

Tamar Zinguer
The Infancy of the Sandbox

Abstract

Froebel conceived play inside his childhood gardens not only as a preparatory exercise for future adult activities but as a tool capable of sustaining and “watering” the “natural fertility of the soil” of the child’s receptive mind, so that new ideas could find a foothold, to let children grow rooted in the life of the universe, “just as a plant is rooted in the ground with its head facing upwards towards the light”.

This essay also illustrates the development and establishment of the sandbox as a spatial and material tool, and how it has evolved thanks to the work of pioneers in nursery schooling.

Keywords

Friedrich Froebel — Sandbox — Kindergarten — Gift

Eisenach, 13 Maggio 1847

Dear, fatherly friend:

Yesterday I was engaged in studying your Sunday paper when an idea struck me which I feel prompted to communicate to you. I thought, might not a plane of sand be made a useful and entertaining game? By a plane of sand I mean a low, shallow box of wood filled with pure sand. It would be a Kindergarten in miniature. The children might play in it with their cubes and building-blocks. I think it would give the child particular pleasure to have the forms and figures and sticks laid out in the sand before its eyes. Sand is a material adaptable to any use. A few drops of water mixed with it would enable the child to form mountains and valleys in it, and so on.¹

In this letter to Friedrich Froebel, inventor of the Kindergarten the first mention of the sandbox as a pedagogical tool appears. As a child, Colonel Hermann Von Arnswald was a pupil in Froebel’s Kindergarten. The three years he spent under his tutelage left such a profound impression — in the individual liberty the kindergarten inspired and the sense of community it engendered — that Von Arnswald was compelled years later, as an educator himself, to entertain an active correspondence with his old master about education and the importance of play. This paper follows the development and establishment of the sandbox as a spatial and material tool, how it evolved from the work of pioneering kindergartners, the brainchild of female immigrants in a new land.

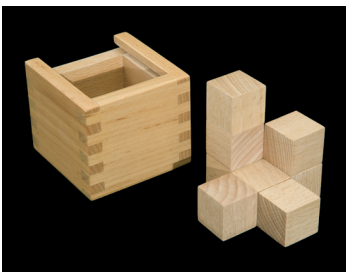
Froebel conceived of play not merely as a preparatory exercise for future adult activities; rather, for him, play in the kindergarten was meant to sustain and ‘hydrate’ «the natural fertility of the ground», that is of the child’s receptive mind, so that new ideas could take hold. Just as

Fig. 1
Gardening at the Brooklyn Pratt
Institute Kindergarten, 1905.



Fig. 2
Gardening in a Kindergarten in
Los Angeles, 1900.



**Fig. 3**

Above left, Froebel's second "Gift".

Below left, Froebel's third "Gift".

On the right, Froebel's fifth "Gift".

Von Arnswald experienced, children would grow to become full individuals «firmly rooted in the life of the universe, as a plant is rooted in the ground, and holding his head upward in the light»².

In Froebel's Kindergarten, initially called the «Institution for Self Education», a kindergartner led the children in communal activities: singing songs and working outdoors, planting and tending to the garden (Fig. 1-2). Indoors, in a controlled setting, the children were led from a very young age in directed play at a gridded table. They would handle a series of building blocks called Gifts, as they were meant to draw out the child's inner abilities through observation and manipulation. The Gifts, designed by Froebel and manufactured by his «Institute for the Fostering of the Creative Activity Drive», were wooden solids cut precisely out of maple, which gradually decomposed volumes into planes, lines and points. This breakdown followed rules that were based on the latest discoveries in crystallography emphasizing the polar opposites in matter, which Froebel learned through his advanced studies with the groundbreaking crystallographer Christian Samuel Weiss (1780-1856) (Figg. 3a, b, c). The Gifts meant to impart to a growing child an understanding of a world founded in natural, mineral structures. The ten Occupations that followed were a series of activities, based on common crafts, which gradually reconstructed the points, lines and planes into volumes again. Thus, natural structures and cultural constructs combined to provide an understanding of the solid world. The first Occupation, paper pricking, represented points; it was followed by embroidery, which connected two points with thread, creating a line; then weaving slats of paper paralleled lines forming a plane, gradually leading to free molding of solids with clay. With both Gifts and Occupations, the children were encouraged to observe the world around them and create constructs that elicited *Forms of Life* – reproducing man-made objects, *Forms of Knowledge* – describing mathematical relationships, and *Forms of Beauty* – forming symmetrical compositions reminiscent of crystals³.

By 1847, when Von Arnswald wrote Froebel about the plane of sand, the Gifts and Occupations had been used in the kindergarten for ten years already. Froebel had written extensively about the first six Gifts dur-

ing his lifetime, while his numerous disciples and trainees developed the instructions concerning the other fourteen Gifts and Occupations. These kindergartners-in-training were primarily women; they rewrote his pedagogical teachings, updated his inflexible guidelines and made his rigid structured program more accessible for younger generations. Froebel believed women were the ones to be entrusted with the «education of man», as he thought a woman would be better suited to carry his voice and ideas to future generations, she would better empathize with the “mind of childhood», since a woman, he stressed, is «the true natural educator of man”⁴. Having briefly attempted to address fathers with no success, he dedicated his lectures and schoolings to women during a time when men, as teachers and headmasters, occupied official positions in education⁵. His editor Arnold Heinemann attested: «If we look over the long array of names that call themselves disciples prepared by the master himself, under his own eyes, and through hearing the living word from his mouth, they are nearly all females. And they all acknowledge that nobody, either male or female, has ever recognized and indicated the true vocation, the life work, the destiny of woman to form and elevate and bless man-kind, as clearly and distinctly as Froebel did»⁶. It is as if Froebel recognized the timely coincidence between the contemporary struggle of women, and aligned it with the necessity for early childhood education when he observed: «women are my natural allies, and they ought to help me for I bring to them what shall relieve them of their inner and outer fetters, terminate their tutelage, and restore their dignity with that of still undervalued childhood»⁷. These women would become instrumental in founding the sandbox as a grounding space of play.

Froebel had thought his young trainees, would dedicate themselves to the profession only until they married; nevertheless these kindergartners never stopped working and became pioneers devoted to a life-long mission. For years after Froebel’s death, these women carried the kindergarten’s message and championed its cause, and regardless of Froebel’s original motivation, they used that institution for their own empowerment and to promote women’s emancipation. These first kindergartners were often motivated by difficult family circumstances, a wish to elevate their financial circumstances, and a way to support their large families. Others still, looking to find alternatives to their orthodox upbringing, sought another course for women in society, an alternative to the anticipated marriage. Froebel’s niece for example, Henriette Schrader (1827-1899) who would later establish the Pestalozzi-Froebel House in Berlin, refused to accept the dutiful domesticity that was expected of her as the eldest of ten children of a pastor, and defying her father, enrolled in her uncle’s Kindergarten course. The new profession offered her a possible vocation: through education she would gain a voice, a social position and a salary, hence the opportunity to be autonomous financially.

Simultaneously, the cause of the kindergarten and early childhood education became a conduit of the voices of some aspiring revolutionaries, and offered opportunities for self-expression afforded beforehand only to men. Innovative social reformers, these women were unified by their aspirations of equal educational opportunities and religious freedom, and assembled around this common cause. This model society, where female kindergartners would work throughout their lives and children

would be actively engaged, appealed to those hopeful feminists seeking an alternative kind of living. They greeted favorably the social and political revolutions of 1848 in Germany, and, during that time, the kindergarten movement flourished briefly with the hope that a liberal constitution of a new unified German state would support their efforts. However, when the socio-political revolutions failed and monarchical governments sustained conservative agendas, a ‘Kindergarten Verbot’ was issued by the Prussian government in 1851, a decree calling to close all Froebelian Kindertgartens as they were believed to promote a revolutionary political agenda, propagate atheism and stand against the church. Froebel himself died a year following the decree, in 1852, and did not see the reversal of the ban take place in 1860⁸.

Ironically it is specifically the Verbot that led to the propagation of the Kindergarten message across Europe and the United States. The numerous newly trained and idealistic kindergartners were suddenly unemployed, yet persisted with their mission of reform and looked for more favorable grounds elsewhere. At the time, the United States seemed to offer hope for a better future and the freedom to develop new opportunities; and early childhood education – along with other aspects relating to domestic life and child rearing – was accepted as an area where women could seek autonomy and self-reliance.

With the promise of liberty and opportunity for the political exiles of 1848, America also seemed to be open to the kind of changes the kindergarten offered. Froebel, without having ever visited, had written guidelines for kindergartens in the U.S.A⁹.

Therefore, after 1851, the German female Kindertgartners sought a receptive ground across the Atlantic, where by mid-century most American elementary schoolteachers were women, compared to Germany, where teaching was still dominated by men¹⁰. In addition, the separation of church and state – which by 1833 was complete across the United States – allowed for the positive reception of the early childhood ideals of Pestalozzi and Froebel and the proliferation of the kindergartens. Altogether, in a land with many new immigrants, the focus on education was a way to create a shared culture that would mediate among the different ethnicities. Cultivating a common ground was key to the future growth of a healthy society – and it is in the U.S.A that the idea of sand play took root and developed. While it had been employed elsewhere, it is in a new country that the women kindertgartners recognized sand as an important element of play, and wrote about this grounding matter that should occupy a special position in the Kindergarten, outside the structured spatial sequence of the Gifts and Occupations. It is as if in a new land, a new engagement with the pedagogical mission could take place. A new flexible attitude – and malleable material – could better conform to a changed version of the kindergarten in new society.

The women who brought the Kindergarten to America differed from other women immigrants, who resettled with a family. They were for the most part financially independent, single, and like pioneers were willing to travel distances for the professional opportunity. A few key women, German and American working in tandem, were instrumental in propagating the knowledge of the kindergarten in the United States. Their writings — both loyal to Froebel and seeking change — revealed that through reciprocal exchanges and influences, the idea of play with sand developed and took hold.

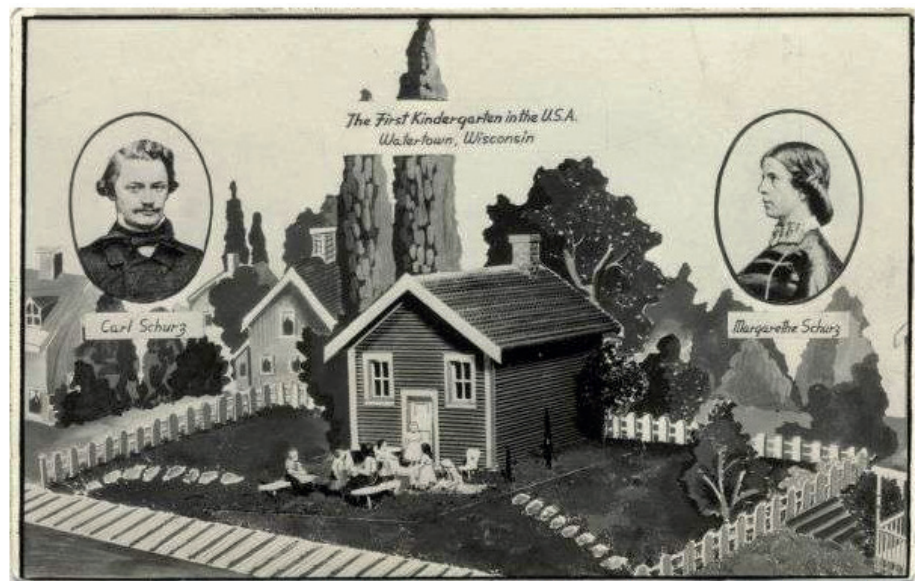


Fig. 4

Artistic representation of one of the first kindergartens in Watertown in Wisconsin. On the sides of the postcard are the portraits of Carl Schurz and Margarethe Schurz, 1856.

Margarethe Meyer Schurz (1833-1876) had trained to become a kindergartner at the college for women in Hamburg before it was forced to close in 1851, and a year later visited her sister who had already opened three Froebelian kindergartens in London. She then immigrated to Watertown, Wisconsin, where she opened the first Kindergarten in the United States, German-speaking to accommodate the large immigrant population there¹¹ (Fig. 4). In 1859 she met Elizabeth Peabody (1804-1894), who, as accounts go, marveled at her ‘well-behaved’ daughter who had been taught with the Froebelian curriculum¹². Hearing then for the first time about Froebel and his method, Peabody, then in her fifties, decided to dedicate the rest of her life to the establishment of English speaking Kindergartens in the United States. A former bookstore owner, the editor of a journal of the Transcendentalist Movement, and the sister-in-law of Nathaniel Hawthorne and Horace Mann, Peabody had been very involved with the cause of education. She was familiar with Pestalozzi’s writings, but Froebel’s idea of the kindergarten as developed in his book *The Education of Man* (1826) that was presented to her by Schurz, incorporated the communal aspects she deemed so important and that Pestalozzi’s pedagogy lacked. Enthusiastic to learn more about the system, she travelled to Germany in 1867, where she met Froebel’s widow Luise Levin Froebel (1815-1900) and Baroness Bertha von Marenholtz-Bulow (1810-1893), who had become Froebel’s main advocates¹³. They enlightened Peabody as to the kindergarten practices, and Peabody, eager to “establish the real thing [in the U.S.A.] on the basis of an adequate training of the kindergartners” enlisted women who had been trained by Froebel, and who were eager to move to America, since Froebel himself had believed that «the spirit of the American nationality was the only one in the world with which his creative method was in complete harmony and to which its legitimate institutions would present no barrier»¹⁴.

Emma Marwedel (1818-1893) was one of the most influential kindergartners who had immigrated to the United States following the solicitation of Elizabeth Peabody, whom she met during her first visit to Hamburg in 1867 and the first one to write about the importance of play

with sand.

Marwedel wished to elevate women's role in society. She had traveled extensively throughout Europe to assess the working conditions of women, their different wages and the disparity among them, and witnessed the general lack of institutions dedicated to their training¹⁵. Nurturing women students in vocational schools, she claimed, meant nurturing the mothers of the future generations. Marwedel was one of the founders of Germany's first feminist organization, the German Women's association (*Allgemeiner deutscher Frauenverein*), and for one year, in 1867, she was the first director of The Girls' Industrial School (*Gewerbeschule fuer Maedchen*), which she helped found in Hamburg. It is then that she met with Elizabeth Peabody, who inspired her to adapt and develop the Kindergarten for the United States, in English¹⁶. The kindergarten — with the income it would provide — could help support a single woman who wished to never marry; or if married, it could give her supplementary income so as not to be dependent on her husband. In fact, many of the early kindergarteners, like Emma Marwedel herself, never married nor had children, as if equating this newly found independence with the opportunity of a completely different lifestyle. She sought to create a holistic education for Kindergarten teachers and their pupils, addressing body and mind introducing daily walks, bathing and gymnastics. Rather than these acts pertaining to the home and to 'motherly care', she incorporated these practices in the curriculum of a contemporary woman's education¹⁷.

In America, despite her great enthusiasm and Peabody's support, Marwedel's plan to form a school for kindergartners was not immediately successful; therefore she developed a practical agricultural institute for women instead, to become actual gardeners of fruits and vegetables. The president of Cornell University, Andrew Dickson White (1832-1918) offered her a piece of land, but she declined, as Ithaca was too far from a metropolitan center necessary for access to the markets, she claimed. Changing course five years later, she established an Institute for Women with an adjoining private kindergarten in Washington D.C.¹⁸. It was the work of her kindergarten class that was on display at the Centennial Exhibition in 1876 in Philadelphia, where according to Frank Lloyd Wright's account, his mother bought him the Froebel's Gifts that left such a profound influence on his life-work¹⁹. Subsequently, Marwedel moved to Los Angeles and established a school for kindergarten pedagogy in a picturesque building resembling an assembly of Froebel's solids, a structure that was known as 'The Round House', with a sign on the gate announcing - 'Paradise of Eden'. It seemed like an ideal location for the housing of the pedagogy that the Kindergarten manuals in English named the "Paradise of Childhood"²⁰ (Fig. 5).

In her first book, *Conscious Motherhood, or the Earliest Unfolding of the Child in the Cradle* (Chicago: Interstate, 1887), Emma Marwedel established that sandboxes (or sand-tables) were so important that «even the sea-shore should have one»²¹. Sand-tables should be part of every nursery, she wrote, but as she knew them at the time, «nurseries were not made for children», she wrote, yet they could become ideal spaces «if mammas would make the plans of houses», she emphasized²². (Fig. 6) In the nursery, the biggest and sunniest room in the house, built on the ground floor as an extension of the garden, children would gain knowl-



Fig. 5-6
Round House in Los Angeles,
1885.

Sand table Vienna alamy.



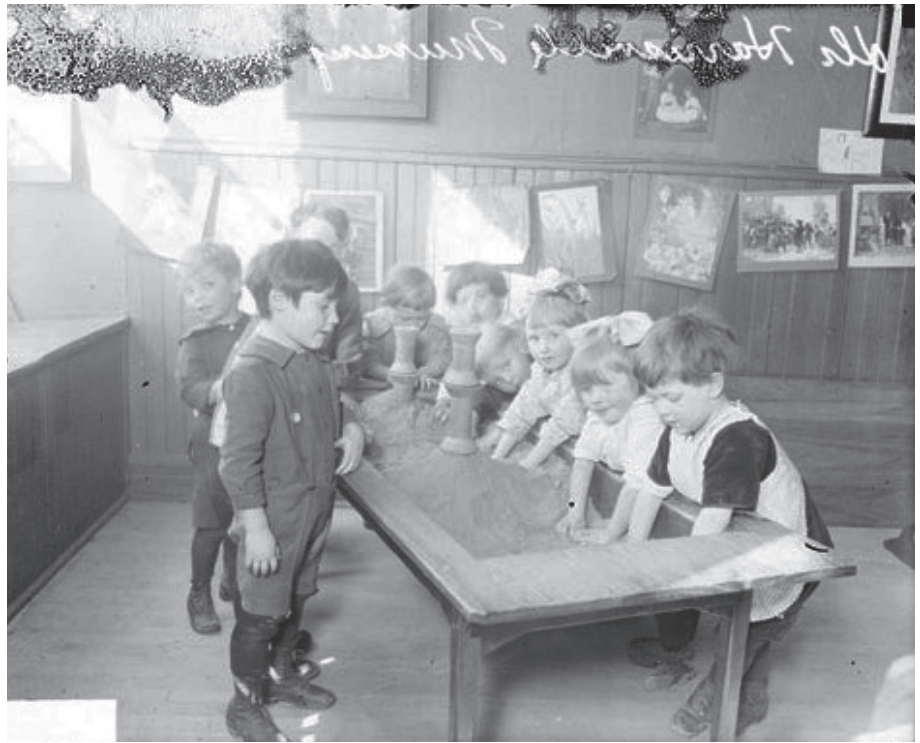


Fig. 7

Sand table at a Harrisville nursery, Chicago, 1919.

edge by «self-instruction». The sand-table would be there, alongside different collections from nature –shells and pebbles, pressed flowers, and branches, which would be included in the children’s play as props when stories were told. The sand table could embody the ‘first garden’, literally a place where the children could sow seeds and watch them grow. Once the garden has sprouted, paths, streets and houses would be designed, Marwedel explained. Children would work together to form entire neighborhoods. More than any other game or occupation in the nursery, this long-term project in the sand table would be “leading the child to a high moral development by making him... a member of a social organization, learn quite early as an individual to respect the work of others, and to overcome his own selfishness»²³, Marwedel said. By gathering around this framed piece of earth, building together cities in small, the children would learn «to share generously, to accept graciously, and to yield courteously to the *social training*, — one of the most important features of the kindergarten, she wrote²⁴ (Fig. 7). And breaking from Froebel, she insisted children play with sand unsupervised, and therefore the sand tables should be placed in the least observed places, since it is there that the «children’s greater imaginative power [would] form the root of their higher inspiration». Such an indispensable space for personal growth is necessary everywhere, Marwedel added; since it is especially around the sand table that “the child is led unconsciously from the created to the Creator»²⁵. At the invitation of the Ethical Society, Marwedel founded the first free public kindergarten in San Francisco, the Silver Star Kindergarten in Oakland. She remained in San Francisco to her death in 1893, and continuously dedicated her life to Froebel’s teachings. (Fig. 8)

In 1878 Marwedel asked Kate Douglas Wiggin (1856-1923), who had completed her Kindergarten training with her in Los Angeles, to head that school. Years later, after having been a kindergartner for eighteen years and a very successful children book author, Wiggin published with her sister Nora Archibald Smith (1859-1934) books on the educa-



Fig. 8
Tomb of Emma Marwedel Oak-
land CA.

tional principles of Friedrich Froebel²⁶.

In the book *Froebel's Occupations* (1896), the last chapter was entitled "Sand Work", proof that Kate Wiggin afforded work with sand as much importance as any other Occupation conceived by Froebel. That chapter, the first scholarly summary of the history of the sandbox, established Sand Work as a basic practice and an important addition to Froebel's pedagogical canon. Wiggin quoted Froebel and interpreted: «The little child employs itself for a long time merely by pouring water or sand from one vessel into another alternately... for building and forming with sand and earth, which precedes clay work, opportunities should be afforded even to the child of one year»²⁷.

Wiggin made the sand-table kid sized and set on rollers, just as the rest of the furniture in the Kindergarten. It was to be approximately five by three feet, one foot deep and lined with zinc, to allow the children to pour water and form landscapes. Most importantly it was to be large enough to allow for a dozen children to gather round, as the sand table, she emphasized, was to be used solely for communal work²⁸. All activity at the sand table should be cooperative, Wiggin stressed, as the greatest value of this work is that it promotes and demands cooperation, following Froebel's remark that «the feeling of community is commonly not only not early awakened or later nourished in the child, but on the contrary is early disturbed and even annihilated»²⁹.

Wiggin too, following Marwedel, instructed the kindergartner to remain in the background so as to promote spontaneity, without which a growing person's originality and sense of creativity would be crushed, she wrote. The teacher, Wiggin added, «must endeavor simply to be one of the children and not force her ideas upon the community»³⁰. All in all, she wrote, work at the sand table is an «unexcelled teacher of social morality and of self-control, ...it develops the creative instincts, which if suppressed, entail a loss of power upon the whole being of the child»³¹. It is in the sand that children experiment being architects first, Wiggin emphasized as she quoted Baroness von Marenholz: «The hands of children commence their first rough trials at building, whilst digging in earth and sand. The scooping of caverns, the building of houses and bridges, forming and fashioning of all kinds... – all spring from the instinct of construction, the true instinct of work»³². Thus, recognizing the sand table as the most important tool in the kindergarten, she added, «there is nothing in the kindergarten which is capable of such varied, helpful, and beautiful uses as is the sand table, and it alone, were all our other helps to child training removed would support the claims of the system to be considered as a great educational agency»³³. And recognizing the sand as a creative and pedagogical tool of prime importance, she called the 'plane of sand', a «fit drawing board for giants»³⁴.

That instinct to dig in earth and sand was often repressed in city children, following what she called the «first commandment of maternal catechism» – «Thou shalt not make thyself dirty» parents would say³⁵. The children would hence suppress their most natural instinct, as they would be deprived of what could please them most – touching mud and soil. Wiggin described in her autobiography, *My Garden of Memory*, the sand table on her first day of teaching at the Silver Spring free kindergarten in San Francisco. Forty little children came on that first day, ages 3-8, she recalled. While thirty students acquiesced and sat quietly

waiting, another ten would not let go of their mother's hand, at which point most of those mothers took their children outside for a spanking and returned them crying even more. Most mothers just left the children there – crying. When they would not quiet down, Wiggin asked her assistant to take those crying kids to the sand table outside where they eventually calmed down and then returned³⁶. The sand table, this model earth, could provide warmth, pliability, calm, a supportive background and connective matter – a powerhouse of sorts. Children should dig in earth and sand, she emphasized, since «children renew their strength at the touch of Mother Earth»³⁷. Wiggin wrote.

When in 1882, Henriette Schrader-Breymann (1827-1899) founded the Pestalozzi-Froebel Haus in Berlin, a training institute that also featured a Kindergarten, she was critical of the Kindergarten as it had been established by Froebel, her uncle. She questioned whether a place for educating young children should resemble the institution of the school altogether, rather than emulate the supportive environment of the home. The complete control given to the kindergartner, leading the children through series of successive detailed instructions appeared to her as rigid and excessive. «The idea that playing according to direction could make men noble seemed to me so narrow and limiting», she said³⁸. Just as a child's early years are usually spent near the mother and under her guidance, the Kindergarten should emulate the warmth of home and allow for the expression of emotions, rather than inculcate to the strict discipline of a school (Fig. 9).

Based on universal concepts of mathematics and geometry, Froebel's Gifts and Occupations transcended language barriers and were easily adapted to different cultures. Nevertheless, in time and with the move to a new continent, interpretations and criticisms emerged, and numerous changes were made to the system with its adaptation to the new cultural climate of the United States. With the translation to English came a moderation of the strict instructions and a greater flexibility of the structure overall. It became evident that the rigid framework—even the gridded surface that was to underlie all play—might not be able to sustain young children's attention for very long. In her book, *The Transatlantic Kindergarten*, Ann Taylor Allen contended that while the American kindergartners contributed significantly to the institution's reform, it is Schrader-Breymann's critique of the kindergarten that proved pivotal. She introduced manual skills, domestic work and exercise into the curriculum, changes that were much appreciated by the American adepts of the Froebelian system. While domestic in nature and involving manual tasks from around the home, these aspects of learning followed new reforms favoring experiential over theoretical education.

Schrader-Breymann had claimed that, «the first years of life create the basis for the individual's entire existence», and therefore «natural motherliness... and the quiet work of women in the home and with her children must be given a new significance for public life»³⁹. The new profession of Kindergartner, would allow a woman to employ in her educational role the maternal qualities of care and warmth that she innately possesses, regardless of whether she has children of her own. In 1870 Schrader-Breymann coined the term 'geistige Mutterlichkeit', or 'Spiritual Motherhood', specifically to denote that a woman need not

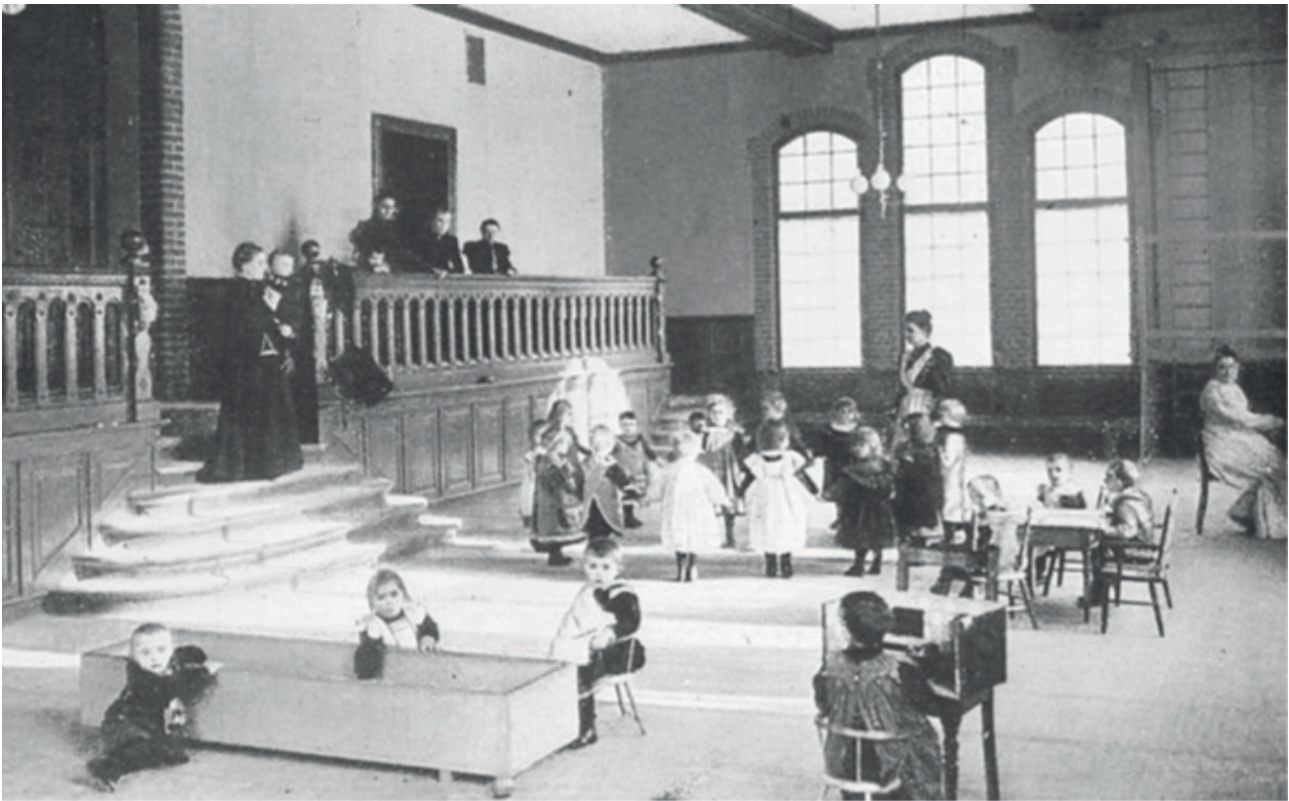


Fig. 9
Sand Table Froebel-Pestalozzi
House Berlin, 1904.

have a family in order to express her maternity: her maternal instincts could be directed to and benefit the children of the kindergarten and society as a whole. The Women's Movement took up the concept of 'Spiritual Motherhood' and utilized it to explain a woman's ability to benefit society at large and the necessity for women to partake in societal roles. Agnes von Zahn-Harnack, women's rights activists and author, wrote in her history of the movement, *Die Frauenbewegung* (1928), that «It is only where physical motherhood purifies itself and breaks through into spiritual motherhood that we can speak of the highest fulfillment of life, which does not at all consist in the fact that a newborn child is lying in a cradle»⁴⁰. In practicality the movement used this concept to demand for women's employment. During a time when teaching positions were held primarily by men who followed formal educational training and requirements, a formal establishment of women's abilities and roles seemed to offer them a new professional appeal. Historian and social scientist Irene Stoehr wrote, «The women's movement took... ['Spiritual Motherhood'] up later and made it refer to the demands for employment and participation by mostly childless women, arguing that maternity was in principle a quality of all women, and expressed not only in the family»⁴¹.

The achievement of Henriette Schrader-Breyermann was to order these nurturing acts in a system that could then be taught and would allow the mother of a family to expand her domestic role to the public sphere. Rather than being the mother of a few children, she could become a mother in society at large. This embodied a continuation of Froebel's thought who rendered early childhood education — as reflected in the Gifts especially — as a precise science with its specific tools⁴².

Henriette Schrader-Breyermann had said, «I foresee an entirely new age dawning for women, when she... will bring to the broader community a quality which until now has been entirely lacking—the spirit of

motherhood in its deepest meaning and in its most varied forms»⁴³. The sandbox then, warm, embracing and conforming, became the physical manifestation of these thoughts, the actual brain-child of these women, 'spiritual mothers' who attempted to redefine what motherhood could be.

The sand table, this model earth would act as a supportive background or connective matter — a mother earth of sorts — where an individual discovery of the child could take place. The study of the child — and her environment-provided spiritual mothers with new territories to explore. Kate Douglas Wiggin had written: «For many of these women, the study of the child had provided the basis for a new understanding and affirmation of the self... The child, any child I had almost said, is the Columbus of the undiscovered world within you, in your heart, that goes without saying, but in your mind as well»⁴⁴. And the sand-table became for children a model continent that remained to be explored.

Notes

¹ Friedrich Froebel, *Froebel Letters*, edited by Arnold H. Heinemann, Boston: Lee and Shepard Publishers, 1893, p. 61.

² Ibid., p. 25.

³ For a detailed description of Froebel's Gifts, see Tamar Zinguer, *Architecture in Play: Intimations of Modernism in Architectural Toys*, Charlottesville, VA: UVA Press, 2015, chapter 2.

⁴ *Froebel Letters*, p.2, p.8. Froebel admitted that by his own account his letters, expressed more clearly and fully his views on education than his formal writings, such as *The Education of Man* (1826) or *Pedagogics of the Kindergarten* (1861).

⁵ He had originally founded 'Educational Unions' where fathers were to be enrolled, but he was not satisfied by the responses he received from fathers and men. "Does Herr Froebel mean we shall eventually have women university professors?" asked a (male) member of the audience at a teacher's conference as the assembly broke in laughter. See Zinguer, *Architecture in Play*, p. 20.

⁶ Heinemann wrote: "Having clearly recognized the great vocation of woman as the true, yea, he thought, almost the only, educator of man, Froebel thenceforward devoted all his time and energy to the problem of winning the adhesion of woman to his educational scheme; of interesting and training her in the art, and, as far as feasible, also in the science of education; of persuading her to take up the great task of educating man, and to recognize in the sublime mission and heavenly blessedness of a woman's life." *Froebel Letters*, p. 163.

⁷ Bertha von Marenholtz-Bulow and Mary Tyler Peabody Mann, *Reminiscences Friedrich Froebel*, Boston: Lee and Shepard, 1905, p. 60.

⁸ Froebel had set up a Kindergarten and Training Institute in Hamburg, when another innovative educational institution intersected with the history of the kindergarten and precipitated its closing. The "College for the Female Sex" (*Hochschule fuer das weibliche Geschlecht*), the first institution for higher education for women, founded in Hamburg too, was headed by Carl Froebel, Friedrich Froebel's nephew. This college offered a general curriculum but also courses in 'feminine' areas, such as nursing or teaching, as well as a Kindergarten course following Froebel's principles and methods. The institute's leaders—Jewish liberals and Christian reformers, including Bertha Meyer and Johannes Ronge who would start a few years later the first Froebel kindergartens in London—strove to lead women to financial independence and equal rights. "Froebel" being the same last name of the two institutions' leaders, led the authorities to think the college and the Kindergartens were related.

⁹ See "Friedrich Froebel, "Die Kindergarten in Amerika" in Helmut Heiland, ed., Friedrich Wilhelm August Froebel, (1782-1852) Baltmannsweiler: Schneider-Verl. Hohengehren, 2002, pp. 252-53.

¹⁰ For detail see, Katja Munchow, "The relationship between the Kindergarten Movement, the Movement for Democracy, and the Early Women's Movement in the Historical Context of the Revolution of 1848-49, as reflected in *Die Frauen-Zeitung*", *History of Education* 35, No. 2, 2006: pp. 183-92.

¹¹ She was sixteen when her father, Heinrich Christian Meyer, and sisters were among the founders of the college for women in Hamburg, under the direction of Carl Froebel. Her older sister, Bertha married an ex-communicated priest, Johannes Ronge, who was also among the founders of the college. They moved to London where Bertha founded three kindergartens in 1851, one in Manchester (1859) and another in Leeds (1860). Margarethe, Bertha's younger sister, married a German émigré she met in London, Carl Schurz, who would later become a prominent member of the Republican Party, a senator and minister of the Interior. Margarethe founded the first kindergarten in the United States, at Watertown Wisconsin, where she used her sister's Bertha manual "Practical Guide to the English Kindergarten."

¹² See Elizabeth Palmer Peabody, "Origin and Growth of the Kindergarten," in *Education* 2, no. 5 (May 1882), pp. 522-23.

¹³ Luise Levin (1815-1900) joined Froebel's training institute in 1849, became Froebel's assistant and second wife in 1851, a year before his death in 1852. She never remarried, nor did she have children, and dedicated herself to his legacy

and to advancing the cause of the kindergarten to the end of her life. Baroness Bertha von Marenholtz-Bulow (1810-1893) met Froebel in 1849. When she realized Froebel's play activities with children embodied an actual education, she embarked on the study of Froebel's principles and became his chief advocate throughout Europe. She wrote numerous books about Froebel – *Woman's Educational Mission: Being an Explanation of Friedrich Froebel's System of Infant Gardens* (1855), *The Child and Child-Nature* (1868), *Reminiscences of Friedrich Froebel* (1876), and *Hand Work and Head Work* (1883).

¹⁴ Fletcher Harper Swift, *Emma Marwedel 1818-1893: Pioneer of the Kindergarten in America*, University of California Publications in Education. Volume 6, No. 3, pp. 139-216. Berkeley, California: University of California Press, 1931.

¹⁵ The pamphlet she published upon her return in 1868 received a five-page review by Elizabeth Peabody in Harper's Magazine, in 1870. See Elizabeth Peabody, "Industrial Schools for Women," Harper's New Monthly Magazine, 40, May 1870, pp. 885-891.

¹⁶ Peabody said about Marwedel: "She inspired me with the courage to make it the main object of the remainder of my life to extend the kindergarten of my own country." Swift, *Emma Marwedel*, p. 153.

¹⁷ Fifty years before the criticism of Austrian culture by Adolf Loos and at least 60 years before the inclusion of such daily rites into 'clean' modernist spaces, Marwedel advocated that all public institutions should introduce daily bathing, as well as daily walks outdoors and daily gymnastics. See Swift, *Emma Marwedel*, p. 152.

¹⁸ Her kindergarten was opened in connection with her School for Physical Culture in D.C., educating among others the three children of James Garfield, who was to become president of the United States. By 1873 she had 50 pupils studying five days a week for 4 hours each day. The school prospered, educating 95 students from ages three to eighteen years old, and employing six assistants most of whom versed in the Froebel curriculum.

¹⁹ See Vincent Scully, "Frank Lloyd Wright and the Stuff of Dreams" in *Perspecta*, Vol. 16, 1980, pp. 8-28, 31, and Norman Brosterman, *Inventing Kindergarten*, New York: Harry N. Abrams, 1997.

²⁰ *The Paradise of Childhood: A Manual for Self-Instruction in Friedrich Froebel's Educational Principles, and a Practical Guide to Kinder-Gartners* was a manual of instructions to Froebel's system written by Edward Wiebe and published by Milton Bradley as early as 1869.

²¹ Emma Marwedel, *Conscious Motherhood; or, The Earliest Unfolding of the Child in the Cradle, Nursery, and Kindergarten*, Chicago: The Interstate Publishing Company, 1887, p. 272.

²² *Ibid.*, p. 225.

²³ *Ibid.*, p. 268.

²⁴ *Ibid.*, p. 269.

²⁵ *Ibid.*, p. 269.

²⁶ Kate Douglas Wiggin and Nora Archibald Smith, *Froebel's Occupations*, Boston and New York: Houghton & Mifflin (1896). The book detailed Occupations such as Perforating, Sewing, Interlacing and Peas Work, and then added such activities as Freehand and Nature Drawing, Circular Drawing and Paper Cutting, which were not originally described by Froebel, but were deemed important by Emma Marwedel. In the early 1880s, members of the North America Froebel Institute welcomed changes and adaptations to the rigid Froebel system, greatly based on rigid stereometric principles, and adopted Marwedel's proposal to embrace the curved line since it was present in all natural forms – animal and vegetal.

²⁷ Friedrich Froebel, *Pedagogics of the Kindergarten, or his Ideas Concerning the Play and Playthings of the Child*, translated by Josephine Jarvis New York: D. Appleton, 1895 p. 146; also quoted in Wiggin and Smith, *Froebel's Occupations*, p. 293.

²⁸ Wiggin and Smith, *Froebel's Occupations*, p. 295.

²⁹ Friedrich Froebel, *Education of Man*, Translated by Josephine Jarvis, New York: A. Lovell and Co., 1885 p. 74, also quoted by Wiggin and Smith, *Froebel's Occupations*, p. 295.

³⁰ Wiggin and Smith, *Froebel's Occupations*, p. 303.

³¹ Ibid., p. 308.

³² Wiggin is quoting Baroness von Marenholtz-Bulow, no source given, *Froebel's Occupation*, p. 297-8.

³³ Ibid., p. 298.

³⁴ Ibid., p. 290.

³⁵ Ibid., p. 291.

³⁶ Kate Douglas Wiggin, *My Garden of Memory: An Autobiography*, Boston and New York: Houghton Mifflin Company, 1923, pp. 117

³⁷ Wiggin and Smith, *Froebel's Occupations*, p. 291.

³⁸ Henriette Schrader, "Girlhood Days at Keilhau," in *Kindergarten Magazine, Monthly Text Book of the New Education*, Vol. VIII, No. 5, Chicago, 1896, p. 325.

³⁹ Henriette Schrader-Breymann and Erika Hoffmann, *Henriette Schrader-Breymann: Auszüge aus ihren Schriften*, Langel salsa: Beltz, 1930, p. 160 Translation by Ann Taylor Allen, *The Transatlantic Kindergarten: Education and Women's Movement in Germany and the United States*, New York: Oxford University Press, 2017, p. 96.

⁴⁰ Agnes von Zahn-Harnack in her account of the Women's movement, *Die Frauenbewegung* (1928), pp. 76-77, quoted in English in Irene Stoehr, "Housework and Motherhood: Debates and Policies in the Women's Movement in Imperial Germany and the Weimar Republic" in Gisela Bock and Patricia Thane, *Maternity and Gender Policies: Women and the Rise of the European Welfare States 1820s-1950s*, Routledge, 2012, p. 222.

⁴¹ Ibid.

⁴² Ann Taylor Allen explained: "Far from trusting to mere instinct, Froebel insisted that child-nurture was a complex science, best taught in a specialized training institution attached to the kindergarten itself. In the role of educated mother—whether to the biological family or to the spiritual family of the kindergarten—Froebel saw the fulfillment of women's demand both for responsibility and for respect." Ann Taylor Allen, "Spiritual Motherhood: German Feminists and the Kindergarten Movement, 1848-1911," *History of Education Quarterly*, Volume 22 no. 3, Special Issue: Educational Policy and Reform in Modern Germany (Autumn, 1982), pp. 322

⁴³ Mary Lyschinska, *Henriette Schrader-Breymann: Ihr Leben aus Briefen und Tagebüchern zusammengestellt*, Berlin and Leipzig, 1922, vol. I. p. 64, 86. Translated and quoted in English in Ann Taylor Allen, "Spiritual Motherhood," pp. 323-24.

⁴⁴ Kate Douglas Wiggin, "The Training of Children," in *The Woman's Book: Dealing Practically with the Modern Conditions of Home-Life, Self-Support, Education, Opportunities and Every-Day Problems*, New York: Charles Scribner's Sons, 1894, p. 320.

Tamar Zinguer is an architect, educator and historian whose overall work is concerned with the pedagogy of design through history and across scales, from the level of the object to the landscape. Her book projects position architecture within larger cultural fields and discourses. *Architecture in Play: Intimations of Modernism in Architectural Toys*, (UVA Press, 2015) explores how breakdown and collapse have positioned toys as tools that advanced the constant reevaluation of spatial design. Forthcoming is *Sandbox: An Architectural History* (MIT Press, 2021), which follows the ubiquitous space from its beginnings in 19th Century pedagogy, to its rebirth in 1970s as a significant trope in art. Zinguer was trained at The Cooper Union, Technion, and Princeton University, and has been Associate Professor of Architecture at Cooper Union since 2006.