The Children’s Scale in Finnish Kindergarten Interiors from 1920s to 1980s

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Abstract • The purpose of this article is to offer a perspective on spatial history in Finnish kindergartens’ surroundings, especially through design that emphasizes children’s scale. The timeline of the article is from the 1920s, when the vocative kindergarten teachers took responsibility for kindergarten design, till the 1980s, when professionals designed kindergartens. The article focuses on the vertical level, which defines the height of children’s activity and how the idea of children’s scale affected interior design during the timeline. One theoretical starting point is Edward Soja’s concept of Thirdspace, which is applied to combine experiential narratives related to childhood, contemporary materials about conversations that took place at the studied time, and spatial regulations and design related to ideological, political, and cultural structures. From the 1920s to the 1980s, children’s scale is highlighted and linked to homelike surroundings with miniaturization in scale to affordances concerning a human body scale, dimensions, and children’s agency. In 1970s, due to the emerge of the Day Care Act, children’s scale extended more broadly to the environment and children’s dimensions than in the kindergarten era.

Keywords • spatiality, Finnish kindergarten history, children’s scale, thirdspace, Edward Soja

Introduction

Finnish early childhood pedagogy has its roots in the kindergarten ideology developed by Friedrich Froebel (1782–1852). Hanna Rothman (1856–1920) founded the first folk kindergarten in Helsinki in September 1888 and, together with her colleague Elisabeth Alander (1859–1940), developed the Froebelian pedagogy in Finland for many decades.1 They both studied in Pestalozzi-Froebel-Haus in Berlin with Henrietta Schrader-Breymann (1827–1899) as their teacher. She was Friedrich Froebel’s student, close relative and familiarized with both Pestalozzi and Froebel’s ideas.2 Rothman and Alander also spoke for the cozy, homelike atmosphere, which was at the center of public debate at the turn of the century, for example, in the writings of Ellen Key.

Architect Birger Federley designed the first building, originally intended as a kindergarten, in Forssa in 1901 for the children of the employees of the Finlayson-Forssa Oy’s factory. In the early stages, however, most kindergartens operated in primitive premises in temporary rented apartments, from which objects and supplies had to be moved out of sight to make way for other activities. The criticism focused on

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1 Froebelian ideas were introduced to Finland already in the 1860s by Uno Cygnaeus (1810–1888), who was the founder of the elementary school system in Finland and wanted to combine the idea of the kindergarten with the school system. His ideas were only partially realised and did not have continuity in the way he had hoped. Sisko-Liisa Hänninen and Siiri Valli, Suomen lastentarhatyön ja varhaiskasvatuksen historia (Helsinki: Otava, 1986), 52–58.

the temporary nature of kindergarten facilities, the lack of opportunities for outdoor activities and the wide range of uses of the apartments. This article studies two different periods in Finnish kindergarten history, the kindergarten period from the 1920s to the 1970s and the period after the Day Care Act in 1973 from the 1970s to the 1980s. The article uses the terms kindergarten and daycare center depending on the time. The spatial solutions of these periods have common features, such as children’s scale, but also differences, which can be explained, among other things, by the change in educational views and by the change in the need for kindergartens from half-time to full-time, which also caused changes in spatial design. My research questions are: How was children’s scale argued? What kind of speech about kindergarten childhood did it represent; what were the voices of the users, decision-makers, and professional designers? Users in this context refer to the meanings and experiences of written memory data that adults share about their childhood. What was the role of adults' ergonomics?

In this article, I use the concept of Thirdspace as a key concept of analyzing space and its changes in the kindergarten context. One can understand space as relationally and dynamically produced in social relations between environment and human beings. Space always encompasses its collective definitions and ideas and is never a neutral background for action. In my research, I locate the relationality of space as a dialogue between meaningful experiences related to the state of childhood and the rules that have arisen in the activities, as well as the ideological and cultural structures associated with kindergarten and its facilities. Spatial agreements and specifications have an impact on how children move, act, and play in different spaces. Personnel, especially teachers, have also modified kindergarten spaces by designing, furnishing, and decorating the environment.

Written autobiographies and memories are a distinctive Finnish method of collecting memory-based research materials of the past. The Finnish Literary Society (SKS) has collected written traditions and memories since the early 20th century. Written narratives are used, for example, for studying daily life, and experiences of childhood. Researchers have analyzed Finnish childhood experiences through written and oral memory data. For example, ethnologist Pirjo Korkiakangas has a groundbreaking study about reminiscing childhood work and play in a Finnish rural environment, and folklorist Elina Makkonen on factory childhood in Kaltimo. Historian Antti Malinen has studied post-war childhood, such as the significance of nature in the lives of children living in difficult conditions, and historians Essi Jouhki and Kaisa Vehkalahti landscapes and growing environments in Northern Finland that open up from post-war childhood memories. Research into the history of early childhood education is limited in Finland,

3 Supervision reports from Elsa Borenius collection, EB 16 ja 17, The Labour Archives (Tyark), Helsinki.
6 Korkiakangas (1996); Elina Makkonen, Muistitiedon etnografiaa tuottamassa (Joensuu: Joensuun yliopiston humanistisia julkaisuja 2009).
and researchers have started to utilize early childhood memory data only in recent years. In the narratives of my research, the authors describing their kindergarten childhood have, through their actions, built and transformed space and, on the other hand, maintained spatial solutions throughout the period under study. When examining the memory data through source criticism, the question is, do writers convey their experiences. Individually experienced reality is always tied to a collective and socially shared history, although these bonds can be unconscious and unrecognizable. One can view childhood sometimes through very romantic spectacles. These limitations can also be the most fascinating aspects of oral history. We can formulate questions such as what the writer wants to remember and why?

Previous research and theoretical background
Space and place as concepts have become important themes through which to study childhood institutions. The spatial history of childhood has been studied from many perspectives, for example, through playgrounds and School buildings. Spatiality in early childhood surroundings through a historical context has also been explored, for example, in the Swedish preschool context by Johannes Westberg, Sophia Grunditz, as well as Sara Backman Prytz and Josefin Forsberg Koel. In Finland, spatiality in the context of the history of early childhood education is a new research area.

The theoretical starting point in this article is geographer Edward W. Soja’s concept of Thirdspace. Spatiality is elevated, alongside sociality and temporality, as equally valuable in both an empirical study and theoretical concept. Sociality, history, and

12 Sillanpää (2021).
spatiality are intertwined simultaneously and intricately. According to geographer Doreen Massey, spatiality takes shape over time and is social in nature. The ideas of French philosopher Henri Lefebvre have influenced Soja, who argued that space is at once a physical, social, and discursive construction and shapes through the way it is built, lived, and imagined.

According to Soja, spatiality consists of the perceptible, sensory, and material Firstspace (perceived space), Secondspace (conceived place) containing experiences and impressions and Thirdspace (lived space), which represent the relational, intergenerational and multidimensional aspects of the environment. Thirdspace includes Firstspace and Secondspace, but is not a combination of them and, in addition to the lived space, also includes public or hidden community rules and principles, laws or regulations in the environment. The views of both Soja and Lefebvre have influenced studies of spatiality in today’s early childhood education environments in Finland. Niina Rutanen has utilized Lefebvre’s thinking in her research on the lived space produced by young children. Raija Raittila has used the concept Thirdspace when studying encounters between children and the urban environment, as well as small group activities and play areas.

In this article, I use Soja’s idea of Thirdspace as a pursuit of change and connect it to changes in the spatiality of kindergarten surroundings. How humans perceive, interpret, and act can shape their spatial practices in daily life. Personal interpretations (memory data) connect to the social and cultural aspects of the spaces, in the structures of kindergarten’s official knowledge, political decisions, and various legitimized practices, values, regulations, and attitudes connected to spatial design that guide interpretation and create a potential for it.

Space connects closely to human agency. Individual actors actualize potential affordances in Thirdspace. The environment has affordances, opportunities, and limitations, even without an observer. People interpret these affordances individually, depending on whether the interpreter is a child or an adult. Affordances refer to the opportunities that the environment offers to people and are linked to a human body scale and to what a person can do, or which possibilities and goals are present in terms of action.

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15 Gutman (2013), 250.
Affordances can also be analyzed using horizontal and vertical levels. According to sociologist Elina Paju, the horizontal level indicates the extent of children's territories in the kindergarten context at different times. The vertical level in kindergartens separates children and adults. Children's world is beyond the reach of adult's commands and speeches. Correspondingly, adults communicate with each other over children's heads. In some kindergartens, tables and chairs for children and adults are of different sizes and placed in separate areas of a room. The space is divided both vertically and horizontally into adult and children's areas, separating them from each other. In this article, I analyze the kindergarten space at the vertical level. I am curious about why child-size furniture has been so popular in kindergarten surroundings and what are the goals behind it? I am also interested in exploring the experiences of users in their lived space. Children can effortlessly get up from their child-sized chairs to retrieve necessary supplies for activities, such as more coloring pens, and return to their seats without difficulty.

Marketta Kyttä cites James Gibson's view that children perceive objects as functionally significant units rather than as individual objects. Therefore, the functional meaning of an object, for example, a piece of furniture, takes precedence. Objects offer chances for grasping or raising, while surfaces allow for running, climbing, or sliding. Gibson also cites individual body proportions, such as a hand size or shoulder width, which affect the range of affordances, detection, and actualization. For example, choosing the right chair depends on individual characteristics, such as body proportions, skills, preferences, intentions, and the context of use.

Method and source material
According to historian Jorma Kalela, the usefulness of any source as evidence is relative, not absolute. Instead of definite knowledge, we can discuss about fruitful knowledge. The sources do not speak for themselves, researchers' task is to interpret them according to their goals and starting points. The conclusion's sustainability should be the focus of researchers’ efforts in convincing readers, not the source.

Collecting and reading source material from multiple perspectives characterizes historical research. Memory data relates to the meanings given to the past, while contemporary materials, on the other hand, are about conversations that took place at the studied time. This article analyzes the source material from three different perspectives based on Soja's concept Thirdspace. The source material consists of

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material through which one can view the lived space, the conceived space, and the perceived space, but also public or hidden community rules and principles. Spatial design represents the conceived space and memory data about the interpreted and lived space. Contemporary resources describe the various values, rules, and principles that revolve around matters related to spatiality. I rely on comparing, contextualizing, and using parallel datasets as a key analysis tool for my research.

This article focuses on oral history research, which involves analyzing stories in oral or written form and descriptions of past events. The interpretation of narratives from my research requires a multifaceted close reading, involving repeated reviews and even reading between the lines. For example, before the appearance of full-time groups, the narratives concerning chores made around tables were common and resembled each other. However, after the emergence of full-time groups, descriptions of such activities disappeared. This phenomenon sparked my interest as a researcher, and I wanted to investigate its causes.

The written memory data consists of the nationwide Memories of Kindergartens and Daycare Centres collected by the Finnish Literature Society (SKS) and the Ebeneser Foundation in 2011–2012, geographically located all over Finland as well as the material Tell us what it was like to be a child in a kindergarten -memory data from Helsinki, Espoo, and Vantaa, collected by the Finnish newspaper Helsingin Sanomat in 2018. The material in the SKS collection of 106 respondents, a total of 1042 pages, contains memories about the activities in kindergartens from the 1930s to the 2010s, their surroundings and people. In this article, I have analyzed memories from a childhood perspective written by 64 respondents, 89% of whom are women. The collection of the newspaper Helsingin Sanomat became a crucial reference material for my research. Together 31 respondents recalled their childhood, of which 85% are women. Additionally, 102 people responded to an electronic questionnaire about childhood memories, reinforcing the memory data.

When using two different materials, a researcher must consider factors such as the design of instructions, collecting institution, and timing of content narration. The instructions partially influence the survey responses, as some of the respondents are aware of the expectations of the collecting institutions and strive to comply. In the instructions of the HS collection, the respondents were specifically asked to write, “What forbidden things have you come up with?” “Have you ever run away from kindergarten?” or “What did you do with your friends secretly from the adults?” This set of questions brought back more memories of childhood rebellion and doing things secretly than the more formal formulation of the Finnish Literature Society’s collection guidelines. The respondents thus fulfil the narrative “contract” when answering the instructed questions and selecting appealing themes related to the collection. For example, the narratives in the SKS collection are more traditional, common, and positive.

26 According to Jyrki Pöysä multifaceted close reading (lähiluku) means reading the data many times during the research process in different aspects and returning back to the first readings with more depth when analysing. Jyrki Pöysä, Lähiluvun tieto, Näkökulmia kirjoitetun muistelukerronnan tutkimukseen (Helsinki: Tiedekirja 2015).

27 Published in newspaper Helsingin Sanomat by journalist Maija Aalto 19.11.2018.

This article discusses concept of spatiality and photographs in early childhood education utilizing official materials. With the help of journal articles, I examine the debate on kindergarten values and its spatial practices at different times. I have not systematically reviewed all the volumes of Finnish trade union journal for kindergarten teachers Lastentarha but looked for articles that fit the framework of this study. I contextualize the memory data with legislative material representing official information in design guidelines and regulations related to space and safety. The purpose of the documentation is to explore the significant changes that have taken place in kindergarten and daycare facilities, as well as the factors that contributed to them. The photographs used in this article are from Kindergarten Museum’s photography collection. I use photographic material in parallel with the memory data to deepen the contents of written narratives. My priority is to relate the narratives and the images to the cultural environment, space, and historical moment in which it occurs.

The cozy atmosphere of Finnish kindergartens

Hanna Rothman and Elisabeth Alander read the writings of the Swedish writer and social debater Ellen Key (1849–1926), in which she emphasized the importance of home as the closest living environment to a person and as a place for creating a new human ideal. According to Key, home represented a natural place for a child to grow and develop, and the presence of a mother in particular was important. She criticized group-based institutions, where a child receives too little space and attention. Key distanced herself from collective educational ideas, but nevertheless, or precisely because of it, Rothman and Alander, partly inspired by Key, seized the idea of a “good home” as an ideological model of kindergarten and the requirement of homely atmosphere, which is still to some extent reflected in the spatial solutions of Finnish early childhood education. According to Key, home shaped the future character of a child, so beauty and harmony were prerequisites for beneficial future citizens. Artist Carl Larsson’s paintings of the bright, cheerful, and domestic interiors reinforced Key’s message. Elisabeth Alander combined Key’s views on a homely atmosphere, Henrietta Schrader-Breymann’s ideas of household work and Froebel’s glorification of the natural countryside life, and in 1921, in the Finnish journal Alkuopetus elevated the idea of cozy, homelike kindergartens to the ideal of a country home, with its household chores, animal care and gardening. Rural life, partly as an idealization of a past way of life, formed a city’s counterpart, and a kind of refined agrarianism formed a new modern human ideal. Even in kindergartens, this served as the starting point for planning of the growing environment and the guiding principle of upbringing.

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30 Meretniemi (2015), 92.


33 Saarikangas (2002), 77–78.

34 Elisabeth Alander, Ebenezerkoti: Katsaus Hanna Rothmanin ja Elisabeth Alanderin laitosten 32-vuotiseen toimintaan 1890–1922 (Helsinki: Weiling & Göös, 1923), 79.
In 1919, the School Board commissioned Elsa Borenius (1881–1958), secretary of the Association of Kindergarten Teachers, to inspect Finnish kindergartens. During her inspection visits, Elsa Borenius found deficiencies in indoor and outdoor kindergarten facilities. The facilities did not allow adequate consideration of the children's needs and operating methods. Borenius emphasized the need to build permanent premises for kindergartens with a cozy atmosphere. Kindergartens needed blueprints and appropriate instructions for decoration to design suitable premises. In 1927, the annual meeting of the Finnish Association of Kindergarten Teachers set up a committee to plan the sizing of furniture and to design floor plans for kindergartens. Kindergarten teacher Bärbi Luther (1888–1979) designed tables of various shapes and chairs for 3-4-year-olds and 5- and 6-year-olds, storage drawers, and sandpits for indoor and outdoor use. The starting point for the design was the interior design model of sophisticated home, which followed the kindergarten teachers’ home background. The teachers in charge of designs considered children of different ages and sizes. The material used in the furniture was wood and painted with colors picked by the teachers. Kindergartens made similar furniture according to the sketches all over Finland.

![Figure 1. Kindergarten teachers’ sketches of tables and chairs in three different sizes. Photo: The Archives of Salaried Employees.](image)

At the initial stage of kindergarten activities, kindergarten teachers were responsible for decorating group rooms. In the 1930s, the trade union journal *Lastentarha* considered issues related to furnishing of kindergartens. Kindergarten managers selected furniture in accordance with the age and size of children, but their choices also reflected a homelike atmosphere, simplicity, and diversity. Despite the increase in costs, managers held on to the individual character of group rooms, as was the case in homes. Furniture could be of different colors and slightly different shapes in different rooms.

35 Supervision reports from Elsa Borenius collection, EB 16 ja 17, (Tyark).
37 *Lastentarha* (1/1938), 16.
Gradually, furniture was manufactured industrially. One of the pioneers, architect Aino Marsio-Aalto (1894–1949), who also considered the profession of a kindergarten teacher, drew the first furniture for children in 1929. The pursuit of practicality and expediency did replace the emphasis on turn-of-the-century beauty.\(^{38}\) Aino Marsio-Aalto combined pedagogy with architecture and furniture design in her work. Her interests were in Montessori pedagogy\(^ {39}\), which resulted in designs based on modularity, stack ability, foldability, and multiplicity of use. Marsio-Aalto designed a modular table of lightweight bentwood construction and durable linoleum surfaces for kindergartens.\(^ {40}\) She also designed a tent bed for naps for kindergarten use in 1939. After a nap, kindergartens could roll up the bed bases and assemble benches from the headboards, giving children more play area. Aalto chairs were also made suitable for children's proportions, which became one of the flagships of Finnish modernist designs for children.\(^ {41}\)

After the end of the Second World War, urbanization increased, resulting in an increase in the need for daycare places. Several new kindergartens opened their doors and old buildings got new furnishings.\(^ {42}\) In Helsinki, for example, the City Board decided in 1949 to authorize private furniture architects and interior design shops to make sketches that included tables and chairs of various shapes and sizes, benches and cabinets for accessories, utensils and other equipment.\(^ {43}\) It was self-evident that children had furniture of different sizes available according to their age. Adults had their own chairs and tables, for example, for eating, or adults dined with children at small tables.

**The size and furniture of group rooms centered the activities around tables**

At the Nordic kindergarten meeting in 1928, kindergarten director Elin Waris (1875–1958) described a good kindergarten environment as containing several sunny rooms and one larger room where all children could gather. Rooms had to be of a suitable size for one group of children, and premises had to have home-like décor. According to Waris, too much space can create an institution or school stamp for kindergarten:

>The kindergarten teacher decorates group rooms as much as possible in the manner of a home. There should be tables and chairs. Chairs should preferably be benches that can be stacked as needed. There should also be cabinets with comfortably placed children's utensils. There should also be cabinets with comfortably placed children's utensils. Each child should preferably have his or her own place at the table. Curtains, flowers on windows and paintings on the walls create coziness [...]\(^ {44}\)

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\(^{38}\) Saarikangas (2002), 287.

\(^{39}\) Montessori pedagogy is a child-centered educational method founded by the Italian pedagogue Maria Montessori (1870–1952). One of its key educational goals is to support the child's independence and freedom, which includes guidance based on an equal attitude of an adult towards the child. The learning environment has been designed taking into account the child's periods of development and sensitivity. Children have the freedom to experiment for themselves based on their own interests.


\(^{42}\) Hänninen and Valli (1986).

\(^{43}\) Annual activity report of the Board of kindergartens (1949), Ekf, 4. (Tyark).

Since kindergarten interiors did not allow extensive play environments, activities happened around the tables. According to Børve and Børve, some rooms in kindergartens may have cultural codes, which define normative meanings of the expected function of a room.\textsuperscript{45} Because of the deep influence of the Froebelian tradition in Finland, especially the emphasis on handicrafts, group rooms were planned for activities associated with tables. These values behind spatiality refer to Soja’s \textit{Thirdspace} and appear in narratives of lived space, especially in the recalled narratives of the 1940s–60s. The descriptions are quite mechanical, but diverse lists of various forms of work, such as crafting, sewing, weaving, and drawing, for example, in a narrative from a female writer in the 1950s in Helsinki:

\begin{quote}
Everyone was sitting at the table, and we had a variety of things to do, the same for everyone. I remember the small wooden cups and patches of fabric from which we unwound threads, which we then put in the cup. We often used Froebel’s brick boxes, and one day, each of us got a potato to peel. We shaped, drew, cut, and painted all at the same time, nicely in our own place.\textsuperscript{46}
\end{quote}

These activities, typically associated with kindergartens, serve as examples of commonly shared remembrance. According to Pirjo Korkiakangas, when remembering, generally acceptable and interactive versions of supposed events are created and negotiated.\textsuperscript{47} The individual memory combines with the historical, collective, and social memory. Details heard from others and facts related to events tie with a memoirist’s own personal recollections and form an understandable, logical ensemble. People share social memories with an important group, such as family, friends, work community, living environment or, in this case, a social institution of early childhood education. The community we have lived in and operated in defines its own conditions for what is worth remembering.\textsuperscript{48}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{image}
\caption{All children from one group working at the tables in one room under adult supervision in 1954. Photo: Kindergarten Museum’s photography collection, Helsinki.}
\end{figure}

\textsuperscript{46} SKS, KRA, Kindergarten memories (2012), 453.
\textsuperscript{47} Korkiakangas (1996), 17.
\textsuperscript{48} Ibid., 164.
There is also a lot of pictorial material about working and playing around tables that support the memory data. Both girls’ and boys’ activities focused on tables. Also, the whole group followed the same or table-by-table instructions when making handicrafts. Children were required to behave calmly and persistently while performing their tasks. One narrator, who was in kindergarten in the 1950s as a child, talks about a visit to her former kindergarten in the early 2000s. She missed the cheerfully colored low furniture that attracted the child’s eye:

The furniture was a traditional kindergarten model that has remained almost the same to this day. The upper surfaces of the tables, chairs and benches were cheerfully blue and red. They charmed the child’s eye. [...] In the early 2000s, I was able to visit my former daycare center. Of course, the kindergarten had redesigned furniture, and it was modern, higher, and more ergonomic than the old colorful tables and chairs, but it didn’t exude the same childlike atmosphere.49

It is important to emphasize that memory data is information about a past produced at the time of the narration, and it can describe more about the diversity of meanings and experiences, often reaching out and comparing to the situation of the present than the event itself.50 Often, recalling one’s past also contains nostalgic, sentimental emotions, longing for the lost, enchanted world, where things might seem better than they actually were and better than at the present.51 Some of the narrators had visited their childhood kindergartens again as adults. Familiar places look different in the eyes of adults. This change of space remembered and experienced in adulthood from large to small, or from special to ordinary, is familiar to all adults recalling their childhood.52

When, after decades of living elsewhere, we visited the yard of our childhood with childhood friends, the big hill was just a knuckle, and everything felt small, made to fit the children’s dimensions.53

Cultural researcher Bo Lönnqvist notes that play equipment at the turn of the 1800s and 1900s was designed and made according to the views dominated by adults’ perceptions of children.54 This phenomenon was also evident in kindergarten equipment later and recalled in the narratives. “Maintaining traditions was devotion, play equipment was the perfect copy of real work equipment: a horse and cart, iron stove and frying pans.”55

The descriptions of functional play of “little mothers” and realistic play equipment that fit the children’s hands often have a nostalgic touch. My results are in line with Swedish researcher Sara Backman Prytz’s and researcher Josefin Forsberg Koel’s study about the home corner and doll house in the middle of the 20th century. Their study

49 SKS, KRA, Kindergarten memories (2012), 444.
52 Korkiakangas (1996), 288.
55 HS Memory Collection (2018), 37.
revealed that children’s play is often gender-based and reflects the varying expectations of future life tasks based on gender. This research is a clear example of an adult-oriented concept of gender based personal growth.\textsuperscript{56}

**Daycare centers increased children’s space indoors in the 1970s**

With the Day Care Act in Finland in 1973, the number of square meters intended for an individual child increased and brought versatility and independence to indoor space usage. Kindergartens for children over three years old and nurseries for children under three years old were combined under the same concept as daycare centers. With the facilities for full-time care and full-time children’s groups, the interior space expanded, and it became more versatile and enabled children to use it more independently. The space allocation was also a gender issue, assuming boys required more physical play areas than girls.\textsuperscript{57} The increased space allowed children to move away from tables and search for new places to play. Children had more opportunities for independent play indoors as they could do activities in several rooms. Daycare centers got a resting or sleeping room for full-time groups in addition to a single group space typical of part-time groups. In addition, designs considered various small rooms, such as a sand and water playroom and a carpentry room.

Still, in 1973, two kindergarten teachers criticized the small size of units in an article in the trade union journal *Lastentarha*:

> There is barely enough floor space to meet the minimum requirements, preferably a little below rather than over. When we have chairs and tables for 25 children in a 33 m² compartment, there is hardly any room for activity outside them, and yet it is probably not intended that the children will be seated all the time.\textsuperscript{58}

The rapid growth of kindergarten and daycare center buildings and construction costs in the early 1970s accelerated projects that dealt with spatial solutions. The planning was based primarily on a daycare center’s educational goals and the organization of activities, considering the diversity of a child’s development. Additionally, spatial projects had to consider appropriate group sizes, activity duration, and repetition.\textsuperscript{59}

Still viewed on the vertical level, children’s scale prevailed. The design was aided by presenting proportions and dimensions for children of various ages.\textsuperscript{60} In 1980, the guidelines for designing daycare centers emphasized that premises should provide a diverse and interesting environment for children to satisfy their curiosity and thirst for knowledge. A child should be able to carry out various activities more independently and without the help of an adult, thereby avoiding dependence on adults and increasing passivity. Therefore, children’s workspaces and equipment storage should support children’s agency. Children should be able to take out equipment and put it back themselves.\textsuperscript{61}

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\textsuperscript{56} Backman Prytz and Forsberg Koel (2023), 60–61.

\textsuperscript{57} Sillanpää (2021), 239.

\textsuperscript{58} Lastentarha (7/1973), 143.

\textsuperscript{59} The development project of the spatial design of the children’s kindergarten Little Prince (Pikkuprinssi) (1978/4) Helsinki City Archives (HKA, Helsinki).

\textsuperscript{60} Pikkuprinssi, (1977/2); (1978/5) (HKA, Helsinki).

\textsuperscript{61} Päiväkodin toimitilojen suunnittelu (1980).
Figure 3. Measurements and dimensions of a five-year-old child. Children’s proportions and dimensions No. 5/1978. Helsinki City Archives.

However, children’s scale gradually began to raise questions as the discussion about work ergonomics intensified. In 1979, the trade union journal Lastentarha examined the ergonomics of employees’ working conditions and methods. However, despite the new requirements for work ergonomics for adults, the daycare center equipment sizing did not change:

There has been lots of discussion about children having to live in the big world of adults. In daycare centers, the situation is the opposite. Staff must bend over to a level of children. Chairs and tables that are child-sized cause awkward, often back-straining working positions. At work, there are situations when children need guidance or help, and in this case, adults must bend over, go to their knees, or lift a child. For this reason, back problems and diseases of the musculoskeletal system are common among staff who have worked at daycare centers for a long time. The nature of the work limits the possibilities to alter the size of the daycare center’s equipment. However, each compartment should have some furniture designed to the dimensions of an adult.\(^{62}\)

Gradually, criticism of children’s scale increased, and in the early 1980s, flexibility was a starting point for designing: child-friendliness does not have to mean making the environment suitable only for children in such a way that it is uncomfortable for adults.\(^{63}\) Tables and chairs of different heights make a mixed impression.\(^{64}\)

\(^{62}\) Lastentarha (5/1979), 5–6.


\(^{64}\) Marianne Andersson, ”Suunnittelu päiväkodin perustoimintojen tukena – joustavuus- ja laatutekijät sisustusratkaisuissa,” in Lasten päiväkoti – tilat, kalusteet, välineet, ed. Marja Turkka (Helsinki:
In the late 1980s, descriptions of daycare center indoor play areas depict them as a natural part of the environment, not as a separate miniature world. Furniture and utensils were small, and the goal was to increase children’s independent initiatives. For example, by providing low toilet fixtures, tables, and chairs of a suitable height. However, daycare centers also require adult-sized furniture for use by both children and adults, including sofas and chairs. Group rooms had open shelves and cabinets for children to access equipment and materials for activities.

The child’s horizon allows children to enter secret places

In 1984, architects Raili and Reima Pietilä discussed about the starting points of the Taikurinhattu daycare center design in the Finnish journal Arkkitehti. They emphasized the importance of artistic thinking instead of abstract spatial composition. The daycare center design had to be “childlike”:

“Modifying the standard floor plan is the way to create child-friendly architecture. For example, an architect imagines a space, looking at it from the usual eye level. Adult’s eyes are approximately 1.6 m from the floor level. Thus, they experience all objects and shapes within this habitual and precise framework. This parameter is a result of a long career. When one lowers their gaze to a 70–80 cm level, they see from the child’s perspective. This is the “child’s horizon.”

Another Finnish architect, Pentti Myllymäki, noticed children’s need to invent their activities. Spaces designed for children included, for example, porches and their fronts, corners, window seats, lofts, stairs, and platforms, where it was comfortable to be, and plays developed according to children’s needs.

In the 1980s, children’s activities expanded with the release of additional spaces and new educational perspectives. The importance of liberal education was a topic of discussion in Finland already during the 1970s. The focus was, for example, on Summerhill’s pedagogy and children’s freedom to be themselves. Furniture was not used only for its practical function but also as a tool for imaginative play. For example, Artek’s versatile tables, featuring various shapes, were adaptable to various activities. Artek’s furniture advertisements in the Lastentarha journal encouraged more flexible use of furniture. Teachers still had an important role in building and changing the environment according to children and their activities.

Lisa Rosén Rasmussen highlighted that in Danish new school architecture materiality and pedagogy, teaching strategies and practices interact (or intra-act) throughout different processes of occupying and establishing everyday practice in new school buildings in the early 1970s. Children could do inspiring activities such as climbing on a table, unlike in

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67 Pentti Myllymäki designed the premises of the Little Prince (Pikkuprinssi) daycare centre in the 1980s.
the 1950s when activities focused on chairs around a table. Children could move more freely from one room to another in a daycare center, and play extended to various secret places, such as a mattress cabinet, a coat rack, or under a table.

Figure 4. Versatile use of tables in an Artek advertisement in the Lastentarha journal (15/1981)

Figure 5. Children are working on their project at a low table. Children have a lot of tools at their disposal and their commitment to the activity is strong. 1994. Photo: Seppo Sarras, Kindergarten Museum’s photography collection, Helsinki.

Narratives describe small, closed spaces, rooms, closets, or hiding places, often found and conquered by children, to which adults could not access. Daycare center facilities and activities inside gave more opportunities to children, yet activities were largely adult-led. The memory data describes children’s secret places as outdoor locations in the kindergarten era with halftime care, while indoor narratives appear in memories when interiors expand. It was meaningful for children to act without adult supervision, and children’s peer culture and mutual humor strengthened. The narrators describe secret places as exciting and atmospheric, and acting in them brings a feeling of wildness and freedom. Children’s secret places appeared on the vertical level, separated into “layers” of adults and children. For example, underlays of tables, bushes, and other places, which are difficult for an adult to reach, served as hiding places, shelters, or playgrounds in the narratives. Children and adults can interpret the potential of a daycare center hallway differently, even though the space is physically the same for both. For children, the space provides an intriguing opportunity for peer activities, while adults see the space as a cramped and noisy place to dress.


71 Sillanpää (2021), 270–73.

72 Vuorisalo, Rutanen and Raittila (2015), 68.
I was a nice kid, but at one point, I remember that my two best friends and I hid in the depths of a coat rack to eat candies that were forbidden in the daycare center. We had to be quiet so that no passerby noticed us from behind the barrier made of rain pants.\textsuperscript{73}

We played hairdresser under the table in secret from the adults and used craft scissors to cut each other’s hair (about 5-years-old). The aftermath wasn’t pretty, at least not for adults.\textsuperscript{74}

Tomas Ellegaard’s research on Danish kindergartens supports the findings of my source material. He notes that children live in two different social realities: the children’s peer culture and the adult-dominated adult-to-child culture.\textsuperscript{75}

**Conclusion**

This article discusses kindergartens’ and daycare centers’ spatial arrangements and equipment on the vertical level at children’s scale. New educational thinking is always rooted in a specific cultural and social situation and is in dialogue with spatial decisions. We can view physical spaces and material culture as a tool for adults to carry out their objectives for children and for children to engage in play.\textsuperscript{76}

At the turn of the 20th century, there was a growing emphasis on creating furniture and equipment tailored to the needs of children. This movement was heavily influenced by the educational philosophy of Friedrich Froebel, which served as the foundation for the kindergarten tradition. Children were in an important position and at the center of activity, but kindergarten teachers mainly organized and planned the pedagogical activities and surroundings.\textsuperscript{77} Child-centered pedagogy places the child at the center and considers their qualities and developmental stage. The aim was to introduce some aspects of the adult world into the children’s world, for example, by scaling down furniture and kitchen utensils to fit children’s measurements and designing play equipment and playgrounds that resembled the adult world to some extent.\textsuperscript{78}

Gradually, child-oriented pedagogy, where children influence teaching with their initiatives and interests, came alongside traditional child-centeredness in the 1980s. The distinction between child-centeredness and child-orientation is evident in the approach toward the child’s self-governance and subjectivity.\textsuperscript{79} Child-oriented pedagogy considers children’s active agency, spontaneous play, interests, creativity, and

\textsuperscript{73} HS Memory Collection, (2018), 126.

\textsuperscript{74} Ibid., 95.


\textsuperscript{76} Gutman (2013), 249.

\textsuperscript{77} Jarmo Kinos et al., “Suomalaisen varhaiskasvatuksen työ- ja toimintatavat opetussuunnitelmissa,” *Kasvatus & Aika* 15, no. 2 (2021), 22–42.


the need to define themselves. Design attitudes also incorporate this idea by taking a wider look into the proportions and dimensions of children. They consider individual body proportions, such as hand size or shoulder width, which can influence the range of affordances, detection, and actualization. In Sweden, the government mandated diverse and stimulating preschool environments to support children’s independence and freedom of choice, following a similar trend even earlier. Beauty as design’s starting point was replaced by the pursuit of practicality and children’s agency.

When examining Soja’s lived and conceived space, narratives written about children’s scale exhibit a nostalgic tone. However, the writing style shifts when moving from kindergarten narratives to the daycare center era. The stories of the kindergarten era reflect the romantic idea of the child’s century, the idealized descriptions of small-sized equipment of home play that reflected the life of adults. In stories from the 1940s and 1960s, when reminiscing about working at a table, activities are described as versatile lists of various forms of work, such as crafting and sewing, often in the we-form approaching general, the collective scale of recalling.

In the 1970s, due to the emerge of the Day Care Act, children’s scale in narratives extended more broadly to the environment and children’s dimensions compared to the kindergarten era. Written narratives from the 1980s about the activities related to children’s scale indoors also include other children and peers. Experiences reflect a more active, personal level. Children could also retreat collectively to some shared secret place and, at the same time, create friendships and bonds with their playmates. In these narratives, nostalgia connects strongly to childhood itself, peer groups, and children’s mutual activities. On the contrary, before the 1970s, children’s experiences within their peer groups related to outdoor activities and kindergarten excursions.

According to Bourke (1994) recalling the sense of community can be strongly inclined to nostalgia, and activities in a peer group are often described in a positive and idealistic tone. Recalling one’s childhood can be influenced by the author’s attachment and may affect the way they remember their experiences. Most of the respondents are women. Gender may have influenced the way women write about their childhood experiences, particularly those related to being a girl, given the societal differences between the 1940s-50s and the 1980s. This matter needs to be analyzed further.

Spatiality thinking can enrich the history of childhood, but also help us to imagine different futures for children. How child-oriented is the Finnish kindergarten environment today? Today, employee ergonomics is considered one of the key elements for design, and the necessity of children’s scale and dimensions are no longer emphasized in the same way as before, though guidelines mention the term child-size.

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80 Kinos et al. (2021), 30–31; Rosqvist et al. (2019).
81 Westberg (2019), 5.
82 Sillanpää (2021), 138, 184.
84 Sillanpää (2021), 272.
86 Gutman (2013), 261.
It is further stated furniture should fit children’s size to encourage independence and activity in all areas of a daycare center. However, a large part of furniture follows adult-size, which guarantees a functional and ergonomic work environment for daycare employees. In this case, daycare centers facilitate children’s activities by using raised chairs, stools, and step boards; children must reach into the adult world.

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