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“Could it be that we adults are imposing our tastes and preferences on children, claiming that they need nature, trees, grass, flowers and other living things when in fact it is we who want them?” - Briavel Holcomb

# The Perception of Natural vs. Built Environments By Young Children

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**ABSTRACT.** This paper questions the assumption that young children need exposure to natural environments for healthy psychological development. Preliminary investigation of the environmental perceptions of 4-year-olds suggests that the distinction between natural and man-made milieux is insignificant to preschoolers, and that they find both kinds of environments similarly fascinating. Both offer rich potential for collecting treasures—an important preschool criterion of environmental satisfaction. The behavioral environments of parent and child are markedly different in the same physical setting.

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**I**T IS COMMONLY assumed that children need nature in their environments for healthy growth and development. In cities, where non-human nature is diminishing, it is presumed crucial to preserve those pieces of nature which have survived the ravages of urbanization, and to reinject nature where feasible. This is not a new idea. That natural environments are important to healthy psyches has long been asserted, and it has been advanced with new vigor since "ecology" became popular. Detwyler states that "only two kinds of landscape are fully satisfying. One is primeval nature undisturbed by man. . ." (*Detwyler 1970:696*). Hart suggests that natural settings (earth banks, streams, woodland) best provide the manipulable environment which Piaget demonstrated was essential for the development of human intelligence (*Hart 1973a, 1973b*). Cobb goes further in asserting that the genesis of human genius requires exposure to natural milieux:

The exploration includes tracing the relationship of this early psychophysical force in human development to those uncommon forms of genius which constitute the high point of achievement in human growth potential, with roots, as I believe, in the child's perceptual relations with the natural world. (*Cobb 1959:537*).

The purpose of this paper is to question whether natural settings are in fact so necessary to young children, and to further explore the environmental perceptions, preferences and needs of preschool children. Could it be that we adults are imposing our tastes and preferences on children, claiming that they need nature, trees, grass, flowers and other living things when in fact it is we who want them? While there is certainly nothing harmful, and probably some benefit, in exposing urban preschoolers to "doses" of nature, they may need them less than adults do. Among my beliefs is that it is quite possible for the urban child of lower Manhattan, of Chicago's East Side, Boston's West End, or even the South Bronx, to grow into a fully functioning, happy human without exposure to primeval, or even to tamed nature.

A subsidiary thesis of this paper is that the distinction between natural and man-made environments is unimportant to young children. Categorizing landscape elements by the degree of human involvement in their formation is a skill perhaps most finely developed by North Americans. I suggest that the ability to dichotomize environments on this basis is learn-

ed, rather than innate. Other cultures, especially those less technologically sophisticated, conceive of humans as part of, rather than apart from, nature. It can be argued that this outlook produces a higher degree of environmental responsibility and that to teach children to make fine distinctions on the basis of human involvement in creation is not particularly functional or even logical. No longer is there any part of the surface of spaceship earth that remains unaltered by human agency. Even the deep oceans and ice caps have higher concentrations of DDT than they did at the beginning of the century. Every environment we inhabit is, to a greater or lesser degree, "man-made." Yet contemporary American culture (and this symposium is no exception) imbues its young with the ethic of nature as virtue. Whether nature is seen as the manifestation of God's order, or nurturing the virtuous yeoman of Jeffersonian tradition, occasional lapses into mountain and wilderness paranoia are aberrant in the longer tradition. Continued acceptance of nature as a (or *the*) source of good entails contradictions and ambivalence for the member of an urbanized society. What chance does one have of being virtuous while inhabiting the immoral urb?

The evidence presented here is far from conclusive. This paper is polemical and anecdotal, rather than objective, and the methods are exploratory. Though trained as a geographer, I chose to investigate these questions mainly as the mother of a 4-year-old daughter. The research was carried out at a nursery school in New Brunswick, New Jersey, an old, crumbling city ringed by more affluent suburbs. The children at the school come from both settings, but cannot be said to be representative of either since a high proportion of them are from geographically mobile families associated with Rutgers University.

The specific questions under investigation were:

1. To what extent do 4-year-olds distinguish between natural and man-made phenomena?
2. What qualities of natural environments (specifically woodlands) appear to young urban children? Are they found, or can they be replicated, in urban settings?
3. How does the behavioral environment of the 4-year-old differ from that of her

mother in identical urban places?

To investigate whether 4-year-olds can and do make distinctions between natural and human landscapes, 15 children were presented individually with collections of photographs culled from periodicals, and asked to "put different pictures in different piles." Children at this age already know the concept of classification. They have learned to put blocks into categories based on size, shape, color, and other variables. This learning is reinforced by numerous games that require the child to select the odd item in a series.

The picture set consisted of four scenes that were predominantly "natural", with woods and mountains (care was taken to exclude bodies of water, which have been shown to be consistently appealing), and four that were urban. The pictures were not, however, of uniform size, and on the first test 12 out of 15 children categorized the pictures by size! The following week a new set, in which all the pictures were the same size, was presented. All the pictures showed distant scenes with no people in the foreground. Now the children had difficulty deciding on a criterion for classification. When asked to make two piles, some children asked which should go in each, others simply dealt the pictures into two equal piles like cards. When asked why the pictures in one pile were different from those in the other, the children replied "they just are," or "they are in different piles." Four children divided the pictures by general preference, so that the scenes they like best went into one pile, and those they liked least into the other. Their preferences, however, were not related to the degree of nature represented. Weather seemed a possible variable. For none of the 15 children did natural vs. manmade seem a significant criterion for categorization.

To further explore the children's understanding, I asked them whether they thought people had made some of the items shown in the pictures. "Did people make this building, that mountain, this tree...?" Although the teleological questions thus aroused proved difficult to respond to (if people didn't make that mountain, who did?), the children were quite sure they knew what people made. People make buildings, vehicles, roads, and Vesuvius. They do not make plants, animals, or asymmetrical mountains. Neither do they make lawns or city trees, both of which just grow. It seems that

young children are able to distinguish between inorganic and organic more easily than between natural and man-made, and that the first distinction is more significant to them. The 4-year-old can easily distinguish a plastic from a real daffodil, but not a wild from a cultivated one. The croci which the children planted in the school yard are just as natural to them as the alpine gentian.

As a preliminary exploration of 4-year-olds environmental preferences, I "interviewed" 13 children, recording their answers on separate sheets and providing each with a Xerox copy. (The desire for a literary record of oneself for posterity seems to start at an early age). Each child was asked to name and describe his or her favorite places. Home and school ranked high on all lists. Almost all places mentioned were specific (Johnson Park, my Granny's house) rather than generic (parks, train stations), and were small in scale (the swings and slides) rather than large (New York City). Almost all were designed, or man-made places. Even the beach, which was mentioned twice, appealed because of its proximity to carnivals and ice cream. The topophilic tendencies of young children seem strongly influenced by associations with pleasurable activities and friendly people. Aesthetic considerations are distinctly secondary.

The 4-year-old's environmental preferences are obviously constrained by his limited experience. The urban child's activity space is restricted, and limited mainly to designed environments. His brief experience of less tamed nature is carefully monitored by cautious parents ("don't go too near the edge; don't fall in; watch for ticks..."). The young child has more freedom of choice in activity and behavior in a setting designed for safety than in "natural" places. For the urban child, the designed environment is also more familiar, more secure, and less threatening. While Clay is undoubtedly correct that the places we, as adults, remember from our childhoods with the greatest affection are those natural places of grass, rocks, water and trees, we are perhaps remembering from our middle childhoods when our needs for adventure, privacy, and environmental manipulability are less well met in designed milieux (*Clay 1957-8*).

What are, in fact, the environmental needs of the 4-year-old? Which of these provided in

natural settings? Are any found exclusively in nature, or can all the qualities of natural environments be replicated in built environments? Previous research in this field has suggested that the quintessential qualities of, for example, natural woodlands, that are appreciated by humans are changeability, seasonality, spaciousness, unpredictability, secrecy and mystery, manipulability, irregularity, and variety. To these I would add one particularly vital to 4-year-olds—collectability. The woods are a storehouse of treasure. A half-hour walk through the woods near home with two 4-year-olds yielded a rich trove of flowers, goose grass for sticking to each other, leaf umbrellas, dandelion clocks, a feather, a caterpillar, moss for Japanese gardens, and various other items. But a similar walk along city streets produced a fascinating collection of lollipop sticks, silver paper, a plastic bubble wand, several tickets, a piece of tile mosaic, metal scraps, and so forth. Once parental instincts against collecting "dirty" items from streets, gutters and vacant lots are repressed, urban and sylvan treasure troves are fully equal in quantity, variety, and value at 4-year-old exchange rates.

Similarly, most of the desirable qualities of the woods can be found also in urban settings. The city has its seasons. Its coloration, decoration, and temperature, its sonic and activity levels, change with the months, just as the woods do. One can argue that there is as much or more variety in color, shape, texture, light, and sound in a square mile of urban land as there is in an equal area of woodland. The manipulability of natural areas, of earthworks, water, open lots and mud, is replicated in urban settings by young children who dig in sand boxes, tinker with gum-ball machines, trace letters in the dust, make wet footprints, jump in puddles and avoid assassinating fairies by negotiating cracks in the sidewalk. Does the city offer the young child a milieu that is any less mysterious, secretive, unpredictable, or awe-inspiring than nature?

Fiske and Maddi concluded from their investigations of experiential variety that "the more variable of two early environments produces an adult organism that is perceptually and behaviorally more alert, flexible, and able to cope with change." (1961). Parr used this interpretation to deplore what he regards as the increasing monotony of modern architecture. "As

we make our cities more and more uniform by design and regulation, we rob exploration of its rewards, till we force the young to seek the stimulus of the unexpected in their own unpredictable behavior, rather than in a too-predictable milieu." (Parr 1965). Thus he suggests a causal relationship between modern architecture and juvenile delinquency.

Although it is debatable whether the city is so visually monotonous, for the young child the city streets offer many stimulations. There are variations in surface materials (paving stones, grates, dirt, cobbles), there is street furniture (hydrants, mail boxes, benches, litter baskets) to explore, store windows to be enticed by, people and dogs to evaluate, nooks and crannies to hide in, air vents to feel, steps and railings to climb, signs to read, and so forth. The 4-year-old, with fewer social constraints on her behavior, can explore, stare, pry, and satisfy curiosity more easily than an older child or an adult. The vantage point of the child, whose eyes are 2 feet closer to the ground than the adults', offers quite different perspectives. The foreground captures more attention than the middle distance. Not only does the child perceive the street differently, but her evaluation of its potentials differs from that of her mother. Age is a significant variable in urban resource evaluation!

This paper proposes that exposure to natural environments may be less necessary, at least to young children, than has previously been believ-

ed. To the preschool child the distinction between natural and man-made environments is unimportant. Although an infusion of nature into cities is pleasant and provides further stimulation, the human-designed and built habitat probably provides sufficient stimulation, variation, and excitement for the young child. As a data bank of culture, the built environment communicates to the young inhabitant the values, customs, and heritage of society. In the United States the contradiction between an ethos which values untamed nature and the visible concrete evidence of human manipulation of nature sends ambivalent messages to child and adult alike.

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