

# **The horticultural nursery as restorative environment: sensory and social factors that enhance wellbeing**

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## **Restorative Environments**

The term 'Psychological restoration' refers to the return to baseline levels of functional resources and capabilities that have been diminished in ongoing efforts to meet adaptive demands. Restoration can occur in many ways but experiences tend to include aspects of positive mood change, renewal of directed attention capacity, and self-contemplation (Korpela, Hartig, Kaiser & Fuhrer, 2001). When trying to determine what makes an environment restorative, the emphasis has been on the features of the environment (type and extent of vegetation, presence of water, visibility of artificial structures, etc.) and what they might provide to the perceiver. Much of the research makes use of rating-scale measures (e.g. Hartig, Korpela, Evans, & Garling, 1996, 1997; Laumann, Garling, & Stormark, 2001; Herzog, Maguire & Nebel, 2003) based on the four components posited by Attention Restoration Theory (ART; Kaplan & Kaplan, 1989). The first component, being away, refers to the concept of 'psychological distance' from routine mental tasks and everyday demands. The second component, extent, can be defined as the environment having components that are both coherent and fitting, in a place having significant scope. The third, fascination, relates to the idea of involuntary, effortless attention to the environment. The fourth, compatibility, refers to the capacity of the environment to meet the needs of the perceiver's desired activity in that space. While some aspects of the components relate to more diverse concerns – for example, compatibility will be determined by the particular desires of the perceiver – in general there is a focus on the *attentional* needs of the perceiver. In general, studies have shown that environments with components hypothesised to be restorative are in fact perceived as being more restorative than those lacking such components, with natural environments tending to be rated higher than urban ones. However, there has been some variation in results, including some cases where specific urban environments are perceived as being more restorative than natural ones (e.g. Herzog et al., 2003), suggesting other factors may be involved beyond attentional needs.

The other main theoretical contribution to the area is Ulrich's psychoevolutionary model (Ulrich, 1983; Ulrich, Simons, Losito, Fiorito, Miles, & Zelson, 1991). Rather than attentional factors, this proposed a primary role for the initial affective response to a specific environment. Ulrich suggested that perceptual features of the visual scene (relating to the notion of 'preferenda': Zajonc, 1980) elicit positive-affect responses which can then influence subsequent cognition, including attentional functions. Ulrich suggested that the positive effect relates to the 'unthreatening' aspects of nature, including both cultural (e.g. Tuan, 1990, suggests Western cultures tend to condition their inhabitants to revere nature and dislike cities) and individual (e.g. associations of natural scenes with recreational activities) learned responses. In addition to this, there is also some evidence to support the idea that humans have an innate (evolutionary-based) affective preference for specific landscape features (Balling, 1982). This suggests that, to be perceived as restorative, an environment might also have to meet non-attentional needs relating to affective perceptions.

## **Wellbeing**

Despite widespread use, the concept of wellbeing is still a somewhat nebulous term. In a review of the literature, Pollard and Lee (2003) describe it as 'a complex, multi-faceted construct that has continued to elude researchers' attempts to define and measure it', suggesting that it consists of at least five separate domains – physical, psychological, cognitive, social and economic – with each domain spanning a range of indicators, both positive and negative. However there is some agreement that wellbeing is a subjective matter (Haas), and that it relates to characteristics of the inherently positive state called 'happiness' (Bradburn 1969; Pollard & Lee, 2003). It is also

recognised as being a concept that underlies much of healthy human life: the World Health Organisation (2004) defines it as a state which 'allows individuals to realise their abilities, cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their community'.

Given the Cherry Tree Nursery's remit of serving adults with 'severe and enduring mental illness', a focus of this study is on mental wellbeing. Thus the *Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)* was chosen, this a specifically UK-validated 14 item scale (see Appendix 1) that shows high levels of internal consistency and reliability, 'comprised only of positively worded items relating to different aspects of positive mental health' (Tennant et al, 2007). Items concern a variety of aspects of wellbeing, including self-esteem, perceptions of relationships with other people, and positive anticipation of future events.

## **The Project**

The proposed research would involve two interrelated threads:

- 1) ***The effect of being at Cherry Tree Nursery on wellbeing***
  - a) Using the *Warwick-Edinburgh Scale* as the basis for semi-structured interviews: volunteer participants will be interviewed once close to the initial attendance and then again after attendance for 6 months.
  - b) Qualitative interviews with volunteer participants looking for features and processes that have meaning for them (absorptive/hypnotic features, favourite parts of site, ART components, social components)
  
- 2) ***Restorative features of the nursery setting***
  - a) Evaluate different parts of site in terms of perceptual features (visual, auditory, olfactory and tactile). Comparison of favourite and non-favoured sites. Fractal analysis where feasible. Subject to practical considerations and budgetary constraints, could also include before/during/after skin conductance (via stick-on finger sensors) measures and cortisol ('chew on cotton swab for a few seconds') stress-level measures.
  - b) *Perceived Restorativeness Scale* (19 items – see Appendix 2) given to volunteer participants and visitors in respect to the Nursery site as a whole. Analysis of ART components.

## **References**

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