‘Interactivity and Multi-sensory Engagement for Pre-school Children’

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Introduction
As this conference has demonstrated, the past few years have witnessed a great deal of eagerness in art museums and galleries to replicate the success and popularity of the interactives used in science centres and other types of museum. As has been confirmed for those who doubted it, interactive learning opportunities in museums of art and design offer exciting new possibilities for the audience and the profession.

Much of the current thinking is concerned with the very nature of interactivity in an art context, and discussion frequently seems to refer to two main modes of interaction: that with interpretation designed to facilitate understanding of the art object, and that with the art object itself, with the latter often involving works of art produced specifically for that purpose. There are presently many good examples of both in UK museums and galleries, as well as examples of opportunities to make art within the gallery inspired by art objects on display, an activity also included by some within the catch-all term ‘interactive’.

The Craftplay project at Bilston Craft Gallery in the West Midlands offers a means of interactive learning through sensory engagement with a collection of contemporary craft pieces commissioned and made specifically to stimulate the senses. Eight makers and artists have produced work to enhance the richness and learning potential of a dedicated creative play environment, to introduce pre-school children and their parents and carers to contemporary craft and to encourage exploration of materials to stimulate sensory awareness. The Craftplay room is light and spacious, with several smaller areas within that invite exploration, and is equipped with high-quality wood furniture and a range of materials available directly to the children. The craft pieces are located throughout to form part of a sensorially rich environment and can be incorporated into play activities as and when desired.

The development of this particular element of Craftplay owes much to the exhibition Coming to Our Senses, currently touring the UK. Consisting of contemporary craft designed to engage audiences with senses other than sight, the exhibition is consistently proving highly popular with audiences and inspirational to hosting institutions, broadening all expectations of the visual arts and of art museums and galleries. As participating venues were invited to share responsibility for development through a steering group, we had the opportunity to explore the multi-sensory approaches well before the exhibition arrived at Bilston Craft Gallery for the summer of 2001. Craftplay has also benefited from the practices and philosophies of an approach to early childhood education that advocates the importance of an aesthetically (but not just visually) rich and well-designed learning environment for the creative development of young children. The ‘Reggio approach’ is becoming increasingly important to early years practitioners, and underpins all elements of the Craftplay creative play gallery.

Craftplay presents a significant contribution to the ongoing growth and development of interactivity in interpretation of the visual arts, and this paper aims to address briefly some of the issues considered during the development of the project. Although the Craftplay
sensory craft pieces were made with the needs of an age-specific audience in mind, and ‘sensory’ art has traditionally been developed in response to the perceived needs of particular constituents (such as those with disabilities), all visitors can have an equally valid experience and understanding of these craft pieces. Unlike some forms of gallery interactivity that incorporate adult-prescripted tasks or activities, there is nothing to guide or restrict the meaning-making possible with art or craft objects made for sensory exploration.

Craftplay

Craftplay is a dedicated creative play space within Bilston Craft Gallery providing pre-school children with opportunities for creative and cultural development within a sensorially rich and varied learning environment (Fig. 1). Along with the other sites comprising the city arts and museums service (Bantock House Museum and Wolverhampton Art Gallery) Bilston Craft Gallery has a clear remit to reach out to those who traditionally are not confident gallery visitors or regular audiences for the visual arts. The Craftplay project is a significant element of our efforts to reach and sustain new audiences within the local community.

The project endeavours to promote the development of creative thinking and sensory awareness in babies and toddlers and their parents and carers. Craftplay has been developed with funding from the Department for Education and Skills initiative Sure Start, which aims to work with pre-school children and young families living in underprivileged areas to support a wider understanding of their social, intellectual and physical developmental needs, in order to curtail the associated problems of disadvantage for the present generation of young children. Bilston and Ettingshall Sure Start (BESS), our local unit, has successfully implemented a range of initiatives in the area, including the development of outside play spaces at early years settings, the establishment of a crèche at the town market and a weekly ‘Baby+ club’ carer and toddler session at the library. BESS has funded the refurbishment of the Craftplay space and supported the facilitation of sessions during the vital early stages of the project. Its expertise continues to contribute to the project.

Craftplay plays host to groups of 0–4 year olds and their parents and carers visiting from nearby early years settings, as well as weekly drop-in sessions for local parents and carers and their young children. These sessions are facilitated by a resident early years arts worker who encourages the children to explore and manipulate the various objects, materials and other resources available to them at their own pace and on their own terms, according to their own imagination and creative impulses.

Craftplay supports the belief that pre-school children need to learn through explorative play, driven by their own instincts and natural curiosity. This process leads them to answers that make sense to them, and enables them to go forward to new learning experiences with confidence … questions are asked but not answered for the children … [they] find their own answers, as well as more questions of their own.

(Hardy 2002, p.8)
The arts worker’s role includes the observation and documentation of the activities of the children and the management of resources to maximize the opportunities for the specific needs of different groups and individuals.

**The Reggio approach**

Every element of the project has been established in line with practices and philosophies adopted from the Reggio approach, our knowledge of which stems from front-end evaluation undertaken with local early years practitioners in the initial stages of project development. Reggio has therefore been essential to Craftplay from the very beginning, and it continues to enrich all aspects of our practice. Our understanding of the particular issues surrounding the application of this approach has been greatly enhanced by our resident arts worker Anne Hardy, whose post is supported by the Arts Council of England.

To understand the philosophies and practices advocated by Reggio is to recognize the degree to which they are culturally specific. Reggio Emilia is a small and affluent town in the north of Italy, not far from Bologna, and the pre-schools and toddler centres that have evolved there have grown from an inherently child-centred culture; the design of the schools has traditionally been modelled on the townscape itself, with wide piazzas for communal experience, and the town has a history of co-operative work pervading all areas of life (DeBord 1998) fundamental to the strength of community that enabled the schools to be established. Following the devastating effects of the Second World War significant changes to social institutions were welcomed and the parents of young children were empowered to build and run their own schools. The thinking behind Reggio evolved organically from a combination of educational theories that contributed to reform and innovation around this time: hypotheses by Dewey, Piaget and Vygotsky were carefully considered and explored, and threads of these theories are still evident in the approach used today. Reggio also owes much to the vision and leadership of the educational psychologist Loris Malaguzzi, who guided broad experimentation and development for over 40 years. By the early 1990s there were 22 pre-primary (for ages 3–6) and 14 infant–toddler centres (for ages 0–3), which account for around 12% of the town’s budget (New 1993).

The key values of the approach are heavily embedded within the specific context of a society that values children above all else and places them at the centre of their way of life. It has long been acknowledged that the Reggio schools could never be accurately replicated outside this context, and the resulting challenge to appropriate aspects of the Reggio approach into the culture of British early years education is energizing and inspiring many in the field. Although the principles employed in Reggio Emilia have been known to early childhood educators around the world since the 1960s, it seems only relatively recently that UK practitioners have begun to take on board elements of the approach – essentially facilitated by the Hundred Languages of Children exhibition, a travelling showcase of awe-inspiring work by children from the Reggio schools that has toured the country twice since 1997.

There are no strict rules or guidelines for practice; instead, there is a philosophy that informs the kind of environment and resources that might provide the best learning opportunities and the most effective approaches to working with children. To summarize, using what is essentially a socio-constructivist model, the Reggio schools recognize children as active and capable constructors of knowledge, imaginative and creative individuals who have rights rather than needs, and who build their own theories with which to move forward and to apply to their own investigative learning. This image of the child is facilitated by several broad principles, which include:
• Teachers engaged in reflective thinking: all classes work with two teachers and all schools have an artist-teacher (the atelierista) who collaborate together to support child-led projects; teaching partners remain with their class for several years to facilitate understanding and good working relationships.
• Community involvement: interactivity and collaboration between teachers, parents and carers and their children is central to the running of the schools.
• Documentation: teachers are trained to listen and observe all aspects of learning and development. As process is valued over finished product, schools convey children’s learning by displaying very detailed documentary evidence of knowledge construction (as opposed to the displays of neatly finished work found in some UK classrooms).
• Environment as pedagogist: to an extent the learning environment is considered to be the ‘third teacher’, and thus much thought is put into designing with high-quality materials and resources to produce an aesthetically and sensorially rich setting that can be manipulated by the child.

The importance of the learning environment to the Reggio schools has bought about a research project in collaboration with the Domus Academy,\(^2\) which clearly demonstrates the importance of providing well-designed spaces for learning, and carefully considered resources therein. The research publication (Ceppi and Zini 1998) eloquently conveys the need to consider all elements of a space to ensure that it stimulates and supports investigative learning, and through a series of ‘keywords’ and ‘design tools’ the authors explore design concepts based on critical analysis of the Reggio schools. One of these keywords is ‘multi-sensoriality’, which refers to the synaesthetic understanding of one sense through another, and the importance (particularly at this early age) of sensorially rich environments to stimulate and nourish understanding of the world:

Children are born with an immense genetic capacity that enables them to explore, discriminate and interpret reality through their senses. Neuro-biological research has clearly demonstrated the co-protagonism of the senses in the construction and processing of knowledge and individual and group memory. It follows that an unstimulating environment tends to dull and deafen our perceptions … therefore schools must be capable of supporting and nourishing the sensory perceptions in order to develop and refine them. (Ceppi and Zini 1998, p.16)

The authors go on to describe in further detail how tactility, sound, smell, light and colour can be used as design tools, with richness and variety in all considered indispensable characteristics for a space for young children, in line with another of the key concepts: ‘osmosis’. This refers to the importance of equality of school environment with the outside world, as opposed to a synthetic and oversimplified construct saturated with bright primary colours and over-sanitized sensations. The schools are as rich and varied as the rest of the community, reflecting the overall respect held for the child as an individual with as many rights as the adult in the Reggio schools and wider society.

Contrasting sensations such as soft and hard actually offer a greater range of tactile evocations as well as words to evaluate them. Our research with children is directed toward the many perceptual nuances that are part of any attentive exploration of the senses, because of the highly subjective, personal component of every sensory perception and also that the process of knowledge acquisition is as rich as possible.

(Vea Vecchi, Ceppi and Zini 1998, p.134)
In this way richness in the learning environment refers to subtlety of experience as well as variety. It is this component of the Reggio philosophy that has proved most significant to the development of the sensory craft pieces in Craftplay.

**Coming to our senses**

Our understanding of these issues and the implications of this kind of sensory provision for the wider Gallery context was heightened by our involvement with the touring exhibition Coming to Our Senses.

The Birmingham-based touring organization Craftspace Touring has been responsible for some of the most exciting and innovative contemporary craft exhibitions in the Midlands and nationwide over recent years, and previous to Coming to Our Senses had explored interactivity through contemporary automata with the exhibition Devious Devices. The development of Coming to Our Senses had stemmed from the desire to explore the possibilities of providing visitors with a ‘primary’ experience of craft rather than the ‘secondary’ experiences provided through the push-button activity of previous shows (Phillips, Classen et al. 2000). The exhibition consists of installations and objects designed to stimulate sensory investigation and understanding; artists and makers were commissioned to make pieces that would engage visitors with at least two of the senses, excluding sight, and that considered the inter-relatedness of the senses, the same synaesthetic ideal recognized by the Reggio design project detailed above. These installations are accompanied by interpretation posts that also attempt to engage and stimulate on a multi-sensory level, and that communicate the importance of synaesthesia for those with sensory impairments.

From the outset the exhibition tackled issues of accessibility, taking the needs of those with sensory impairments and disabilities as a benchmark for physical and intellectual access for all exhibition visitors. The project was initiated with a series of pilot artist residences in a variety of settings that fed into the development of the exhibition. All artists involved in this were subsequently given disability awareness training, indicating the significance of access to the project as a whole. According to the catalogue, the two main guiding principles were that:

- In order to ‘achieve equal access and acknowledge non-visual ways of learning, a non-prescriptive approach should be taken’
- No one person is better able to connect with, understand, interpret and interact with the works on display than another, regardless of any barriers they may face (p. 2)

The resulting craft works comprise a vibrant exhibition that has succeeded in widening audiences’ perceptions of what craft and the visual arts can be, and has helped to develop new audiences for many venues, Bilston included. Two of the makers were subsequently invited to produce pieces for Craftplay, and as such we benefited directly from their previous experience and understanding of provoking sensory exploration with their work.

A few months before Craftplay was launched we had the opportunity to explore some of the common ground between the values of the exhibition and the Reggio approach within the course of a project for National Children’s Art Day 2001, during which we worked with a group from a local nursery. Working with textile artist Sally Harper, who had previously received training in Reggio practices, we created a series of sensory objects that aimed to stimulate the imagination and curiosity of the children as a lead-in to both the exhibition and the forthcoming Craftplay project. These pieces were constructed from everyday
materials juxtaposed in strange and unusual ways to encourage questioning and multi-sensory engagement, and were made partially in response to the Case Histories handling collection used in Coming to Our Senses. This collection was used as an outreach and interpretation tool that sought to confront and challenge expectations of relationships to material properties, recognition of which is largely based on sight for many of us, thus providing opportunity for other senses to be recognized and used.

The objects made for our NCAD project provided a leaping-off point for the work of the nursery children over several days at their school and at the gallery; the project resulted in significant changes in practice for the nursery involved, and the sensory objects (having well exceeded their expected lifetime) continue to inspire and excite children and parents and carers visiting Craftplay, forming a useful adjunct to the craft commissions themselves.

The Craftplay sensory craft collection
The craft pieces that have been commissioned for use and display in the Craftplay room function in several ways. First, they serve to enrich the learning and play environment in a unique way, presenting visitors with unusual and challenging objects that have the potential to be integral to creative play situations. They also provide a means of access to contemporary craft, challenging preconceptions of what craft is and can be, thus serving a purpose in the broader context of audience development at Bilston Craft Gallery. Within Craftplay itself they help to establish the room’s identity as essentially a gallery space, as opposed to another nursery setting.

Several of the makers involved in Coming to Our Senses were invited to submit proposals to contribute to the Craftplay project; ultimately two of them, Bree Croon and Jim Griffin, produced work for inclusion. Three of the makers are included in the collection as a direct result of involvement with an exhibition about, by and for very young children and parents called BabyLove, which celebrated the opening of Craftplay late last year: two of them, David Petts and Jutta Stahlacke, had been commissioned to make hands-on work specifically for inclusion in that exhibition, and Lizzie Reakes was commissioned on the basis of a piece exhibited. Jon Williams’s work was already well known and regarded at the gallery before he submitted a proposal. Two textile artists, Sally Harper and Becky Smith, have submitted pieces based on their own experiences with pre-school children before and in the early stages of Craftplay: Sally was involved with the NCAD project outlined above, and Becky facilitated Saturday toddler and carer drop-in sessions during the opening weeks.
**Bree Croon** (Fig. 2): Bree’s contribution to Coming to Our Senses was in our experience particularly popular with exhibition visitors – a large ‘tree’ of suspended inflatable textile spheres embellished with a wide range of contrasting textures and finishes, some including hidden noises, inviting exploration and discovery. Her contribution to Craftplay shares many qualities with its forebear, and is also a visually appealing addition to the room. Her work consists of a series of free-standing tactile cubes of different sizes, which, like all of the pieces, can be explored and manipulated as desired by visitors to Craftplay. They sometimes form a vital part of the backdrop to activity, and on other occasions are the focus of creative play.

**Jim Griffin** (Fig. 3): Jim’s contribution is also a direct extension of his work for the exhibition, and is one of the two components of the Craftplay collection that are site-specific. Installed under the large bay window at the front of the space are six small wooden boxes framing metalwork interiors with very different surfaces and environments, all of which can produce interesting and changing sounds when explored. All of the boxes include an element of reflection in their surfaces ranging from mirror-like clarity to twisted convex contortion, providing a means for children to explore their own changing reflection and identity. Reflective surfaces are an important element in many Reggio-inspired settings for this same reason (see Fig. 4).

**Sally Harper** (Fig. 5): Sally produced two separate elements as a direct response to her work with us for National Children’s Art Day 2001. The large felted banner can be broken up into its separate constituents, some of which include a secretive element of sound-making waiting to be chanced upon. The collection of miniature textile panels includes a broad range of materials and surfaces such as plastic ties, feathers and glass beads, and it is therefore one of the pieces that requires adult supervision.
**David Petts:** David’s work was a popular contribution to the BabyLove exhibition, consisting of a ‘soft sculpture kit’ of materials and objects for constructive and creative play, and two book forms: the *Listening Book*, which was constructed with opportunities for sound-making in mind, and the *Looking Book*, which consists of pages made from a variety of materials and objects made to focus visual investigation.

**Lizzie Reakes** (Fig. 6): Lizzie makes hand-hooked recycled textiles, and this large piece enjoys a great deal of attention from Craftplay visitors. All of the separate squares and triangles are made of recycled fabric and plastics, and can be lifted and replaced elsewhere on the Velcro backing. Originally intended to be wall-mounted, this piece now spends most of the time on the floor. There have been several occasions where children have become absorbed with it for long periods of time, feeling the different textures, holding the pieces to their cheeks, examining them with torches and rearranging them on the backing. This piece is particularly suited to very young children, who can sit or crawl on the mat alongside their carer, seeing and feeling the differences between the separate components (Fig. 7).

**Becky Smith** (Fig. 8): This site-specific piece is the most recent commission, and as an environmental piece rather than a free-standing work it is slightly set apart from the other items of the collection. It is a textile installation in a small alcove directly off the main Craftplay space that will house a specially made lightbox for exploration of objects and materials. The concept was developed in collaboration with the head teacher of Bilston Nursery, Jo Barr, and the area will also function as a quieter area for children to be with their parents and carers.

**Jutta Stahlacke** (Fig. 9): Jutta’s contributions to the BabyLove exhibition formed a cozy and intimate tactile space, with four wall-mounted square panels and a floor mat with cushions. The neutral pale tones of the fabric provided a calming and serene environment. The pale colours emphasize the different qualities of material and stitch, encouraging users to investigate these pieces with touch.
Jon Williams (Fig. 10): Unsurprisingly, we had to consider carefully whether to include Jon’s ceramic objects in the collection, for obvious health and safety reasons. For this same reason these pieces have more limited scope for use – in that they can only be used with smallish groups of three- or four-year-olds with direct adult supervision. None the less, they have elicited exciting responses from the children, the bizarre shapes and textures and unusual qualities of the objects all inspiring surprisingly expressive language. Children examining the pieces have likened them to dinosaurs, elephants, shells, trumpets, snails and vegetables, and described them as lumpy, sharp, pointy and curly. The bobbly slurpiness of the forms and the candyfloss colours seem to contradict visual evidence and expectations of their material qualities, which are cool and sometimes quite heavy. The children are encouraged to treat the objects with respect; the fact that the pieces are stored in equally interesting ceramic-lidded pots, surrounded by sumptuous pink fur, makes their unravelling an exciting and awesome experience, and even very young children handle the ceramic pieces with extreme care. Some of the shapes conceal their own noises too.

Conclusion
This paper has described how multi-sensory contemporary craft has widened expectations, challenged preconceptions and introduced new audiences to Bilston Craft Gallery.

The sensory craft commissions are an essential element of the broader Craftplay project, and are providing us with an insight into how artists and makers have a distinctive contribution to make to the learning environments and creative spaces of young children. This understanding will feed straight back into Bilston Craft Gallery in the future, as we plan to develop a permanent introductory gallery called Craftsense, which will include new work commissioned for a similar purpose.

Bibliography

1 For further information and contact details see www.surestart.gov.uk.
2 The Domus Academy is a research and professional training organization based in Milan, which works in the fields of communication and design; ‘a place for producing ideas and
work tools aimed at providing design solutions that are appropriate for the massive transformations that take place in industrial society’ (Ceppi and Zini 1998, p. 154).

3 For further information and contact details see www.craftspace-touring.co.uk.

Nicki Brookes
For the past two years Nicki Brookes has played an integral role in the development of the Craftplay creative play gallery for under-5s at Bilston Craft Gallery, Wolverhampton. Craftplay aims to provide local pre-school children and their parents and carers with new opportunities to play and learn together with resources that promote sensory development and creative making skills, and has been supported by the DfES Sure Start initiative and the Arts Council of England.

Nicki has worked for Wolverhampton Arts and Museums Service since August 1999. Previous work there has included undertaking a major evaluation of access and interpretation initiatives at Wolverhampton Art Gallery (including multi-sensory interpretation piloted within the galleries and the 'Creation' Digital Art Gallery project) assisting with marketing prior to the refurbishment of the Gallery, and additional development work at Bilston Craft Gallery.

Nicki has also spent a year as a visiting lecturer at Sutton Coldfield College of Further Education in Birmingham, teaching Art History and Contextual Studies to A Level and GNVQ students; and in late 1999 undertook a two month internship at the Peggy Guggenheim Collection in Venice, Italy. She began her career five years ago whilst studying for her first degree in Art History, working on a paid and voluntary basis in Exeter at the Royal Albert Memorial Museum and Spacex Gallery. Nicki is currently studying at the University of Manchester for an MA Art Gallery & Museum Studies, and is looking forward to pursuing a challenging and rewarding career in art education; future plans also include obtaining a PGCE to enable her to continue lecturing alongside work in museums and galleries.