton Museum are included in sessions with children with special educational needs to create multi-sensory experiences (Chambers, 2010). An experienced project team in collaboration with a local special school developed a box of artifacts directly related to the collections, sparking curiosity and imagination for the user. The box resembles an old treasure chest and when opened up it reveals a pop-up screen housing a painting and mixture of handling objects and low tech interactives for children to use independently and as part of the session. Through touching and smelling, stimulating the senses the children come in physical contact with new materials and shapes, to help unravel their uses and purposes, giving a material context to ideas and ways of living. The multi-sensory box is used within the museum but can be hired for a fee by schools or other community groups.

The museum recognizes that there are concerns. Firstly, museum staff uses the box with a wide range of schools and children, and from the analysis of the sessions it was noted that working with special needs children required specific skills and that additional training was required. Secondly the contents of the box continually needed to be updated to complement the changing exhibitions to maximize the learning potential (Information by Museum Educational Officer, Northampton Museum).

Certain museums have been designed wholly for children, so expertise is more likely to be available and spaces more specific to various needs. The social context is inevitably more child focused and more relaxed thereby reducing the social and cultural barriers of an adult ordered world. The National Children's Museum, Eureka in Yorkshire, north east England is an excellent interactive place for children. The museum is designed for children from birth to 11 years old including their families and carers. Due to its nature, play is at the heart of the visitors' experience with physical interaction; both real and imaginary is encouraged in internal and external spaces. The children are invited to make new discoveries and achievements in an inclusive environment that minimizes cultural differences and with a focus on the special educational needs. For example ‚Break to Play' is a programme developed

for families who have a child with Autistic Spectrum Disorder (ASD). With the aim to provide a safe and welcoming environment the museum is bringing these children and their parents, carers and siblings to experience playful sessions together for a six week period. Recognizing the difficulties of such a group they are organized into smaller groups according to age: five year olds and under and 5 to eight year olds.

The Museum became aware of the specific needs of these families from research carried out by Contact a Family, which showed that a large number of parents were apprehensive about taking their disabled children on days out because of the challenges and difficulties they face (Break to Play, Project Evaluation, March 2011). The museum therefore aimed to provide the children a space where they felt they belonged and could explore the world on their own terms and pace, leading them to a positive experience, which in turn gave emotional support to the parents and carers. Art activities and small games were developed to exercise the children's fine motor coordination skills while other games were introduced to encourage negotiating and team skills. The programme also offered a valid opportunity for the parents/carers to understand playful techniques, confidence on ASD condition as well as reduce the feeling of isolation. The staff of the museum got a professional understanding on ASD and disability in general, challenging misconceptions and behaviors which automatically gives the museum a further elements of accessibility.

Evaluation indicated positive outcomes on the lives of the children and their families. For example, the progress of those children who participated in at least one activity each week went beyond their parents' expectation. They improved their motor skills, grew in confidence and self esteem, developed in key social and life skills, such as turn-taking, sharing and negotiating with others. The majority of parents reported that they were happy with the activities of museum, and that their own knowledge and confidence in supporting ASD has increased through participation in the activities. Concretely, some of the families expressed:

"Meeting the other families and hearing of their experience with ASD has been hugely useful to us as a family. It was very useful that the sessions were as structured or as unstructured as required. On some weeks, our son simply wanted to use the opportunity to run – and we could allow him to do that safely. On other weeks, he was happy to be directed to play with specific items and we enjoyed allowing him the freedom to dictate what he wanted to do."

"We learnt that we were able to participate in a group activity; actively involving our son and that we could do that very enjoyably as a family. This was an entirely new experience for us as previously we would often either not include our son or we would have to do things separately. We really enjoyed doing something collectively as a family and I think Eureka was the perfect place for this project" (Break to Play, Project Evaluation, March 2011).

The museum is about to commence a three year programme working with families with children with disabilities across Yorkshire and beyond. A part of the programme is to launch an ambassador scheme with a team of advocates made up of children with disabilities, parents and carers who will provide advice to the museum on suggestions for new developments and programmes, as well as highlighting individual needs. Special Educational Needs (SENs) learning is an area that the museum have included in its regular educational programme and which has increased over the last few years. The museum has a strong partnership with Horizon School, a special secondary school in Dalston, Hackney, and through working with the staff and pupils the museum staff have sharpened their awareness and skills. Projects such as 'My Home My Self' using photography is a part of an annual project 'Inside out' for pupils with severe learning difficulties has become apart of the school's curriculum. This photography project explores ideas around identity and domestic space and looks at how objects contain meaning and references.

Apart from these school projects the museum has organized two successful forums and is encouraging independent visits with friends, carers or families. The museum evaluates its work across all its activities including those with SENs. On the whole teachers complete the questionnaires as to what extent were the aims and outcomes of the sessions were successful. However the museum is endeavoring to included pupils comments by devising 'specific' visual represented questionnaires for them to complete, especially the older pupils. These sheets have also been used to evaluate older pupils with disabilities' experiences of a work placement at the museum, working with office staff behind the scenes.

Special needs are one of the main focus areas of Geffrye museum the last years. The museum works extensively with individuals with moderate to severe learning difficulties as well as with pupils with emotional and behavioral problems. The Education Officer expressed the importance of training for the museum staff and both permanent and freelancer staff have regular training on working with individuals and children with a range of needs providing them with confidence in working in specialized areas. The museum is keen to mainstream groups with SENs so they feel fully included and integrated with other groups as part of their school visits or in the activities provided in the holidays and weekends. However there are problems relating to space and accessibility which the museum is trying to overcome. Thus such inclusion requires careful, long term planning of projects and efficient communication between museum practitioners and other partners in order for the museum to offer the best learning environment and experiences for the children.

These examples give some understanding on the types of 'good practice' that include children and young people with disabilities and other social needs in the museum activities and projects. The importance of these programmes is that the museums are raising awareness within and beyond the institution on issues around the definitions of physical and learning disabilities, impairment and representation. The awareness and understanding of museums' staff on such issues by working closely

with teachers, practitioners, agencies and organisations is vital for the development of substantial museum spaces.

Dedicated museum spaces for children with special needs can incorporate a range of cultural artefacts, multi-sensory resources such as photographs, undertaking tours with 3D maps, using audio guides and video-recording to create individual and authentic connections to the collections. Such spaces require strategic planning to allow for flexible and innovative exhibits and programs so that the learning and teaching experiences develops each child's specific abilities. A group of museums, including the NMDC group and the Geffrye, together with the existing literature suggest the following main points that are central to using museum as an inclusive agent for children with special needs.

The first one demonstrates the critical role that partnerships play between the museum and the education sector. Museums have much to learn from the world of teachers and carers about creating an inclusive space for children with special needs to bring about beneficial change. Museum practitioners have demonstrated the importance of learning "specific" techniques, gaining professional understanding and confidence with the notion of disability, challenging misconceptions through their collaboration with teachers and organizations working with these groups. Thus what makes an effective partnership is the training of the museum staff which embeds beliefs and ambitions into reality by widening access to the collections and broadening the museums' audiences. Staff not only can use their expertise working with formal school group visits but they can also be confident to support individual visits by families with children with disabilities and young people with special needs.

In creating a dedicated space for children with disabilities, their families and teachers demands planning and resources. Appropriate exhibits and programmes can create multiple opportunities for children with special needs if they are supported by special materials and new supportive technologies such as tactile images and Braille, large print information, audio screen readers, speech synthesizers, website special elements. In order for the museum to connect children with their offline and online spaces, it needs to create suitable environments that facilitate their requirements on a regular basis.

Furthermore, these spaces should be integrated within the general structures and programmes of the museum helping children with special needs to be included with their peers, though having different interests, abilities and skills, can still explore and experience the same exhibits together avoiding apparent exclusion. Through inclusion comes the possibility of empowerment, contributing to the museum's 'knowledge' and engaging with decision making, such as advisory groups enabling disabled people to play an active role in designing projects and learning experiences. As we already have mentioned before, the museum's democratization is its obligation to constantly renew its patterns of thought and practices.

Lastly, museums recognize the value of evaluation, and the projects' outcomes, apprehending it in theory and policies but under development. The museum is engaged

with the evaluation processes, using questionnaires, surveys and commentary books but it is mainly focused on getting out specific messages or outcomes for certain exhibitions. The evaluation of specific programmes on a systematic basis of specific outcomes can support the effective understanding of visitors requirements and needs. Additionally, this can provide a framework to apprehend a diverse audience including children with special educational needs and disabilities as well as measuring the social impact of the inclusive museum.

Conclusion

The Deuleuzian rhizomatic model is an initial move to a museum space as a *social process* able to construct our culture and society allowing audiences 'return' to a multiplicity of knowledge experiences in a heterotopia of becoming. The contribution of some museums to make places of becoming for vulnerable children offers to a greater understanding. The emphasis lies on the interrelations towards the space or topos, more precisely on their interrelations. The important point is not the space itself but what it performs in relation to other sites, a fluid sense of social space and the processes which space is subject, sites of potential instability and progress (Thacker, 2003). The concept of becoming is a system of relations that create possible spaces that have the capacity to affect and be affected which can occur by means of affect (Deleuze & Guattari, 1987).

The physical and educational participation and accessibility of people and especially children with special educational needs is a vital component for an inclusive museum as a space or topos of becoming. British Museum develops educational programmes which match the needs of disabled children in collaboration with teachers. The National Maritime Museum plays a significant role on accessibility to the collections for people with visual and hearing impairments. The National Children's Museum, Eureka is an excellent interactive place for children with Autistic Spectrum Disorder (ASD). Geffrye Museum, in east London works with children with learning disabilities, creating a space of discovery and stimulation of audience's imagination.

The museum's role as an educational space of becoming includes its constant aim to tackle exclusion and reach broader audience. The children and young people with special needs are the most socially excluded and vulnerable groups in UK (Department of Health, 2001: 21). Museums can become for this group spaces with benefits in their personal development and in their health and well being. The awareness, the up-to-date knowledge, the training of museum experts on their specific needs, the collaboration with the school, parents and health professionals as well as the systematic and continuous evaluation and the creation of inclusive interactive spaces will support the implementation of best practices and

a breakthrough on excluding children with special needs, dominating stereotypes and notions of disability.

Acknowledgements

References

Allday, K. (2009). From changeling to citizen: Learning disability and its representation in museums. *Museum and Society, 7*(1), 32-49.

Bellamy, K., Burghes, L., & Oppenheim, C. (2009). Learning to live. Museums, young people and education. In K. Bellamy & C. Oppenheim (Eds.) *Learning to live. Museums, young people and education* (pp. 9-21). Institute for Public Policy Research and National Museum Directors' Conference.

British Museum. (2010). *Disability equality scheme*. http://www.britishmuseum.org/PDF/disability_equality_scheme.pdf

Chambers, N. (2010). *A case study: "In the picture" Creation of a sensory loans box for pupils with special needs* http://www.learningmatters2u.co.uk/Case_Studies_files/In%20the%20Picture%20Sensory%20Loans%20Box.pdf.

Coffee, K. (2008). Cultural inclusion, exclusion and the formative roles of museums. *Museum Management and Curatorship, 23*(3), 261-279.

Davis, P. (2004). Ecomuseums and the democratisation of Japanese museology. *International Journal of Heritage Studies, 10*(1), 93-110.

DCMS. (2005). *Understanding the future: Museums and 21st century life.* London: DCMS.

Deleuze, G., & Guattari, F. (1987). *A thousand plateaus: Capitalism and schizophrenia* (B. Massumi, Trans.). Minneapolis: University of Minnesota Press. (Original work published 1980).

Department of Health (2001). *Valuing people a new strategy for learning disability for the 21st century.* London: HMSO.

De Varine, H. (1996). *Ecomuseum or community museum? 25 years of Applied research in museology and development*, http://www.asdic.fr/francais/ecomu.htm.

Disability Discrimination Act (1995). London: HMSO. http://www.ofmdfmni.gov.uk/disabilitydiscriminationact1995.pdf.

El-Abbadi, M. (2004). The Alexandria Library in history. In A. Hirst & M. Silk (Eds.), *Alexandria, real and imagined* (pp. 167-183). Aldershot: Ashgate Publishing.

Erskine, A. (1995). Culture and power in Ptolemaic Egypt: The museum and library of

Alexandria. *Greece and Rome, 1*, 38-48.

Falk, J. (2004). The director's cut: Toward an improved understanding of learning from museums. *Science Education, 88*(Supplement 1), 82-96.

Falk, J. H., & Dierking, L. D. (1992). *The museum experience.* Whalesback Books, Washington, DC.

Falk, J., & Dierking, L. D. (2002). *Lessons without limit: How free-choice learning is transforming education*. Walnut Creek: AltaMira Press.

Falk, J., & Dierking, L. D. (2004). The contextual model of learning. In G. Anderson (Ed.), *Reinventing the museum: Historical and contemporary perspectives on the paradigm shift* (pp. 139-153). Oxford: Rowman & Littlefield Publishers, Inc.

Foucault, M. (1967). *Of other spaces. Heterotopias*. (Online) http://foucault.info/documents. hetertopia/foucault.heterotopia.en.html (30/1/11).

Foucault, M. (1986). Of other spaces. *Diacritics, 16*(1), 22-27.

Harris, I. (1999). Outdoor education in secondary schools: What future? *Horizons*, *4*, 5-8.

Hein, G. S. (2000). *The museum in transition: A philosophical perspective.* London: Smithsonian Institution Press.

Hjorth, D. (2005). Organizational entrepreneurship with de Certeau on creating heterotopias (or spaces for play). *Journal of Management Inquiry, 14*(4), 386-398.

Hooper-Greenhill, E. (2006). The power of museum pedagogy. In H. H. Genoways (Ed.), *Museum's philosophy for the twenty-first century* (pp. 235-247). Oxford: Altamira Press.

Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York: New York University Press.

Lang, C., Reeve, J., & Woollard, V. (Eds.) (2009). *The responsive museum: Working with audiences in the twenty-first century.* Hampshire, England: Ashgate Publishing Co.

Martin, J., McKay, E., Hawkins, L., & Murthy, V. K. (2007). Design-personae: Matching students' learning profiles in web-based education. In E. McKay (Ed.), *Enhancing learning through human-computer interaction* (pp. 110-131). London: Idea Group Reference.

Miller, P., Parker, S., & Gillinson, S. (2004). *Disablism: How to tackle the last prejudice*. London: Demos.

Meskens, A. (2010). *Travelling mathematics- The fate of Diophantos Arithmetic*. A Springer Basic Product.

National Museum Directors' Conference. (2010). *Museums and galleries:Creative engagement. A report commissioned by National Museum Directors' Conference.* www.nationalmuseums. ork.uk

Neurath, O. (1933). Museums of the future. *Survey Graphics, 22*, 458-63. (Reprinted in Haller and Kinross, 1991).

Nicholson, G. (1999). *Plato's Phaedrus: The Philosophy of love.* West Lafayette, Indiana: Purdue University Press.

Rickinson, M., Dillon, J., Teamey, K., Morris, M., Choi, M. Y., Sanders, D., et al. (2004). *A review of research on outdoor learning*. London:National Foundation for Educational Research and King's College.

Preziosi, D., & Farago, C. (Eds.) (2004). *Grasping the world: the idea of the museum*. Aldershot: Ashgate.

Sandell, R. (2002). *Museums, society, inequality*. London: Routledge.

Sandell, R. (2003). Social Inclusion, the museum and the dynamics of sectoral change. *Journal of Museums and Society, 1*(1), 45-62.

Sandell, R. (2007). *Museums, prejudice and the reframing of difference*. London: Routledge.

Simpson, Th. K. (1998). Abode of the modern muse: The science museum. *Great ideas today*. http://www.thomasksimpson.com/abode.pdf

Thacker, A. (2003). *Moving through modernity: Space and geography in modernism*. Manchester: Manchester University Press.

Topinka, R. J. (2010). Foucault, Borges, Heterotopia: Producing knowledge in other spaces. *Foucault Studies*, *9*, 54-70.

UPIAS (1976). *Fundamental principles of disability*. London: Union of the Physically Impaired Against Segregation.

http://www.leeds.ac.uk/disabilitystudies/archiveuk/index.htmlVan Mensch, P. (1996). *Towards a methodology of museology*

http://www.muuseum.ee/en/erialane_areng/museoloogiaalane_ki/p_van_mensch_ towar/

Vergo, P. (1989). *The New museology*. London: Reaktion Books.

Wikipedia (2010). *Muse,* http://en.wikipedia.org/wiki/Muse http://www.city.ac.uk/ ictop/mus-def.html

Woollard, V. (2004). Caring for the visitor. In ICOM *Running a museum: A practical handbook* (pp. 105-119). ICOM- International Council of Museums.

Webpages

Wikipedia. (2010). *Muse,* http://en.wikipedia.org/wiki/Muse http://www.city. ac.uk/ictop/mus-def.html

This book is an ambitious project uniting various fields in a multidisciplinary venture drawing on academics and clinicians from medicine, psychology and educational sciences. The interdisciplinary approach has assembled medical, educational and health specialists with scholarly contributions from many different countries and institutes.

A plethora of scientific studies have shown that in order for children to maintain good health, both physically and psychologically, families, teachers, physicians and psychologists have to work closely together. Few scientific books address the wide spectrum of challenges required to resolve such developmental issues: for example, when families migrate to unfamiliar countries, the influence of grandparents in childrearing practises, impact of having a disabled children on family structures and social interactions, socio-economic factors which impose limits on healthy growth, and families which have to cope with debilitating emotional crises whether originating from the parents or their offspring. This collection of essays is an attempt to bridge theoretical and research concepts and findings with clinical practise, adopting an interdisciplinary and cross-cultural perspective. It reveals determinants and other factors which are implicated in the effectiveness of health promotion and therapeutic interventions, as well as identifying reliable diagnostic and health programs and / or enhance learning and teaching programmes.