Children’s sense of place in desert towns: a phenomenographic enquiry

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Set against the background of the call for sustainable development, a fostering of sense of place emerged as one of education for sustainability’s chief goals. Heidegger’s concept of dwelling thinking guided us, in this research, to look beyond the emotional and cognitive attachment to a place toward a state of mind which is not limited to a specific place but can also be taken with the dweller wherever he or she goes. A qualitative tool based on analysis of children’s drawings was developed for characterizing dwelling thinking in desert towns’ children aged 9–10. The results clarified different forms of sense of place and pointed to practical methodologies for the enhancement of dwelling thinking in our quest for sustainability.

Keywords: education for sustainability; sense of place; dwelling thinking; children’s drawings; phenomenographic methodology

Introduction

The United Nations Decade of Education for Sustainable Development (UNESCO, 2005) indicated a significant transformation in the domain of environmental education. It showed a trend moving from a largely science-based educational approach toward interdisciplinary education. This trend, embracing human and value aspects, emerged alongside the need to promote ecological literacy, i.e. knowledge about ecological systems and higher-order thinking skills (Palmer & Brich, 2005; Robottom, 2007; Sherren, 2008; Smyth, 2006; Tilbury & Wortman, 2004).

Education for sustainability (EfS) regards humans as integral components of their ecosystems and human actions as influencing their entire environment. Thus, instead of focusing on resolving human-made “environmental problems”, EfS encourages learners to take an active part in their environment, sustaining it and maintaining it as a healthy system (Berkowitz, Ford, & Brewer, 2005; Fien & Tilbury, 1996; Smyth, 2006; Tilbury & Wortman, 2004; UNESCO, 2005).

In recent years, the idea of a multidimensional sense of attachment between human beings and the environment has begun to appear in EfS discourse. A sense of attachment is considered as a key component that affects our desire to reside in a certain place and as a motivating factor to live as a citizen actively involved in protecting the quality of the social and the natural environment (Beatley, 2005; Flaws & Meredith, 2007; Lane, Cheers, & Morrison, 2005; Mueller-Worster & Abrams, 2005; Newman & Jenning, 2008; Orr, 1992; Szerszynski, 2006).

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The aim of the current research is identification of small desert towns’ children’s perceptions of the environment as a place of dwelling. These insights, we believe, can contribute greatly to EFS program design.

The sense of attachment to place is usually described in the literature using the terms “sense of place” (SOP) or “place attachment” (PA). These are closely related terms describing a sense of attachment to geographical sites in such a way that it makes them significant for individuals or groups. The terms refer first and foremost to an emotional attachment, and also to a cognitive attachment (knowledge, thinking and beliefs) and to a practical attachment (behavior and action) (Altman & Low, 1992). Research literature in anthropology, sociology and geography often addresses the issue of SOP and PA, especially in the context of “a sense of home” and “residence” (Altman & Low, 1992; Buttimer, 1993; Kyle & Chick, 2007; Manzo, 2003, 2005). Malpas (1999) asserted that place, as opposed to space, is not just a mapped territory but a space to live in. Hay (1998) proposed the term “SOP” for referring to a specific way of thinking, and thus it is regarded as broader than the term “PA”. SOP includes subjective qualities (the creation of personal meaning toward a place) and social context in a geographical region, as well as community and ancestral connections to a place.

Many researchers emphasize long-term residence, home ownership and expectations of long-term residence as factors that reinforce attachment to a particular place. In addition, the importance of a deep acquaintance with the natural and the man-built environment is emphasized as reinforcing an emotional attachment (Altman & Low, 1992; Basso, 1994; Hay, 1998; Mueller-Worster & Abrams, 2005; Smaldone et al., 2005). Tuan (1977) and Malpas (1999) emphasized the importance of deep involvement with place or experience in it in order to live in a place. At the same time, good social relations, social involvement and family ties may be no less important in influencing an SOP (Altman & Low, 1992; Basso, 1994; Hay, 1998; Mueller-Worster & Abrams, 2005; Smaldone et al., 2005). A difference between these two dimensions of PA was indicated in the study of Brehm, Eisenhauer and Krannich (2006), which examined correlations between attitudes. Social attachment was highlighted as an important predictor of concern for the local environment in relation to protecting an environment that is of significance to the community’s culture or identity. Attitudes that manifest natural environment attachment were positively correlated with the desire to protect the open landscape that surrounds a settlement. SOP was found to increase individuals’ involvement and concern about environmental issues (Vorkinn & Reise, 2001) and to reinforce the residents’ commitment to protect their environment and support sustainable development (Kyle, Bricker, Graefe, & Wickham, 2004; Smaldone et al., 2005).

Heidegger’s concept of dwelling thinking (1977) brings out another aspect of SOP, a way of thinking not necessarily limited to a specific place. In his article “Building Dwelling Thinking” Heidegger simply asked this: do people who live in urban areas truly dwell there, i.e. do they really feel at home or do they just lodge in and inhabit the city buildings? This question challenges the claim that the virtues of environmental citizenship emerge from (among other things) our sense of having a private realm (Dobson, 2003) and our familiarity with our “ecological neighborhood” (Berkowitz et al., 2005).

According to Heidegger, to dwell is a fundamental feature of being human; it is the manner in which we, as humans, like many other animals, are on the earth (Buttimer, 1993; Heidegger, 1977, p. 325; Ingold, 1995; Tuan, 1977).

Dwelling thinking enables us the opportunity to live in safety and feelings of freedom, allowing us to act authentically in the locations where we reside. For Heidegger, dwelling thinking implies staying in one place, building and inhabiting homes embodying
four dimensions: being on the earth, under the sky, among mortals and before the divine. Humans are seen as incorporating these into their habitat – creating a space for their activities and giving meaning to their environment. This is achieved by protection, preservation and caring for the environment, including the development and building of new man-made structures. For Heidegger (1977), fostering and development are two complementary sides of our dwelling activities; together they form the meaning of environment for humans. Mortals dwell in that they save the earth (alongside the other three dimensions); however, saving does not imply snatching it from danger. To save, Heidegger suggests, means to set the environment free into its own essence (Heidegger, 1977, p. 328). Consequently, according to his view, the concept of environment is derived from man’s dwelling thinking.

Human activity transforms sites and is the means of turning sites into dwellings (Buttimer, 1993; Tuan, 1977; Malpas, 1999). Heidegger’s idea of dwelling shows an ongoing process characterized by maintaining our environment under repair, decorating or performing structural alterations in response to changing circumstances, as most of us wish to do in our own homes. To dwell is not just the outcome of preformed plans but also the process. In this process, humans become an active component of the ecosystem, changing the environment and causing new habitats to exist for many other creatures. Distinguishing between a house and an animal shelter is seen not as absolute but as relative (Ingold, 1995, p. 187). The specific feature of continuity in human dwelling is stressed in Malpas’ study of the concept of place in Heidegger’s thinking (Malpas, 2007). Malpas asserts that “only temporality can provide the necessary unity and directionality that allows things, persons, places, and spaces to appear as significant” (Malpas, 2007, p. 96).

Dwelling thinking may lead us to accept our homes as extensions of our “private realm.” Conversely, the absence of dwelling thinking ultimately leaves people still feeling homeless, although they may have “a house” (Heidegger, 1977, p. 339). EfS, aspiring to encourage our sense of responsibility with regard to our behavior not just in a locale but also in the global environment will benefit from facing the challenge of encouraging dwelling thinking. Yet, defining people’s dwelling thinking remains elusive. Heidegger pointed out that in the past, the accumulated wisdom of generations guided people in how to build their houses: they took climate and local weather into consideration, respecting the earth and the continuity of generations. The building structures reflected expertise, which itself was derived from the experiences of long-term dwelling. This is not a suggestion for twenty-first-century citizens to build as did dwellers of a bygone age. Nonetheless, it is important to realize that technological progress in our society comes hand in hand with a distancing from the natural environment (Orr, 1992); nature is sometimes perceived by urban dwellers as a threat or boring or anything but a source of wisdom for dwelling. In modern city life wherein the authorities organize the structures and functions of the community, the residents’ participation in local district management is restricted. Even inhabitants who consider themselves environmentally aware find arenas for participatory democracy rare (Harrison & Burgess, 2003). Moreover, nowadays people often have the feeling that their addresses are temporary and that sooner or later they are going to move to another place in search of work or services. This feeling of impermanence can elicit a sense of alienation from the environment (Buchecker, 2009; Gustafson, 2001). These factors do not encourage development of dwelling thinking and, consequently, of SOP. They do however highlight the need to understand just how students in modern towns conceptualize the environment and what their state of dwelling thinking really is, as an effective tool for focusing on the design and execution of EfS.
Evaluating children’s dwelling thinking

From the 1960s to the 1980s, progressive research explored people’s perception and cognition of the environment (see, for example, Kaplan & Kaplan, 1982; Moore & Golledge, 1976; Saarinen, 1973). These studies yielded useful insights into the field of environmental education: Ittellson (1978) indicated the link between the way people act in the environment and the way they experience it. This is particularly true in our constantly changing urban environment. In his 1979 summary of 15 years of research into how people conceive environments, Moore (1979) concluded that perceptions of the environment differ, reflecting age, gender, ethnic values, lifestyle and socioeconomic background. He pointed out the limited number of studies which examined the abstract and symbolic aspects of perceptions of the environment.

During the early 1990s, the notion of a more humanistic and interpretive examination of environmental education research emerged. It focused on understanding the subjective world of human experience, including how students conceptualized the environment (Palmer & Brich, 2005). Studies showed that young children aged 4–7 already hold an environmental concept and, indeed, misconceptions of environmental issues (Palmer, Suggate, & Matthews, 1996). Rickinson (2001) pointed out that children can hold seemingly conflicting concepts of the environment such as considering the environment to be threatening, yet at the same time they see it as being under a threat. It was shown that many children think of the environment as an outside object rather than conceptualizing themselves as being part of it (Loughland, Reid, & Petocz, 2002).

Barraza (1999) used drawings of 7- to 9-year-old children from England and Mexico as a tool for evaluating their environmental perceptions, major expectations and their concerns for the future. Some restricted evidence appeared in her analysis, suggesting children from schools with environmental policies developed a higher concern for environmental issues.

Such studies have raised educators’ awareness of the significance of children’s pre-perceptions of the environment and led to change in educational programs. However, having environmental knowledge and ecological perception, important as it is, is just not enough. Palmer and Brich (2005) stress the need for studies that incorporate the duality of conception and action.

It is here that dwelling thinking can be seen as a bridge between being in the environment and knowing about it and acting as part of it. In other words, when people perceive their environment as home and have dwelling thinking, they feel responsible for it and have a willingness to manage it wisely.

An understanding of how children (aged 9–11) respond to their environment and the ways they might begin to disconnect from it in early adolescence were the motivation for Derr’s (2002) study in old communities in north New Mexico. Knowing the factors that contribute to children’s SOP, in her view, is crucial in creating environmental education that meets children’s needs and cultivates caring connections. Derr (2002), using an exploratory and ethnographic approach, demonstrates the wide range an SOP can take in children’s lives. She suggests the importance of family, social relations and personal meaning over physical features of spaces in children’s place relations.

The aim of our paper, in the same way as Derr’s, is to explore more deeply the SOP in young children, but here we focus on the role of dwelling thinking in it and the different forms dwelling thinking can take. Dwelling thinking here should be seen as a state of mind which we carry with us and which is not limited to a specific locale. In this world of constant residential relocation, it is important to understand the forms dwelling thinking can take in order to foster EfS.
Study locations

The research was conducted in two small and relatively young (50-year-old) towns: Mitzpe Ramon with 5000 residents and Yerucham with 8000 residents. Both towns are located in the Israeli Negev Desert, and both are located on the edge of a different Makhteshim (erosive craters), unique geological phenomena and internationally recognized nature reserves (Figure 1). The newness of these towns restricts the ancestral ties to place as described by Hay (1998) and Derr (2002) in their studies.

The desert nature reservations surrounding both small towns frequently emphasize the inhabitants’ sense of isolation and exaggerate residents’ sense of distance from the town’s supplies and services. Conversely, these nature reservations provide the possibility of daily direct contact with nature.

Many residents in both towns live there because of the low cost of living and often see it as a temporary residence; they often unapologetically aspire to live in the urban center of the country. Many residents are unused to taking trips into the nearby surroundings and openly denigrate this specific landscape. Both towns share similar socioeconomic characteristics and almost-parallel population demographics including immigrants from all over the world.

Study populations

Two case studies were included in this study. A total of 78 secular elementary students participated. All students were aged 9–10 years. In the first case study, the town of Mitzpe Ramon (MR), 44 students underwent an environmental education program and served as the intervention group. Their environmental education program was established in 2003 and has provided all students from the ages 7 to 11 with 2 hours of environmental activity per week. The main program goal has been fostering empathy and loyalty to the town and the surrounding environment. The lessons include gardening and trips to nearby sites, both natural and man-made. The children learn how to utilize runoff water and protect plants from the high desert radiation and evaporation. Our MR study group included 24 students from grade 3 and 20 from grade 4.

The other case study investigated a group of 34 students from Yerucham (Y), another town in the Negev Desert. Their school, located at the edge of the town, overlooking the desert, provides no environmental educational program. These children seldom tour their environment as a school activity.
Data collection

It was decided that dwelling thinking was to be evaluated through the medium of children’s drawings. This research methodology was constructed specifically since dwelling thinking involves emotions and abstract concepts, in addition to formal knowledge, and may include negative feelings concerning the towns that we assumed might prove difficult for children to express verbally.

The students were encouraged to draw an advertisement supposedly for the purpose of attracting new residents to their town. The request to draw an advertisement was designed to expose the way the child conceptualized his or her environment as a home.

This was intentionally a different task from drawing the environment (Alerby, 2000; Barraza, 1999; Keinath, 2004). It is different in that whereas the latter referred to knowledge, our study explores the feelings, the dwelling thinking and the role of me in the environment and my hometown. It also deliberately differs from the question posed in our preliminary test – “What does my town mean to me?” – since this question led most of the children to represent the environment utilizing simplified symbols (e.g. “house” is a symbol for “home” or “circle” symbolizes “protected space”) rather than a rich realistic drawing. Although the children had no specific prior experience of drawing advertisements, nevertheless before embarking on the task there was a short discussion about what things might attract new residents to the town. In this interaction, the children recalled their own experiences of dwelling in the town and the drawings did indeed reflect them. The activity took place in the Home-room lesson with their Home-room teacher present. The children received A3 paper and 12 oil crayons. The task was allotted 2 hours. Despite the usual positive connotation attached to advertisements by their very nature, we wanted to avoid stifling any possible negative feelings that the children might feel uncomfortable expressing. To avoid this, we stated in the conversation preceding the task that “some people think it would be better if more residents would come to live in the town”. This deliberately ambivalent wording hopefully legitimized any such negative feelings, and indeed such feelings were expressed in some of the pictures. The children were asked to work alone. We stressed that there was neither a right nor a wrong answer and neither a good nor a bad grade in this assignment. Working with groups of only 8–15 children allowed the children to physically spread out. After the drawing exercise, each student participated in a 7- to 10-minute informal interview to relate what he or she had drawn and could say about the drawing.

Interpretation

The request to draw an advertisement for the town is an innovative methodology for studying SOP because it can be considered a projective test. Projective tests were developed in the middle of the last century. They are based on the idea that drawing reflects the personality, the conceptions and the attitudes of the artist (Hammer, 1997; Wagner & Wagner, 1981). Methodologies were developed to interpret drawing on the basis of a detailed “dictionary” of signs and hints considered to reflect the concepts and attitudes of the drawer. Furth (2002) suggests that even use of color choices as an indicator of attitudes is a limited approach and that colors tend to enhance the theme rather than tell it as it really is. Nevertheless, “out-of-place” use of color should sometimes be seen as a symbolic expression. Although use of drawings as projective tests is still popular, its use has been criticized by those claiming the drawings’ narrowness and limitations in interpreting expression through art (Betensky, 1995; Furth, 2002; Golomb, 2004; Malchiodi, 1998). To avoid adult standards and presumptions about the content and meaning, Betensky (1995) and Malchiodi (1998)
suggested a phenomenological approach that explores the essence of lived experience, an approach in which an open mind can create diverse meanings of the content of the creation and the special way in which the “drawer” observes the world. This approach allows the artwork and the artist to tell the story.

In using the phenomenological approach in our research, we consciously questioned what we could learn about dwelling thinking or the ways in which children conceptualize their environment as home. At the same time, we looked for the multilayered qualities of the drawings (Malchiodi, 1998). We bore in mind the gap between the children’s perceptions and their ability to translate their concept into a drawing. Dileo (1983), Betensky (1995), Malchiodi (1998) and Golomb (2004) all agreed that the understanding of children’s art can be achieved only by studying the children as individuals, since, of course, no two are alike. This methodology emphasizes the importance of conversing with the child for the purpose of receiving his or her interpretation of the drawing. However, these methods are used by specialists working for the most part one-on-one. They do not necessarily fit the framework within which we were working, i.e. that of many children and a limited time frame.

Since we were specifically looking for different ways of experiencing the place as home, analysis of the drawings and children’s explanations of these drawings was conducted by combining a phenomenological approach (Golomb, 2004; Malchiodi, 1998) for better understanding the individual’s experience and a phenomenographical approach (Ballantyne & Bruch, 1994; Loughland et al., 2002; Marton & Booth, 1997) in order to determine the different ways of experiencing place.

The first step in our interpretation was to sort the drawings and classify them according to the main categories. We used three interpreters for this task. One of them was the environmental teacher who knew the children from her lessons. Another interpreter was an art teacher from another school, and the third was one of the researchers. Sorting the drawings was challenging, since several pictures contained more than one main idea. The interpreters were instructed to record all the ideas but to allocate the drawings according to the most dominant idea. The subtitles that were included in the drawings and the transcripts from the interviews aided the interpreters in this process.

The four final categories that were elicited from this process were crystallized by the researchers from an initial set of nine categories previously compiled by the interpreters. These four categories were then returned to the interpreters for additional validation.

The next step was to characterize in depth the commonalities in individual categories. A specific comparison between the drawings from the two desert towns was made only during the last stage of the analysis.

Validity and reliability

Using drawings to aid understanding of children’s thoughts is a well-established methodology (Alerby, 2000; Golomb, 2004; Malchiodi, 1998). Attention should be paid to the contextual components’ influence on the drawings (the history of that day, the teacher in the class, etc.; Malchiodi, 1998). Attaining similar conditions in every repeat would be the ideal basis for research, and of course every attempt was made to achieve this, but we were aware that this could not be absolute. Close attention was paid to content analysis and to the limitations delineated by the wording of the task.

Not uncommonly, our sample group was limited by the size of the small-town schools. Phenomenological and phenomenographical research has often been carried out using relatively small samples. Alerby (2000) used 109 students in her study of students’ thoughts about environment; after age and gender analysis, she was left with 8–20 students in
every category. Keogh, Cook and Bruce (1994) used 87 responses in their research on the conception of learning. We are satisfied that the categories arising from our analysis reliably show the different ways of experiencing the place as home in both towns. The validity of this claim is further supported by the similar results obtained in the different classroom groups when analyzed separately.

To minimize connections between categories being unduly influenced the researchers’ subjective interpretation’s validation of our interpretation is based on a comparison with that of the children’s explanations of their drawings.

Findings

Four main categories for dwelling thinking arose from the analysis of the drawings – each expresses a different attitude and way of experiencing the place as home, characterized as follows:

(1) The Sitting Tenant’s perception
(2) The Lodger’s perception
(3) The Tourist’s perception
(4) The Captive’s perception

Each category is elaborated as follows.

The Sitting Tenant’s perception

This category’s drawings are characterized by bright colors. They stand out in direct contrast to the monochromatic depictions usually associated with desert areas. Many children added illustrations of the sun and flowers. Some decorated the picture with birds, kites or colored tubs. Depictions of people showed them smiling. Some added subtitles declaring that the residents are “pleasant”. Only two pictures (from town MR) had elements of “taking care” of the environment; a child watering flowers and the deliberate placing of stones between plants to prevent people from damaging them, as the child explained in her interview. The quality of the environment was an important theme in this group. Many children emphasized the clean air and quietness in the town. One girl compared the quality of life in her town with the quality of life in a big city; her conclusion was “Come and live here”. Drawings in this category specifically included buildings as an important element (Figure 2a). Most of these were residential but also contained familiar public buildings, a school, the big hotel and the water tower (appearing in the majority of the drawings from town MR). One boy explained, in his interview, that the focus on buildings is a deliberate attempt to show that people can live in the desert (Figure 2b).

Some titles of drawings were “This Is My Home” or “The Place Where I Was Born and Raised”. In interviews some children mentioned that they loved their town.

An interesting point is that in town MR most of the landscapes in the drawings were filled with hills, occasionally with a few houses widely dispersed among them (see, for example, Figure 2c as compared with Figure 1). A subcategory to this category is the expression of the feeling of confidence, which is especially relevant given the ongoing security problems in the region. Children from both towns mentioned in their titles the calm and security in the town or, specifically, the absence of bombs or terrorist actions.
The Lodger’s perception

Landscape drawings characterize this category. Colors vary from browns to red. Many children from town MR drew the Makhtesh (erosive crater), but none from town Y did this despite living in proximity to one. A few students made a profile drawing, as in Figure 2d.
Others drew cliffs from their familiar perspective, where the horizon appears to be the edge of the crater (Figure 2c). Many children from town MR but, again, none from town Y included both domestic and indigenous animals: birds, dogs and desert animals such as ibex and camels. Small unidentified plants and trees are sometimes shown dispersed on the hills. In only one of the drawings did a placard appear pointing out an indigenous tree with its Hebrew name, the Elah tree (*Pistacia atlantica*). Overall, there is a notable lack of local
environmental knowledge in this group, just as in the Sitting Tenant category. However, an emphasis on the landscape appeared in the lodger category in contrast to the built-up areas that appeared in the Sitting Tenant category. This was also the main argument expressed in the interviews for dwelling there.

Many drawings bore titles expressing the uniqueness and beauty of the locale. The importance of interviewing the children is demonstrated in Figure 2e. “These people come from a trip and suddenly they see the Makhtesh”, the drawer explained. “The woman is saying, ‘It is so beautiful! We must come and live here’”. The interviewer asked, “What about the rest of the family?” The child explained that the people in the car were afraid to get out because of the ibex. “So”, the interviewer asked, “Do you think the woman can convince them to stay?” The child replied, “Oh yes! I am also afraid but I love to live here”.

**The Tourist’s perception**

A dominant element in the third category is the main intercity road that leads into and out of the town. It is depicted crossing the colorful and well-drawn town landscape; sometimes cars appear on the road; one girl explained the road’s significance as showing people that they are “not stuck in the town”.

When buildings are depicted, they mostly depict the water tower (locally accepted as the town symbol). Some drawings included the town hotel as if to say, “This place is a way station for tourists rather than a dwelling place”.

**The Captive’s perception**

This category includes two subcategories. In one, the children indicate dissatisfaction with the town, showing it to be quiet, empty and boring. In the second, their township is depicted as not possessing the qualities of a “real town”. The first subcategory’s pictures
had very few elements on the page, and the initial impression is one of emptiness. Most elements were buildings, houses or public facilities. In town Y, some of the children drew the small lake nearby. There was a remarkable absence of plants and animals, even around the lake which, in reality, is surrounded by trees. Some children actually added titles which described the town as boring (Figure 2h), and many others brought it up during the interviews.

Another feature of this subcategory is the absence of color. One boy’s hills were green and he wrote, “Landscape would help the town”. When asked if there is no landscape around the town, he replied: “Not like this green one I drew”. Some children sat for a long time facing the blank sheet and complained of having no ideas for this advertisement assignment. Consequently, they were given the option of drawing according to their fantasy of what they would like their town to be and to express their concept of what would constitute a place to feel at home in. These drawings were classified as a subcategory of the “real town”.

Although the imaginative drawings shared characteristics with the other categories, we included them in this category because the fantasies expressed true criticisms of the town. These same feelings were also expressed in the interviews.

These same children depicted “towns” with malls, shops, green colors and entertainment facilities. Our study towns MR and Y do not really have many of these urban facilities. Some pupils stressed that improvement of the town is the community leaders’ duty. Figure 2g calls for the mayor to “start improving the town”.

**Two towns – two dwelling concepts**

Certain obvious differences between the two study populations were detected. When the task was introduced, most MR children took to the activity enthusiastically, in contrast to many children from town Y. The two communities displayed different expectations of what
Figure 2g. Ten-year-old girl from town Y. The title announces a peaceful and wonderful town, but the placards call for a shopping mall. The central placard calls the mayor to improve the town since “We are bored”.

Figure 2h. Nine-year-old boy from town MR. The title declares, “There is nothing to do in this town”. On one of the bombs that dropped from the airplane there is a title: “A nuclear bomb”.
Table 1. Divergence of the categories between the two towns. Parentheses have the absolute numbers of students in each category.

<table>
<thead>
<tr>
<th>Category</th>
<th>Grade</th>
<th>Town MR N grade 3 = 24</th>
<th>Town Y N grade 3 = 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Sitting Tenant's perception</td>
<td>3</td>
<td>35% (8)</td>
<td>15% (3)</td>
</tr>
<tr>
<td>A place of peace and confidence.</td>
<td>4</td>
<td>36% (7)</td>
<td>36% (5)</td>
</tr>
<tr>
<td>The Lodger's perception</td>
<td>3</td>
<td>42% (10)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>A place of beauty and interest</td>
<td>4</td>
<td>59% (11)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>The Tourist's perception</td>
<td>3</td>
<td>11.5% (3)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>A place of beauty but a temporary dwell</td>
<td>4</td>
<td>5% (1)</td>
<td>15% (2)</td>
</tr>
<tr>
<td>The Captive's perception</td>
<td>3</td>
<td>11.5% (3)</td>
<td>85% (17)</td>
</tr>
<tr>
<td>A place that is not suitable for modern living</td>
<td>4</td>
<td>0% (0)</td>
<td>54% (8)</td>
</tr>
</tbody>
</table>

makes up a dwelling place. Table 1 summarizes the divergence of the categories between the two towns.

Most of the drawings from town MR fall into categories 1–3 and express an appreciation of and empathy with their desert landscape; most from town Y are in category 4.

Table 2 details remarkable differences of the drawing between the two towns.

Table 2. Remarkable differences of the drawing between the two towns.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Town MR</th>
<th>Town Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coloring</td>
<td>Significant investment in coloring</td>
<td>Poorly colored or uncolored at all</td>
</tr>
<tr>
<td>Main colors</td>
<td>Multiple shades of brown – colors of desert</td>
<td>Green and blue – unrealistic colors</td>
</tr>
<tr>
<td>Reference to the natural landscape</td>
<td>Most of the drawing is of desert landscape with few houses (Figures 2b–2f).</td>
<td>The desert landscape is missing.</td>
</tr>
<tr>
<td>Reference to the Makhtesh Natural details</td>
<td>Town MR 80% of the drawing (Figures 2b–2f)</td>
<td>None of the drawing</td>
</tr>
<tr>
<td>Houses in the composition</td>
<td>A frequency of 1–3 houses dispersed between the hills (Figure 2c)</td>
<td>Houses appear only in 14% of the drawing. When they appear, they fill all the page.</td>
</tr>
<tr>
<td>Familiar structures</td>
<td>The water tower (25%)</td>
<td>The water tower (9%)</td>
</tr>
<tr>
<td>People appear in the drawing</td>
<td>34%</td>
<td>29%</td>
</tr>
<tr>
<td>Expressions of empathy</td>
<td>Positive titles: 61%</td>
<td>25%</td>
</tr>
<tr>
<td>Positive titles</td>
<td>61%</td>
<td>25%</td>
</tr>
<tr>
<td>Ornamental</td>
<td>86%</td>
<td>18%</td>
</tr>
<tr>
<td>Expressions of empathy</td>
<td>Negative or critical title: 24%</td>
<td>3%</td>
</tr>
</tbody>
</table>
In general, town Y’s drawings were colorless. In contrast to the multiple shades of brown used by the MR children, the few colors used by the Y children were not natural to this region – mostly green and blue.

Notably the Makhtesh and the desert landscape are missing from all the drawings in town Y, whereas most of the children in town MR expressed their love and appreciation of the beautiful landscape near their town through bright, warm colors, ornamentation and sympathetic titles. Many MR drawings included the Makhtesh cliffs where the town is located and natural details like plants and animals, indicating an awareness of natural environmental diversity. Despite this, only a few of them incorporated familiar elements of the natural landscape (recognized mountains and known plants or animals). Direct relationship or acts of caring were found only in two drawings (one each from grades 3 and 4), a girl watering a plant (town MR) and a boy fishing in the lake (town Y). No other obvious relationships, human or otherwise, were detected.

Conclusions

Our introductory review of the relevant literature indicated various factors that might influence the way people perceive their place of living. Included were factors such as long-term residence, home ownership, acquaintance with both the natural and the man-built environment, good social relations, social involvement and family ties as well as direct experience of the environment (Altman & Low, 1992; Basso, 1994; Hay, 1998; Kyle & Chick, 2007; Malpas, 1999; Mesch & Manor, 1998; Mueller-Worster & Abrams, 2005; Smaldone et al., 2005; Tuan, 1977). Heidegger’s concept of dwelling thinking guided us to look beyond those factors toward a state of mind which can be developed in a specific place but can also be taken with the dweller wherever he or she goes. Deep understanding of children’s conception of their place as home is crucial, as we see it, in order to better design programs of EfS.

The utilization of drawings of advertisements supposedly to attract new residents to come to the desert towns, as the research tool, combined with personal interviews that made room for the children to explain their creations, allowed us a more in-depth understanding of the children’s conceptions and avoided oversimplifying the way children perceive their homes, their environment and their place in the world.

The willingness of most MR children to draw a town advertisement can be considered an indication of a sense of attachment to their locale. Likewise a colorful drawing is usually regarded as indicating enthusiasm (Golomb, 2004). On the basis of the premise that towns Y and MR have similar topographical, socioeconomic and demographic characteristics, it is apparent that MR’s environmental education program has had a significant influence. These results are in contrast to those of Barraza (1999), who found only a few differences concerning environmental issues between schools, either with or without environmental policies.

Nevertheless, it must be noted that in none of the four categories identified in our research were the children clearly expressing Heidegger’s full concept of dwelling thinking.

The dispersal of houses among the hills, in the Sitting Tenant category, may indicate feelings of confidence and a sense of open space, a place where it is unnecessary for people to concentrate on protecting themselves from the elements (a sense of threat that could easily arise in an isolated desert town). Likewise, the natural environment depicted by the MR children does not appear particularly threatening; instead, it permits what Heidegger calls a space for freedom of action (Heidegger, 1977, p. 327). It may also be interpreted as showing children’s views as outsiders looking in – perhaps as a tourist may see
the town, appreciating the beautiful, interesting landscape without any particular feelings of belonging and permanence. The near absence of identifiable natural structures in the drawings is clear in all the four categories. Bearing in mind Golomb’s (2004) claim that children tend to draw familiar elements, this lack may be seen as indicating the students’ limited knowledge about their place of residence. These findings are consistent with the Loughland et al.’s (2002) Australian study, where children’s concept of the environment showed that the majority perceived environment as an object rather than seeing people as an integral part of it. Noting the high percentage of drawings of the Lodger’s and Tourist’s categories in town MR (53.5% in grade 3 and 64% in grade 4), categories that do not express any dwelling activities or thinking either in the drawing or in the interviews, it can be concluded that their conceptions of the town are those of observers rather than of dwellers. In other words, students may very well appreciate the landscape of their locale and even feel secure in it but at the same time might not regard it as home. For the students from the Captive’s category it seems that the geographical place does have a very significant meaning, but it is a negative one. These students consider their home as a trap preventing their self-development. All these ways of regarding the place as home are not characteristic of dwelling thinking in Heidegger’s definition, i.e. a sense of feeling part of the environment and having a willingness to protect, preserve and care for it.

Heidegger defined dwelling thinking as embodying four dimensions: being on the earth, under the sky, among mortals and before the divine. The first two dimensions can be considered in terms of ecological literacy incorporated in the activity of building and managing the human environment. This kind of literacy is apparently absent in all the categories in both towns, although more specific study is needed here. Being among mortals can be interpreted as a feeling of continuity in the place that is derived from ancestral ties (Derr, 2002; Hay, 1998). Young development towns do not provide such connections. Furthermore, the willingness of many of the young students to leave the town as soon as they grow up, as expressed in many of the interviews, does not encourage such feelings. However, being among mortals, as Heidegger explained it, can also enhance the willingness to live a worthwhile life. Likewise, awareness of being before the divine or part of something bigger than the human system can motivate people toward a more selfless lifestyle. It is here that environmental educators can reinforce their students’ dwelling thinking.

Following Heidegger’s idea of dwelling thinking as the outcome of dwelling activity, its fostering needs to be approached through an emphasis on active aspects of sustainability. It calls on us to highlight the for component of environmental education (Lucas, 1980) and to perhaps consider it the main axis of EfS. The positive coursework experiences which students from MR experienced in their locale (Malpas, 1999; Tuan, 1977) enhanced their landscape appreciation but not their ties to the place. EfS educators strengthening students’ dwelling thinking and feelings of having an effective role to play should encourage them to question how their environment is managed even if this is not simple in modern urban areas (Harrison & Burgess, 2003). Initiating even small-scale activities where students can participate and take decisions about environmental improvements may enhance students’ confidence in their ability to elicit a change. Students can also be encouraged to name sites with titles reflecting personal experiences, thus making those sites “their environment” similar to the way Basso (1994) demonstrates in his study of the Western Apache. These simple activities can help transform “an impersonal beautiful landscape” into “a true place of dwelling” for the children and the place where they really do feel at home.

As suggested in our introduction, feelings of impermanence and constant relocation (searching for work, education or other services) are a feature of western lifestyles. This lack of permanence is exaggerated in peripheral towns, as revealed in this study. Nonetheless,
EfS would do well to aspire to foster the development of a dwelling thinking in urban communities. Whether or not a permanent place of residence for them exists, town dwellers need encouragement to perceive towns as permanent dwelling places or “home” for the continuing generations and as environments to be cherished. By doing so we can develop dwelling thinking as a state of mind that we carry with us wherever we go and extend it from our childhood locale (or specific places to which we are attached) to include the entire globe.

References


