

Pioneers of Sensory Development Education: Christof Drexel and Hugo Kükelhaus

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Abstract

Two German pioneers of sensory development education, Christof Drexel (1886-1979) and Hugo Kükelhaus (1900-1984) pursued methodical investigations into perceptual principles of cognition and design in order to discover the ways in which aesthetic principles can develop and guide sensory response. Drexel and Kükelhaus traveled parallel investigative paths, both merging formal aesthetic practices with perceptual psychology. It was not until 1950, when these visionary thinkers finally met in person, that they joined forces to present their discoveries which determined that experiences are momentary intersections between internal and external realities, and are intrinsically intertwined in the deepest levels of consciousness, publicly. Both Drexel and Kükelhaus believed in the value of using the senses as pedagogy and that they should be integrated into every level of education. Correspondence between Drexel and Kükelhaus after 1950 illuminates the theoretical paths and applicative forms generated through the interplay of experimental psychology and applied aesthetic practice. This paper provides insights into the artistic and scientific dynamics based on Drexel's examination of archetypical imagery and the psychic line, and the sensory development applications designed by Kükelhaus.

Keywords: Autodidacticism, Design environments, Models of design processes, The sensuous idea, Intuition

A Sense of Connectedness

Christof Drexel (1886-1979) and Hugo Kükelhaus (1900-1984) were two men, 14 years apart in age, who travelled virtually parallel paths as artists, educators, and theorists until 1950, when they finally met. Since both Christof Drexel (Figure 1) and Hugo Kükelhaus (Figure 2) are not well known in the English-speaking world, a short outline of their theoretical paths and applicative forms generated through the interplay of experimental psychology and applied aesthetic practice is needed. Drexel grew up in the charming town of Königstein, near Frankfurt along the Rhine River, where artists, intellectuals and the wealthy gathered to partake in the healthy air, natural spring water, and exquisite local wines. He studied medicine and architecture in Munich for one year before switching his focus to art. His early subjects, primarily people, animals, and landscape, were aligned with the German Post-Expressionistic Movement (Das Bundesarchiv, 2017). However, after WWII, and the shift toward a greater internalization, his paintings became more abstract in nature. His work ultimately evolved into a concentration on physiognomies and human representations so viewers could observe human behaviors and emotions as social-critical content (Günther, 1977). In contrast, Kükelhaus lived near the city of Essen and grew up as the oldest of five children, all of whom were connected to the crafts because his father was chairman of the Carpenter's Association. In 1919, Kükelhaus finished his Abitur (certificate of general qualification for university entrance) and began his apprenticeship as a carpenter and travelling journeyman. In 1925, he received his Master Carpenter's Certificate

and as a natural-born pedagogue, began lecturing to common carpenters on the subjects of “Proportion, Harmony and the Golden Section” using only a sunflower and a dandelion as objects for demonstration (Schenkel, 1991). Drexel, on the other hand, changed his career path, traveling to Paris (Academy Julian), Rome, and London before settling in Hagen in 1911 to join avant-garde art patron, Karl Ernst Osthaus and the Folkwang Circle, known for espousing the interconnection of the arts and interdisciplinary teaching, learning and producing. Osthaus envisioned a Gesamtkunstwerk that would transform Hagen, a city plagued by all the ills of industrialization, into a model of social reform. This group of artists were charged with the task of discovering the defining principles of form and the psychological effects that art and design could have on reinvigorating this industrial region. Drexel searched for insights into the configurative process of image-making in the art of children and the mentally ill (Petzet, 1950). The experience of anxiety and fear became a dominant theme for Drexel who became increasingly interested in choric drawing (from German Chorisches Zeichnen), in which patients’ drawings became a form of creative therapy that creates a more positive self-view. When Carl Jung heard about this technique, he was very interested, because of his own goal to deepening this aspect of physio-psychic group therapy. In contrast and continuation, Kükelhaus started to pursue methodical investigations into perceptual principles of design in order to discover the ways in which aesthetic principles of design can develop and guide sensory response (Luescher, 2015). Constructive Perception is grounded in the understanding that mental action and perception share a common representational substrate which mediates between the two through inference and associative operations. Eventually Kükelhaus’s focus became centered on the aesthetic dimension as an essential quality of auto-didacticism and finding deep meaning in everyday forms (Willi, 1995). The result became *Spielzeug Allbedeut* (All Things All Meanings, 1939), first toys for infants based on the observation of the need for development of opportunities to enhance the creative arrangement of simple to complex forms. However, it was not until the 1950’s that these two pioneers of sensory education were introduced to each other, which gave rise to an intellectual correspondence on *Mensch zu Sein* (To Be Human) which led to a deep friendship. Many years later, when Drexel passed away, Kükelhaus wrote a eulogy for him entitled *Den Menschen Ermöglichen* (Allow to Be Human).

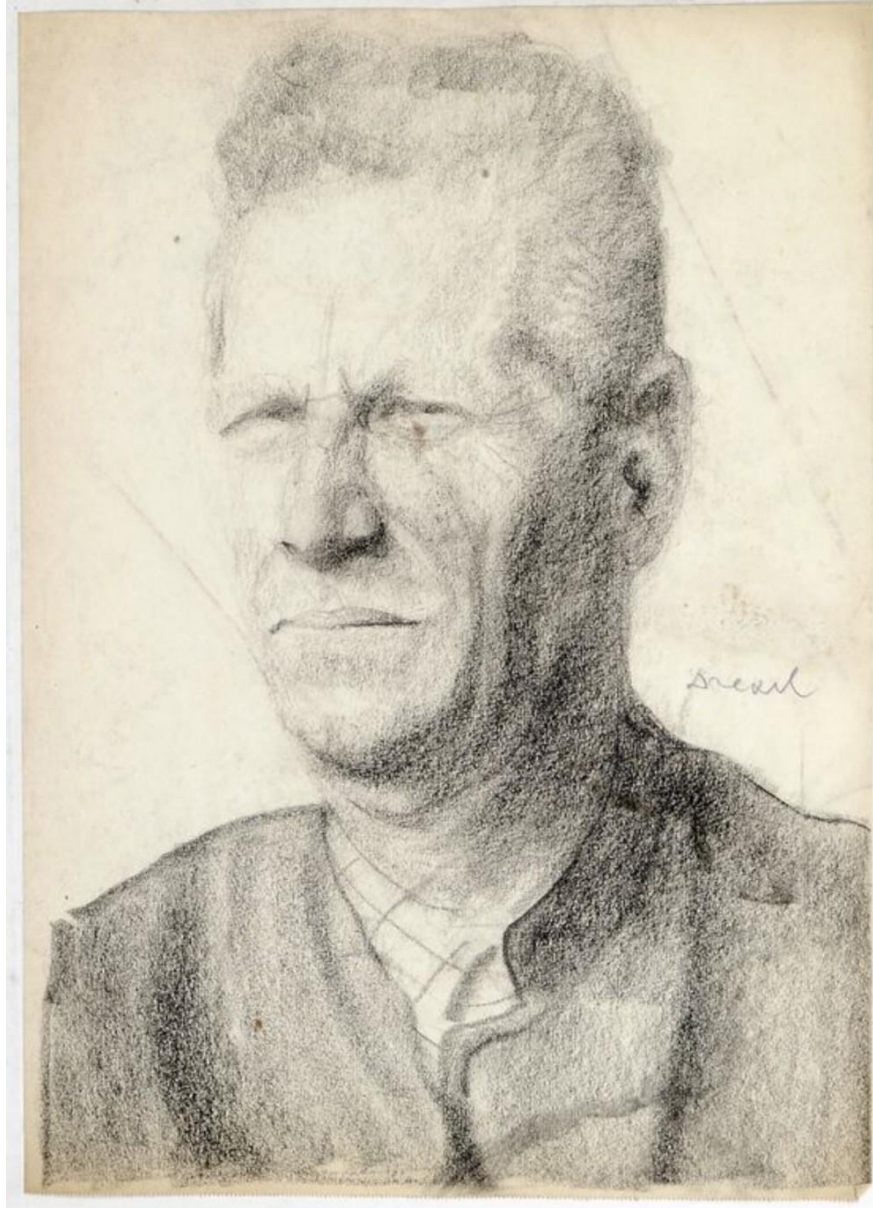


Figure 1: Christof Drexel self-portrait, undated. Source: Unknown.



Figure 2: Hugo Kükelhaus self-portrait, undated. Source: Unknown.

Chorische Zeichnung

Drexel and Kükelhaus's interest in the psycho-physiological substratum of learning, the *erfahrbar* (can be experienced), led them to experimental investigations into creative consciousness and sense-based learning (Luescher, 2006). There are two ideas: Drexel's Chorische Zeichnung (choric drawing), an experimental method of whole body, whole mind restorative physiotherapy, and Kükelhaus's wooden toys, *Greiflinge* (there is no exact translation word for it but teething and rattles comes to mind), for infants and toddlers which help foster the comprehension of deeper and subtler patterns within the conscious experience as an analogue to forms in the natural environment where the endless interplays and variations of shape continually stimulate curiosity (Figure 3).

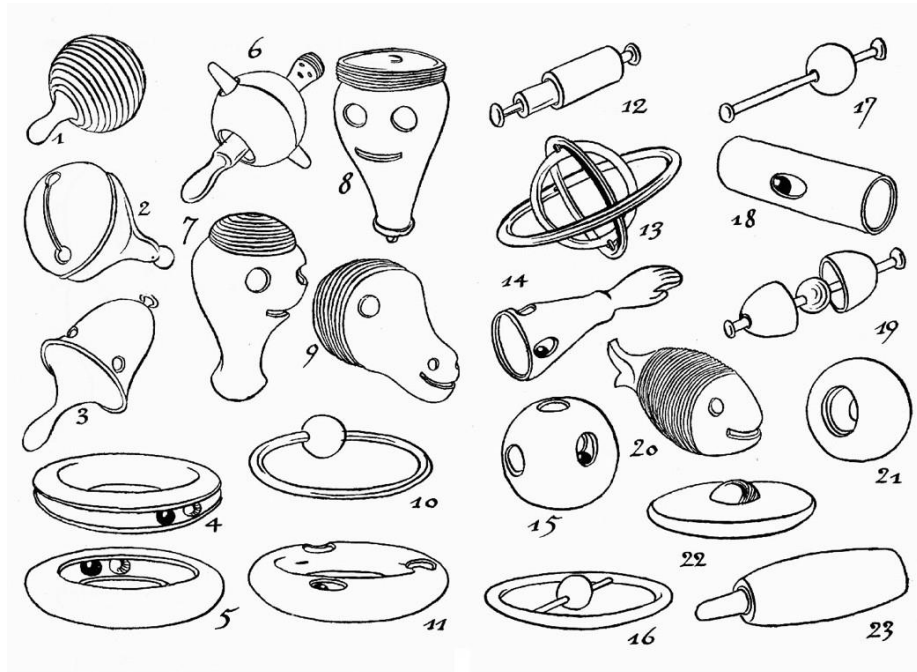


Figure 3: K kelhaus's sketch of prototypes for twenty-three "first toys" for infants, 1939. Source: Hugo K kelhaus Archiv, City of Soest, Germany.

Much of the correspondence between Drexel and K kelhaus has reference, in some form, to the choric drawing Drexel developed with the help of the Folkwang Circle. Choric drawing initiates an inferential process of exchange between mind and body that becomes manifest through visualized gestures (Figures 4 and 5). Drexel and K kelhaus believed that formal sense pedagogies should be integrated into every level of education. For instance, Drexel wanted to make it clear that the cultivation of sight should be considered a discipline, a responsibility, that needs to be consciously pursued. This type of sight goes beyond the sight of conventional reality by focusing on intuition, feeling and the psyche. Similarly, K kelhaus lamented the dearth of opportunities to use our bodies, to turn off and repress our senses. Over hundreds of years people have been replacing experience with knowledge, living in a world of artifice. Per Drexel's writing, the essence of art is not the aesthetic and decorative, but rather its capacity to heal. In Drexel's mind occurs when a person reconciles with and becomes at one with the world. K kelhaus's interest and support of choric drawing was instrumental in its promotion and recognition for art as therapeutic practice, as well as a plea for active sensory learning.



Figure 4: Postcard with a drawing from Kükelhaus titled *Träumling mit Blütenzweig* (child with a Blossom Branch), uncertain about date (1960), sent to Drexel which highlights Kükelhaus's notion of aesthetic principles of design and sensory learning. Source: Hugo Kükelhaus Archiv, City of Soest, Germany.

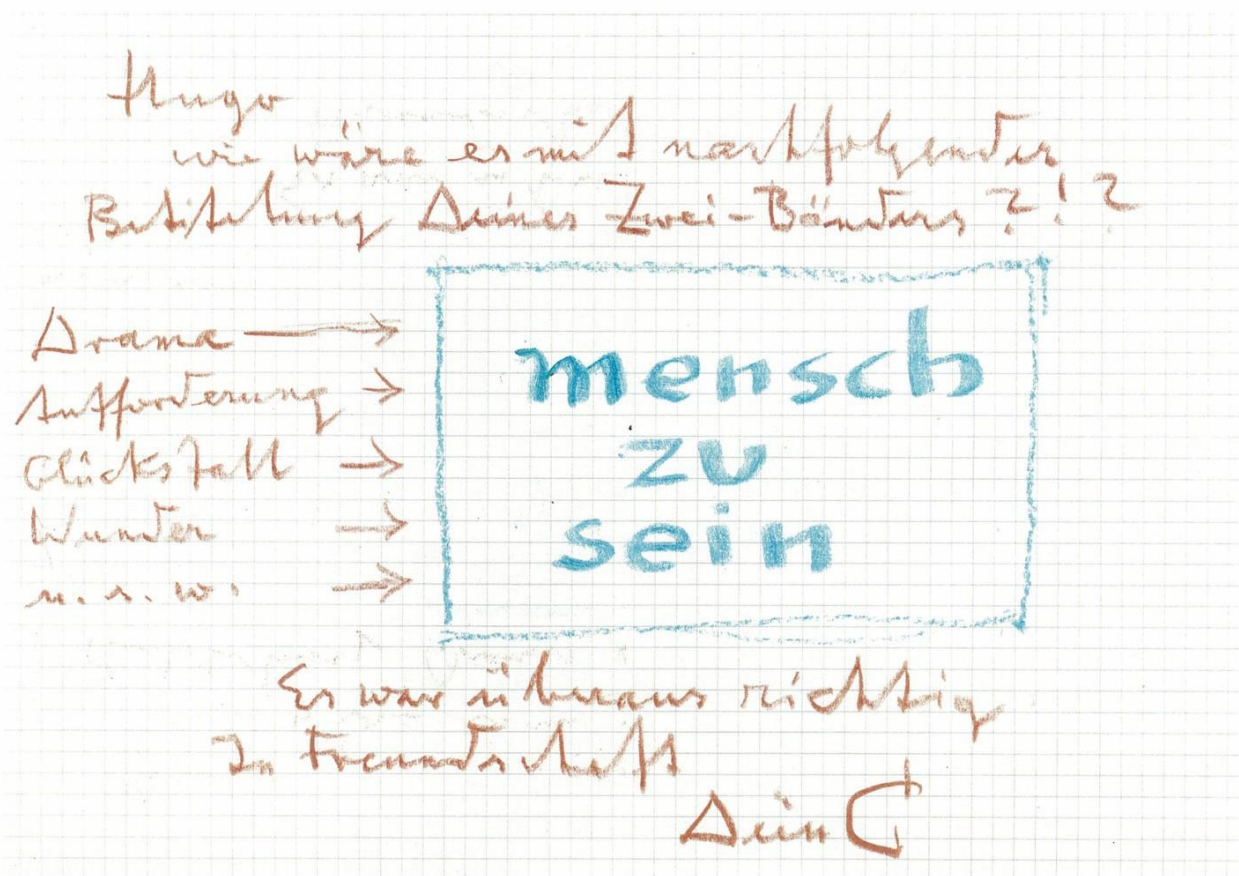


Figure 5: Correspondence from Drexel to Kükelhaus with Mensch zu Sein (To Be Human), circa 1969. Source: Hugo Kükelhaus Archiv, City of Soest, Germany.

Between 1911 and 1920 Drexel created a series of emotionally impacting charcoal drawings which explore the expressive qualities of primary visual elements. In these works, lines, dots, x's, circles, and space communicate complex familial and social relationships (Figure 6). The child appears in Drexel's work as both demonic and divine. This inwardly directed process of drawing, practiced by Drexel, emerges as a primal sketch, rooted in a universal schema. Drexel's experimentation into a line as a transcribed gesture, led him to develop a form of restorative group therapy. He described his method in 1950: "The choric drawing is guided by development, in which the visible formation is to be assessed only as a passage or a metamorphosis. In a deliberate renouncement of the standards of marketable success, the aim is to free oneself up for personal immediacy in the sense of an autogenous training. The natural interplay of the gifts and the free physical mobility of the process generally result in a sociable solitude from which the thematic domination and personal variation in mutual fertilization comes to unity" (Wankmüller, 1979). In Kükelhaus's work, he refers to choric drawing as Symmetry Drawing (Symmetrischen Malen), a longing for the discovery of the body which must be seen within universal dynamics because symmetry (from the Greek: agreement in dimensions, due proportion, arrangement) refers to a sense of harmonious and beautiful proportion and balance (Figure 7). Human feelings, properties, and characters, along with forms of facial expressions, gestures, body language and movement in space (as in miming), can all be recorded as a technique of symmetry drawing. Only in the conditions of symmetry, where all things are equal, can invariance be experienced.

Kükelhaus explains this as a decisive step in which following generations will discover the body as a dynamic universe (also known as universal dynamics). People are now starting to use the external universe to discover themselves: to see the world as a process, and experience as momentary intersections. Symmetry drawing brings the movement of people and their view of their environment into one composition.

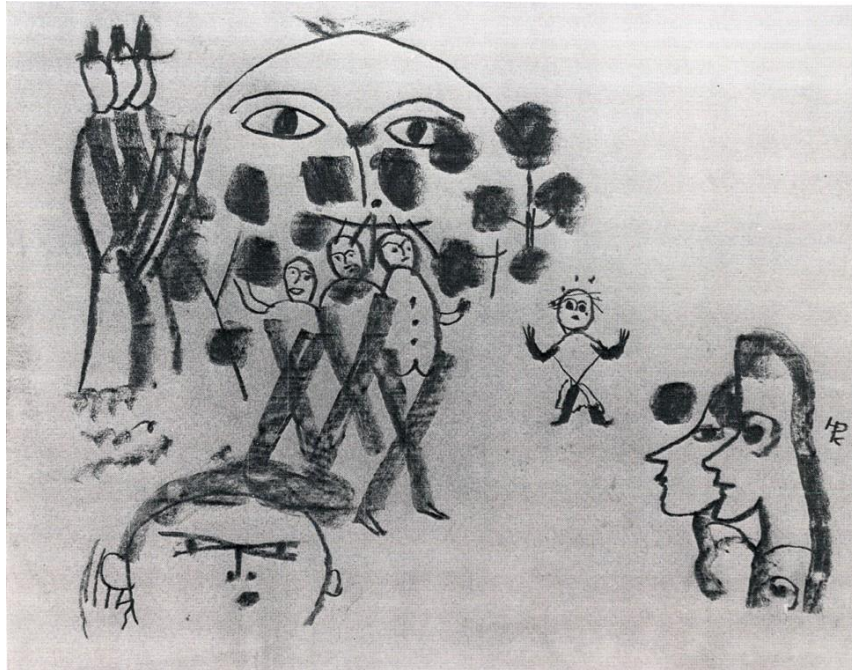


Figure 6: Drexel's undated drawing, an eclectic composition of three men, three clowns, contempt and longing. What do the children see? What do they hear? Source: Unknown.

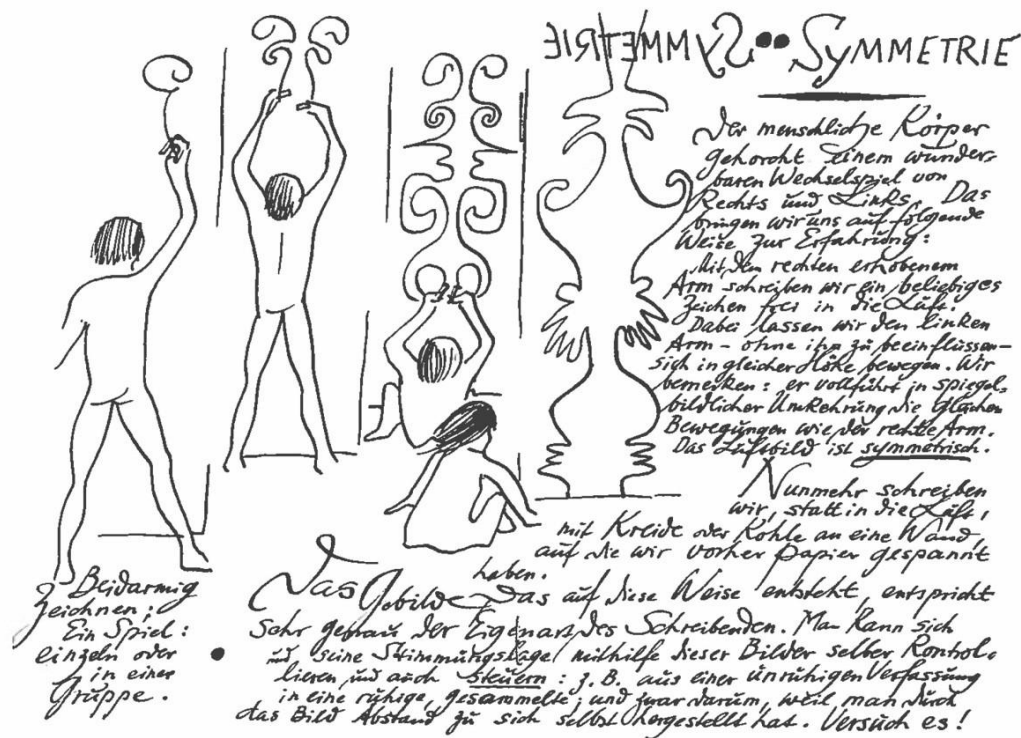


Figure 7: Kükelhaus's visual explanation of symmetry drawing. Source: Kükelhaus, H. (1980) *Mit den Sinnen leben*. Aarau, Switzerland: Sauerländer

The human body is normally bilaterally symmetrical with a single, vertical axis, as seen in the right and left hands with respect to the center of the body. This relationship is deeply and complexly anthropomorphic, and provides a schema for the recognition of the faces and bodies of others, as well as one's own self-image. The bilateral symmetry of the organization of bodies also provides the conditions for upright movement, and the aesthetic and metaphorical values balance a fascinating interaction between right and left, which directly relates to on-going studies of the split-brain: the left hemisphere makes up stories to explain what the right hemisphere is up to. It also refers to the *interpreter phenomenon* and other findings, which indicate that the right hemisphere is inventive and interpretive, while the left brain is more logical and literal (Gazzaniga, 1998). Presumably Kükelhaus believed haptic (from the Greek, meaning to touch) motion, as in drawing, creates the ability to mirror ones-self. From his perspective, Kükelhaus (1980) saw a direct correlation between simultaneous movement of the right and left hands as a mental process that is able to divide an object into two mirror images (Figure 8).

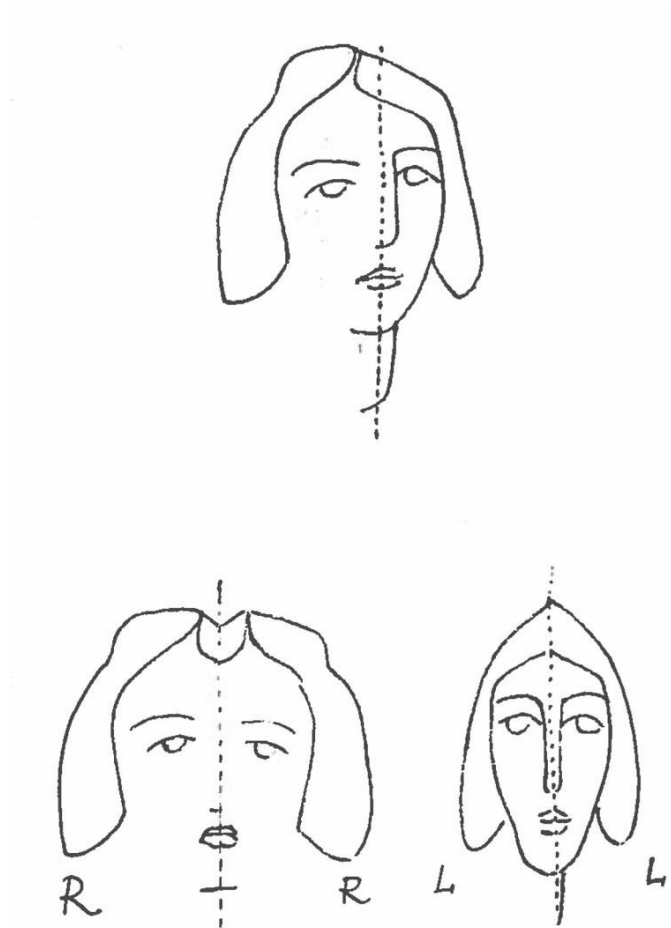


Figure 8: Kùkelhaus (2000) playing with asymmetry and symmetry based on the interpretation of the left and right side of faces. Source: Kùkelhaus, H. (1980). *Mit den Sinnen leben*. Aarau, Switzerland: Sàuerlander

Today, the idea of choric drawing has emerged as relational drawing, defined as a way of approaching the experience of drawing that allows us to feel and explore our relationships to ourselves, the world and others (Figure 9). This method is taught by the Drawing Lab at variety locations like at the Whitney Museum of American Art. “We begin with gentle movements, drawing our attention to our sensations, attending to the deep relationships of our own bodies: gravity and pressure in contact with the floor; a push generating an opposing lift or turn; lengthening, shortening; how these postures are interdependent. We gently explore the physical relationships that express themselves in how we move, breathe, and feel, and then in turn open these relationships up to seeing and resonating more fully with the movements of the world and other people” (Drawing Lab, 2017).

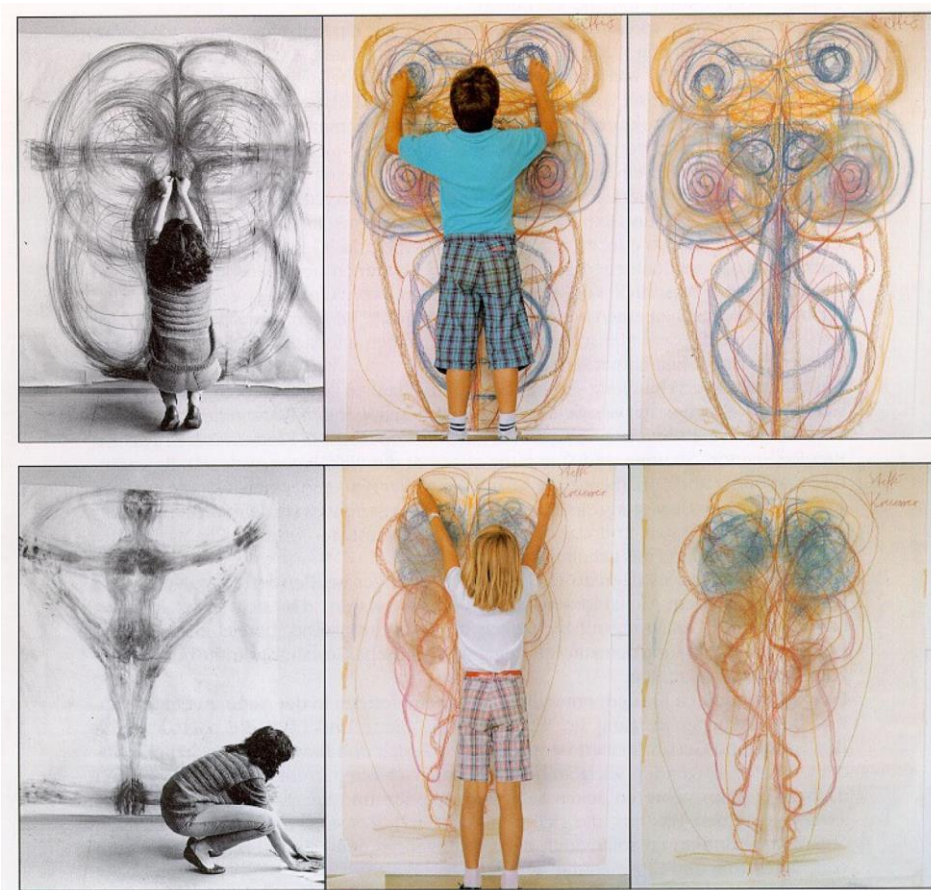


Figure 9: Children demonstrating the practice symmetry drawing. Source: Workgroup Organism and Technology (1976).

1975 Exempla

In the 1970s, Drexel focused primarily on the theme of *Formen des Menschseins* (Forms of Human Beings). In 1975, the artist showed, for the first time, his film *Maske und Gesicht* (*Mask and Face*) at the special exhibition Exempla in Munich, an International Crafts Fair, organized in 1970 by the Chamber of Crafts for Munich and Upper Bavaria. At the same Crafts Fair, Kükelhaus presented his installation “Field for the Development of the Senses” for the first time. An antecedent version titled “Field for the Senses”, was on display at the German Pavilion in the 1967 World’s Fair in Montreal. There were 12 stations selected from “Field for the Senses” placed in a gallery within the pavilion: roundabouts, swings, spring boards, rolling balls, swinging ropes, loops, a bicycle that drove a water vortex, a bell tower and more. Both children and adults gravitated toward these unusual play stations. Kükelhaus himself wrote the following for the EXPO 67 Handbook: “The principle demonstrated here, the discovery and development of which can be attributed to Goethe, has two very particular consequences. One is that art education must be recognized and integrated as a part of a systematic training for the ability to experience. This is not concluded with the maturation of the organism but is pursued and contributes to the conceptual processing of experiences, which begins at the same time as puberty. The second principle is that this processing takes place primarily in vocational schools and schools of applied arts, as well as community colleges and museums, because the experience

of art is integral in the great distinction of the organism's capability to experience life" (Kükelhaus and Zur Lippe, 1982). The *Field for the Development of the Senses* grew to some 40 experimental and play stations, and then migrated to numerous locations in Germany, Switzerland and abroad. The stations are intended to offer visitors an opportunity to experience – in organic proximity – the laws of external nature (oscillation, gravitational force, polarity, reflection, color, etc.) and their interrelationships with the physiological laws of their internal nature (sensorial processes and bodily movements). These fields serve to extend a person's capability to experience with their senses, so they may to experience things in a different way: as eyes see – ears hear – noses smell – skin feels – fingers touch – feet understand – hands grasp – the brain thinks – lungs breathe – blood pulses – the body swings (Figure 10). For, as Kükelhaus added: "It is not the brain that thinks but the human that experiences with their skin and limbs!" (Kükelhaus, 1978).

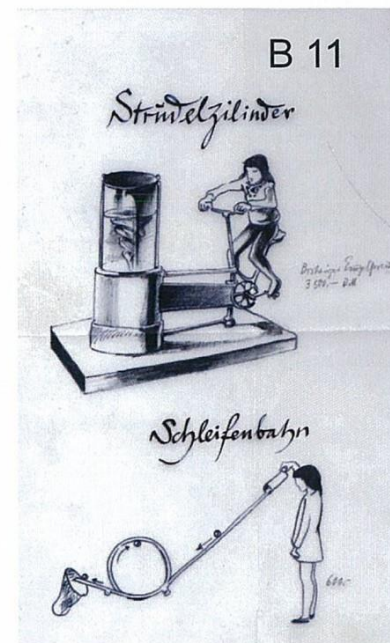
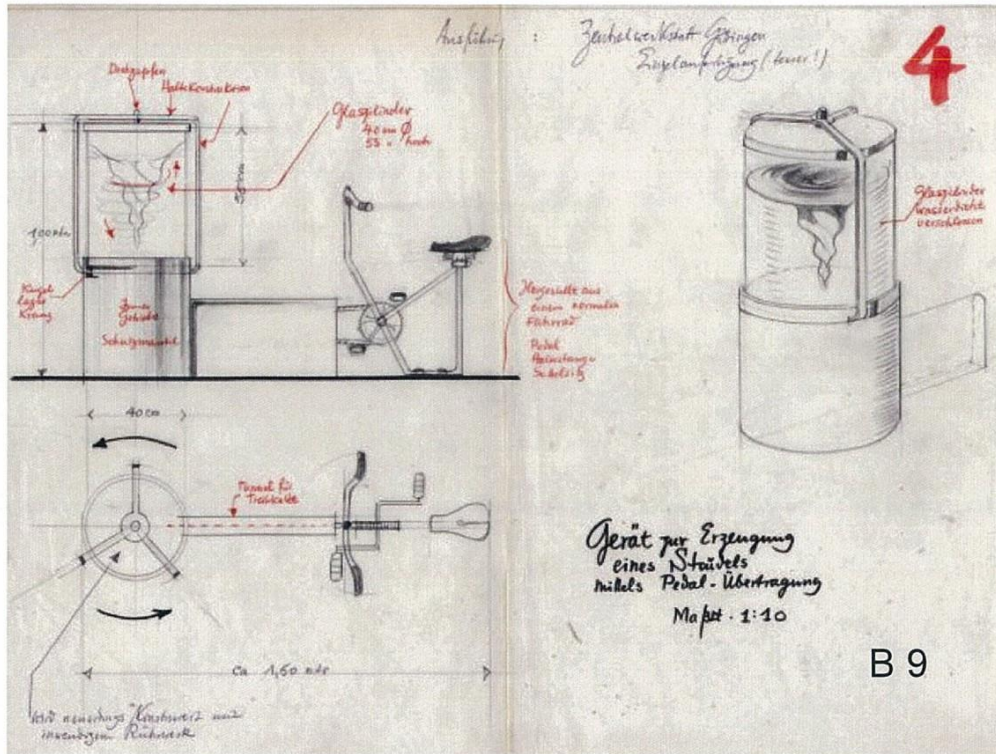


Figure 10: Hugo Kükelhaus demonstrated his swirl play station at the Expo'67 in Montreal. Source: Hugo Kükelhaus Archiv, City of Soest, Germany.

Currently, Drexel's and Kükelhaus's forms of sensory education are being further explored by Tommaso Lana's (2017), an Italian teaching artist and educator trainer that offers workshops on rediscovering and heightening one's sensory perception, *Embodied Learning*, where people use their senses at work, and in everyday life, in a distinctly mindful way. Lana's research focus on how to nurture self-guided learning experiences in a very hands-on way through sensory perception, motion, and body awareness mainly targets adults who work with and for young children. Like Drexel and Kükelhaus, Tommaso Lana believes every single child's identity is not only shaped by his/her brain, but by the collective whole of all his/her muscles, nerves and organs. A MOMA exhibition from 2012, *Century of the Child: Growing by Design 1900-2000*, acknowledged the importance of children experiencing for themselves the laws of external nature directly, and with all their senses.

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Translation

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