

A Sense of Place:

Improving Children's Quality of Life through Universal Design

by Helle Nebelong

 Meet the Author
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“Green is good for the eyes,” says mother duck in Hans Christian Andersen’s fairytale *The Ugly Duckling* and science has proved that well-designed green places influence the human mind positively. The five senses are open to impressions and through these senses we acquire knowledge from the world around us. We experience and learn by seeing, hearing, smelling, tasting, and feeling. Designing sensory gardens and play spaces for children with physical or mental challenges is a question of designing accessible spaces that work for all children, irrespective of abilities and

skills. Children with disabilities wish to be treated like other children and should be given the same opportunities.

Garden of Senses Faelledparken, Copenhagen

I was employed by the City of Copenhagen to tackle this special task because I had specialized in gardens and playgrounds for children with disabilities. My earlier assignments had been for private special centers, so it was, therefore, a big challenge to design a garden of senses, which would be open to the public 24/7 and was situated in the most visited public park in Copenhagen.

Previously there was an old, worn out playground dominated by an asphalt surface, which covered the entire area. I designed a garden as one big

maze with winding paths leading the visitor past many different experiences. There are several ‘wonder spaces’ with tangible sculptures — one sculpture for each of our five senses: sight, hearing, taste, smell, and touch created by artists. There are several crossings, a riverside scenery with rocks, and a lake scenery without water. There is a wide variety of plants — some have sweet and spicy scents, others display beautiful colours

Photography by Tim Erikson Henningsen



Helle Nebelong is a Danish Landscape Architect MAA, MDL, and Master of Public Management, MPM. She is especially passionate about designing spaces for children and how to adapt and improve the city for everyday life. She runs her own private practice (www.hellenebelong.com) specializing in health design and design for all. The essence is healthy, attractive, and inspiring spaces where people’s well being and creativity develop through a spontaneous perception of nature, culture, and architecture.



Balancing in the Garden of Senses, Copenhagen. • Faelledparken Photo Helle Nebelong

or have exotically shaped flowers and leaves. Among others there's a lavender island; a maze of stakes; a bamboo shrub; a small fragrant garden with a fountain; prickly evergreens; shrubbery with old, crumbling sculptures; a pavilion; a grove of ginkgos; a butterfly garden; and a lot of other elements and plants to discover: the Antarctic Beech (*Nothofagus antarctica*) with cinnamon-scented leaves, the spicy scent of Spanish chervil (*Myrrhis odorata*), exciting shapes in the leaves of the Chinese *Ginkgo biloba*, and soft needles on Larch trees (*larix*), crunchy seed heads of Jew cherries, and evergreen prickly fir trees.

The idea behind the Garden of Senses in Copenhagen is to give children in an urban setting a glimpse of the richness of nature and greater sensitivity to the diversity of nature. The natural setting gives children opportunities to use their own imaginations. Nothing is predictable beforehand; they can invent their own play and immerse themselves in sensory experiences.

The Garden is intended to awaken children's interest in nature and help them to learn about nature and to love and respect it. The garden is 4000 m² (43,056 square feet) and was built in 1996.

The Garden of Senses is popular and has many visitors. On weekends, parents and grandparents go exploring in the garden with their children. Many people with visual and physical disabilities also use the garden. Children of all ages and abilities come to enjoy what the garden has to offer.

Historically, the first sensory gardens were created for residential homes for children and young people with multiple disabilities who were unable to go out and experience 'real' nature. These gardens are usually small plots right outside the homes. Faelledparken's Garden of Senses is the largest sensory garden in Denmark and was the first to be open to the general public. It was also the first public park project in Copenhagen that had universal design as the common thread throughout the design process.

The individual areas in the garden are bordered with cobblestones, boulders, and stakes, so the visually impaired can find their way throughout the garden using their canes. This design solution also prevents wheelchair users from getting off the paths and being left in soft soil.

There are sunny places and a shady wilderness. There's the sound of splashing water from the fountains, while inside the bamboo you can hear the sound of silence. I have used many different stones, both large ones to climb and little ones to rattle in the hand. There are 'historic' granite stones, which originated from the former "Fredens Bridge" in Copenhagen. There are old tiles from the City Hall Square and old granite bollards (short vertical posts). Old, crumbling sculptures that previously were vandalized and taken down have been hidden in the wilderness. Even though they lack a nose and a half arm, the decay is suddenly beautiful and mysterious. These sculptures may fascinate children; I once heard a little boy come running out of the wilderness shouting at his friends: "Come see some naked people!"

It has always been my hope that The Garden opens children up and strengthens their feeling for nature in our throw-away society where childhood very often is dominated by toys of artificial materials and poor quality, fast food, and too much time spent in front of electronic screens.

Fenrishus in Aarhus

The little girl in the wheelchair is placed outside the building and her educator disappears into the house. The girl is pretty and she turns her head restlessly from one side to another. Her mouth is open and she punches out loud, shrill noises. She's out of my reach and as I am visiting the place, I hold back to be sure not to frighten her. It's a sunny day and the wind is light. After a short while her educator comes back and gently pushes the girl around the garden. Passing the fountain, the big formation of willows, and the fragrant herbs, the girl becomes silent. Now the only noises that can be heard are the wind in the willows, the water from the fountain, and the birds singing.



Playing in water is children's favorite and gives lots of sensory experiences. • Faelledparken Photo Helle Nebelong



Raised beds with prickly evergreens contrasting with the soft fragrant herbs — all to be reached by children sitting in a wheelchair. • Fenrishus Photo Helle Nebelong



The sound of splashing water stimulates the sense of hearing and has a positive, relaxing impact on the human mind. • Fenrishus Photo Helle Nebelong



The gazebo is overgrown with climbers so one can experience slight coolness from the shadow on a hot sunny day. • Fenrishus Photo Helle Nebelong

Fenrishus (The House of Fenris) is a residential home for children with varying abilities aged 0-18 years located in Aarhus, Denmark's second largest city. There are facilities for 16 children and a special kindergarten with room for three children ages 0-7 who are living at home. All children need a great deal of care.

Stimulating the Senses

In the sensory garden the children get experiences that stimulate sight, smell, taste, touch, and sound. The garden is a peaceful, quiet place with shelter and opportunities for experiencing nature in the 'wild' wood and among the plants that have lovely scents and attract butterflies and humming bees. In everyday life at Fenrishus, care and pleasure at being alive are essential elements. The fundamental idea is that the children here have the same emotions and needs as other children, although their level of function is very different. Nurses, therapists, and educators work closely together to find the best way to solve problems. The aim is that the children keep up and develop the skills they already have.

Parents are the most important people in children's lives. I originally designed the garden back in 1995. When I visited the garden many years later, I was happy to see what a nice place it had turned into — the plantations had grown tall and protect the garden from the wind, lots of perennials offer pleasant smells and beautiful colours, and all of them can be put into one's mouth — nothing is poisonous. The beds are raised to a level that makes it easy for the children to reach out from their wheelchairs and touch the plants. There's a grotto made of bamboo and a gazebo overgrown with climbers where one can experience slight coolness from the shadow on a hot summer day.

Something for Everyone

The tiny ornamental lake is slightly concave so that children in wheelchairs can be placed in it. There are exquisite granite boulders for the staff to sit on and water wells up from some of these. The sandpit is meant to be used by brothers and sisters visiting the home, but the teachers also use it to sit with children with disabilities so they can feel the sand with their feet.

Originally the idea was to include some outdoor musical instruments as part of the garden, but the staff changed their

minds and concluded that nature's own sounds would be much better. Humming insects, chirping birds, the wind in the leaves, the splashing fountain, and the voices of people are pleasant, familiar, and comfortable sounds that strengthen the young children's well being.

A Multi-Functional Garden

Geelsgaard School is the largest special needs school in the capital region of Denmark, for children ages 5-18, with either severe motor difficulties, general learning difficulties, or congenital deafness and blindness. The 129 pupils, who

come from all over the region, use wheelchairs, walking appliances, and special bikes to get around the garden. Many of the children are visually impaired or blind and suffer from different kinds of developmental disabilities. An interdisciplinary team of teachers, educators, occupational therapists, and physiotherapists support the children. The garden is divided into a sensory garden, a playground, a sports ground, and a summer blossom garden named 'The Garden of Strindberg' after the famous Swedish writer, August Strindberg, who stayed there in the summer of 1888 and did some of his most famous writings there.



Boulders and logs to practice climbing and have tactile sensory experiences. - Geelsgaard School Photo Helle Nebelong

A mixture of sunlight and shadow spots is stimulating and relaxing. - Photo Carsten Neergaard



Attention – Restoration Theory (ART)

Scientists Stephen and Rachel Kaplan have a theory regarding two kinds of human attention:

Involuntary attention is the instinctive, automatic attention, which appears when we are under the influence of sounds, smells, visual impressions, and changes of temperature in nature and natural environments. It demands no special mental effort.

Directed attention is the one that uses energy; the one we devote lots of hours to daily, when we force ourselves to eliminate unnecessary noises that interrupt our concentration on, for instance, specialized work. Directed attention has limited resources and according to the Kaplans' theory, we will collapse mentally if we go beyond the limit, trying to solve more and more complex problems.

When we collapse mentally, we need to recreate ourselves in peaceful green spaces to gather new strength.

From Inside *Snoezelen* Room to Outside Sensory Garden

According to Helle Nebelong the idea of a sensory garden derives from the Dutch term *snoezelen*, which means to sense actively and passively. Actively by being open and curious to new impressions from the surroundings. Passively by being affected by stimuli from outside, by for example the scent of flowers, sounds, the warmth of the sun, and so on. The word *snoezelen* is a mix of two Dutch words: *snuffelen* (to sniff) and *doezelen* (to doze).

The term is connected with indoor sensory rooms for children and grown-ups with multiple disabilities where they can extend their perception of themselves in relation to their surroundings, together with people they know who make them feel safe and secure. In the *snoezel* room the senses are stimulated by music, smell, light, warmth, and water. The sensory garden has literally grown out through the walls of the *snoezelen* room as a logical result of the good experiences from indoors. The difference between inside and outside is that outside one has nature's multifarious effects that stimulate the senses to mix and arrange in thousands of ways.

Helle Nebelong also believes that a sensory garden is a concentrated world of nature and sensory experiences, produced by the landscape architect who carefully thinks of every single detail:

- Which plants with which fragrances should be accessible?
- What special shapes of leaves and branches and which colours of flowers should be available?
- How should the path run through the garden?
- Which materials should be used to construct the different pieces of scenery?

Lots of questions to consider and one has to prioritise according to the target group and their needs, the size of the area present, and economics.

For more information, visit www.snoezeleninfo.com/whatIsSnoezelen.asp

The garden has lots of different spaces where the children can absorb delicate sensory experiences. There are herbs, flowers, and bushes that attract butterflies. The surface varies throughout the garden: cobblestones, flagstones, tiles, and so on. The western part of the garden is supposed to echo stylised cliffs and the eastern part contains upturned tree roots, which could be decorated for each season: Easter eggs at Easter, colourful ribbons and flowers in May, wind chimes during summer, sheaves of wheat, and lights in the autumn and winter.

The playground is designed to consider all children, irrespective of age, gender, ability, or skill. The design challenges the children's perceptions and motivates them to practice their motor skills. There is traditional play equipment — swings and slides — and more specific elements like two grassy snake-shaped hills — ocks that are used to practice walking and challenge the children's motor skills.

A sensory garden concentrates themes from nature; its most important purpose is to compensate for real nature, which may be far away and hard to reach/inaccessible. Even though a sensory garden could function as a therapeutic garden, it is important that it is first seen as a space for breathing and a free place for one's senses to be extended and stimulated, a place in which to relax and enjoy without the need to be productive. A place to experience and recreate and where no one makes any demands.

Reference

Kaplan, S., & Kaplan, R. (1989). *The Experience of Nature: A Psychological Perspective*. New York: Cambridge University Press.



Little stones to rattle with as a contrast to a big boulder. • Faelledparken Photo Helle Nebelong