

## The Spatial Experience of Primary School-age Children: The Development of an Open Space Design Language

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### Abstract

This paper presents the development of a design language to assist environmental design professionals improve quality of life for young children by enhancing the experiential potential of places routinely encountered. The research responds to a reawakening of the importance of encouraging an increase in young people's use of the outdoor environment, in particular to promote positive behaviour in children through contact with experientially rich outdoor settings (Worpole, 2003). The research focuses on primary school-age children and the spatial experiences encountered on their routine journey from home to school. It pioneers the use of a new method of open space analysis and design (Experiential Landscape Place, or ELP), developed in the course of the research, which translates aspects of human experience into a spatial vocabulary. The process of improvement is participative using methodology including semi-structured interviews, wish poems, cognitive mapping, text and non-participant observation (Sanoff, 2000; Romice and Frey, 2003).

**Keywords:** Children; human experience; spatial vocabulary

### 1. Introduction

Increasingly the everyday environment or 'incidental spaces' routinely encountered are seen as important. In a recent report these were described as a "national asset" (DTLR 2002), yet evidence suggests that there is a loss of connection between children and the natural environment, despite findings that the wellbeing of children and environmental quality are strongly linked (Thomas and Thompson, 2004). Children's everyday experience of the environment is routinely encountered on the 'school run', and there is a movement towards enhancing this to promote positive behaviour and choice by giving children a say on improving school journeys (DfES 2003).

#### *1.1 The 'Problem'*

Traditional techniques employed by environmental professionals offer solutions that often focus on aesthetics, technical resolution and physical features, and are driven by budgetary constraints. What is lacking is consideration of the experiential potential of place that can promote positive behaviour and a sense of emotional wellbeing. Additionally there is an issue of how to effectively engage with children. Practitioners do consult and use participation in Urban Regeneration projects to School Grounds design (Adams and Ingham 1998). This can, however, become mechanistic by focusing on purely functional elements. The questions remain: how to effectively engage with children and ensure that the outcomes provide not only the desired physical elements but are also experientially rich? This paper seeks to address these issues by proposing and developing techniques from theoretical positions empirically tested and refined over a five-year period to develop a 'dialect' of the emergent design language applicable to the study group.

## 2. The Language of Experiential Landscape Place (elp)

Experiential Landscape Place (elp) is a research project concerned with the spatial expression of experience in open space settings. Ongoing research within elp:rdu<sup>1</sup> holds a central tenet that aspects of human experience have spatial implications that are important to sustaining fulfilled lives.

Elp is concerned with three fundamental categories of experience: how people attach significance and value to preferred locations; orientate themselves; and develop a sense of home ground.

Interpreted spatially as 'CDTA':

- Centre: subjectively significant location engendering a sense of here-ness and proximity.
- Direction: subjectively significant continuity engendering a sense of there-ness and future possibility.
- Transition: subjectively significant point, or area, of change engendering a sense of transformation in mood, atmosphere or function.
- Area: subjectively significant realm engendering a sense of coherence and containment.

A method of mapping these experiences has been developed and is used in two ways: firstly to map existing situations, and secondly, to map potential experiences through the design process.

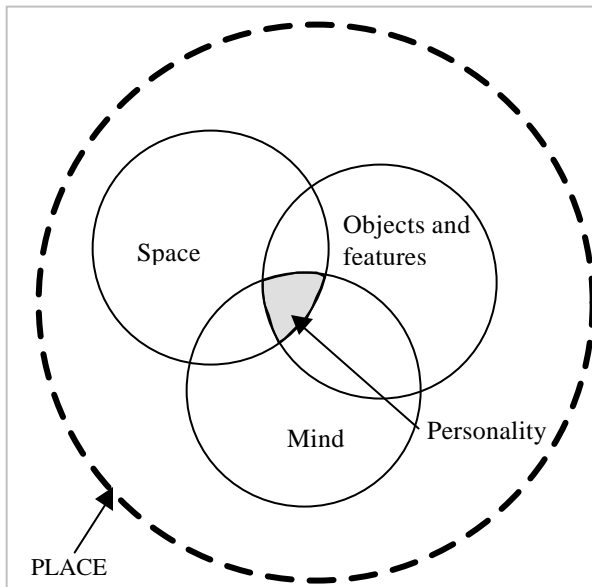
Provisional analysis considers the following as important indicators of rich or poor experience or experiential potential:

- Quantity – amount of experience.
- Balance of types of symbols – establishes characteristics of a site, ie mostly centred, or mostly directional or transitional.
- Distribution – records experiential potential across a site, and establishes any localised concentrations.
- Linkage and Connectivity – the extent to which symbols are connected.
- Intensity – how strong the sensation is.
- Appropriateness – is the experience contextually fitting.

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<sup>1</sup> elp:rdu is a UK based research facility formed by Dr. Kevin Thwaites of the Landscape Department University of Sheffield and Ian Simkins who practices as a Chartered Landscape Architect and freelance Landscape Consultant. elp:rdu was established to research the relationship between human experience and its spatial dimensions and explore how this can be applied to the design of open spaces. <http://www.elprdu.com>

### The 'Solution'



The elp language offers a way of representing a human experience/spatial relationship as an overall framework to assist in place making. Existing participatory techniques can often be ad-hoc or insufficiently rigorous in that they seek to satisfy a brief driven by budgetary considerations or physical objects. To engender place attachment to a particular group it is desirable for their 'collective personality' to be discovered and reflected within the place making design.

Figure 1. The components of place making

### 3. Reading: A Qualitative Methodological Approach to Participative Techniques

Participative processes have been developed to bring out the 'personality' of place, which resides not only in spatial and physical elements, but also in the minds and imagination of the users. This conception of place draws, in its principles, from the work of environmental psychologist David Canter, who has suggested that an individual's conception of place has three constituents: the physical components; activities that occur there; and the individual's thoughts, meanings and understandings (Canter, 1977). The research has sought to develop a means to draw out meanings and associations that children have and feel about their environment; this is viewed as especially important to inform design decisions to create environments that are emotionally and experientially rich and possess a unique sense of place.

### 4. Participatory Techniques

#### 4.1 Non-participant observation

Non-Participant Observation involves the passive observing of a group's activities (Kumar 1999). It seeks to "understand practices, interactions, and events which occur in a specific context" (Flick 1998). For this study it is held imperative that records of these 'naturally occurring' events and behaviour are studied at source and data collected first hand, by observing the children throughout a school day. This can provide 'access' to the cultural mechanisms expressed as a collective 'personality' as well as the spatial relationship that children have with their environment.

#### 4.2 Semi-structured interviews (SSI)

Early studies developed an approach to building trust and determining useful information using a technique of semi-structured interviewing. Predetermined topics guide conversation allowing new questions or insights to evolve as the result of discussion (Pretty et al 1995). The establishment of themes around which discussion is based evolved from empirical work, similar to an ethnographic interview (Flick 1998 citing Spradley 1979).

Themes are categorised into three areas of interest, below are examples of some of the themes used:

- Physical objects and features: About my school grounds – ‘I like..., I don’t like...’
- Human Experience: ‘Imagine coming out of your front door, remember – what do you notice?’
- Place Making. ‘Games we play and things we do’

#### *4.3 Wish poems*

An adaptation of SSI is the ‘wish poem’ (Sanoffa 2000; Sanoffb 2000) a technique that has been refined over a number of case studies. One of the themes used is: ‘I wish my playground had ...’. In both the wish poem and SSI the general theme is used to stimulate conversation, and reveal any significance in comments made by participants.

#### *4.4 Word pictures*

This tool has been developed in studio-based research at post and undergraduate levels and empirically tested with year 8 and 9 children. It has limitations in its application with younger children due to their less developed written communication skills. It is utilised as a way of expressing a sequence of emotional responses relating to places before considering spatial and physical elements. The word picture (Alexander et al 1995) has become a very potent tool. Participants are asked to write in a poetic manner about experiencing a place; one year 8 student described her aspirations for her school’s grounds: ‘What we will feel like! Chilled, relaxed, having fun, warm, charm, fresh, like everything is new born, crisp and everything is alive.’

#### *4.5 Cognitive mapping*

The use of cognitive mapping is effective in finding out how people view their area (Wates 2000). The significance of people being able to understand their environment and be able to mentally map it is prominent in place perception (Downs and Stea 1973). Additionally it is proposed that maps are effective where there are cultural or communication problems, which can be the case with employing conventional methodologies due to the age and limitations of understanding of the study group (Wates 2000). Two mapping exercises are employed; children are asked to respond to the following sentences by means of drawing pictures: ‘This is me and this is what I like doing best, and where’, and ‘This is what I would like the outside of my school to be like’.

#### *4.6 Mapping existing experience*

Symbolising graphically the observations on base plans is important and this ‘coding’ framework proves necessary to simplify the recording and analysis of the process (Romice and Frey 2003). A developed method of mapping activity using the elp framework is employed, this produces a map of existing contextual activity and experiential characteristics together with spatially locating them. An Experiential Landscape Place Map (elpm) is produced which represents the combined existing experience in terms of the distribution of centre, direction, transition and area (CDTA) from information provided by the participatory exercises and observations.

### **5. Writing: Designing an Experientially Rich and Meaningful Place**

#### *5.1 Embedding a ‘personality’*

The qualitative research results are collated, SSI and wish poems are analysed by tabulation, whilst observations are recorded in the form of an elpm. Texts are analysed and also mapped where appropriate and photographs, sketches and cognitive maps are examined, and the

resultant findings summarised. This ‘triangulation’ of data seeks out the ‘personality’ which becomes a common ‘background’ within design proposals. This can be implicit or explicit, and may manifest itself in a visual theme by means of: colour, texture, balance of shape form and spatial arrangement, or to engender a particular feeling or mood.

### *5.2 Mapping experiential aspirations*

Mapping exercises are carried out at intervals in the writing phase, initially a diagram of experiential aspirations is drawn using the defined symbols for CDTA based on the qualitative analysis and brief. The resultant map represents a sequence of experiences which results in a pattern of potential experience. The pattern is then transferred to a base plan and leads to the conceptual development of physical design such as structures and features that will correlate with the desired experience of the pattern. The selection of materials and techniques of construction as well as the spatial organisation of physical elements are used to emphasise the desired experiential characteristics, which also reflect the embedded personality. A number of elpm are used in the design process from outline sketch proposal stages to details such as planting plans.

### **Key Concluding Points**

- Participation: a tool to bring out the collective ‘personality’ of participants.
- Personality: resides in the minds and imagination of the users, not only in its spatial and physical elements.
- Meanings and Associations: draws out how children feel about their environment.
- Behaviour: weak experiential opportunity is associated with anti-social traits, rich opportunities with positive behavioural traits.
- The elp framework: developed into a ‘language’ with a ‘dialect’ for particular users/participants such as primary school-age children and can be used along with traditional survey and analysis techniques to experientially enrich places at both reading (analysis) and writing (design) stages.
- The studies have indicated that children respond to environments that are strongly centred, the most fulfilling having centres nested within each other of differing scales. These centred clusters are most appropriately located around familiar or ‘home ground’, ie at doorstep and school locations, whilst the journey between should be strongly directional with a sense of linked weaker centres along the route.

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