Architronic

J.L.M. LAUWERIKS AND K.P.C. DE BAZEL: ARCHITECTURE AND THEOSOPHY

Susan R. Henderson
Syracuse University

> The modernist time of nationalism then solved this problem by moving off in two directions at once.. . . it sets off in search of its own ancient spirituality; but in doing so it takes a modernizing leap forward, one which will break beyond the history of the merely recent into an authentic future. . . it will move backwards into the future with its eyes fixed sorrowfully upon the past. . . .
>
> Terry Eagleton[1]

In *The Modulor* Le Corbusier articulates a preoccupation with questions of harmony and proportion. "What is the rule that orders, that connects all things? I am faced with a problem that is geometrical in nature; I am in the very midst of a phenomenon which is visual; I am present at the birth of something with a life of its own."[2] Pondering these matters, he recalls how sometime in 1909 he visited a hilltop villa, an unusual building based on some inscrutable proportional system authored by its architect. A man identified as the gardener explained the house saying "This stuff, you see, that's complicated, all these twiddly bits, curves, angles, calculations, it's all very learned."[3] The house was identified by Reyner Banham years later as that of Johann Thorn Prikker, the Theosophist painter. It was built for him by the patron Karl Ernst Osthaus and designed by J.L.M. Lauweriks.[4] Part of the small colony "Hohenhof," the house was perhaps the most complete expression of his Theosophically-based, systematic method of design. Le Corbusier was likely told of the settlement by Peter Behrens during his stay in the latter's studio. His encounter with Lauweriks's work was prescient, at the very least. Some propose that it had a lasting influence on his own propositions regarding modular systems.[5]

Le Corbusier shared an interest in geometric systems with many of his colleagues. It was an era fraught with questions regarding the meaning of contemporary life and the relationship between the immediate past and the future. Arising from this search millennial formulations sought continuity with tradition or an idealized past while jettisoning what was viewed as the crass materialism of bourgeois culture. This was a regressive modernism, colored by longing for a lost culture as much as by revolutionary rhetoric. The early and active Dutch Theosophical movement represents one chapter in this history.

In 1885 the architect J.L.M. Lauweriks (1864-1932) worked alongside K.P.C. de Bazel (1869-1923) in the office of the Dutch master P.J.H. Cuypers.[6] For neither of the young men was work in Cuypers's employ the primary aesthetic compass in their lives. Like many of their generation Lauweriks and de Bazel viewed the approaching century with a revolutionary spirit, and they were increasingly impatient with the narrow historicism proffered by their mentor. The two stayed at Cuypers's employ for eight years, from 1886 to 1895, until their Theosophical beliefs led to an inevitable collision with Cuypers's Catholicism. In 1895 they opened their own office.

By this time Lauweriks and de Bazel had already made their first foray into the cultural debate, joining an anarchist group that produced the journal *Licht en Waarheid* .[7] The anarchists promoted a kind of radical laissez-faire and an intensely individualist and inward-looking art. In numerous woodcuts contributed to the journal, the two attempted to define a new symbolic and iconographic language dealing with ethical and political issues. Then in 1894 they left the anarchists to join the Amsterdam Theosophical Society, a year later founding a special chapter called the Vâhana Lodge, the artists' wing of the Society. De Bazel served as its first president and Lauweriks as secretary. Having studied the precepts of Theosophy the two came to believe that the sea change of modernity signaled an awakening of cosmic consciousness.

> Art is the performance of the cosmic drama in which by means of pictures as symbols the cosmic event is shown in deep convincing acts. The cosmic story, the cosmic drama, the cosmic statue, the cosmic painting, the cosmic building, in short, the harmony, the whole cosmos put together in one aspect, like a small photograph which shows the whole scene."[8]

Their role in spurring this consciousness was to make art with a spiritual harmony that was intuitively understood by the viewer. They focused as much on theory as practice in the early years, and in 1897 they introduced a course of study at the Lodge on the subjects of design, art history and aesthetics.[9] Reportedly, the course concentrated on systems of proportion and their Theosophical bases, though not always with reference to architecture. They taught the course to paying students in the room generally reserved for the architectural society "Architectura et Amicitia" at the old American Hotel in Amsterdam.[10] Following the departure of Lauweriks and de Bazel in 1900, the architect and Theosophist H.J.M. Walenkamp carried on with the course through 1902.

In 1898 de Bazel and Lauweriks produced the first issue of another new journal, their joint project, *Bouw-en Sierkunst (Building and Ornament)*. The journal was to serve as a kind of secular mouthpiece for Theosophically-based ideas on art. Its lavish illustrations juxtaposed contemporary art with that of the ancients: images drawn from Assyrian, Egyptian and Persian sources appeared next to works by Jan Toorop and Evgard Munch. In esotericism, and expressionism more generally, art theory coupled a romanticized archaic past with a utopian vision of the future in an alliance against the narrative and scientific temporality of modernity. If the array of art in *Bow-en Sierkunst* was eclectic, the discovery of a consonance among the works was believed to prove their collective truth: sacred immanence inevitably rose to the surface in those traditions that sought communion with the universe.

Figure 1. J.L.M. Lauweriks, "Architectura et Amicitia" calender cover design, 1895.

Meanwhile, Lauweriks and de Bazel worked steadily on a systematic approach to design that could encapsulate a contemporary theory of the universal .[11] They built on Viollet-le-Duc's rediscovery of geometry as a design fundamental, a study followed by others such as August von Thiersch.[12] The millennial aspect of Lauweriks and de Bazel's work was in separating such theories from rationalism, instead linking them to the occult. For them geometry was inherent in nature and rhythm was integral to a larger life force. Together these two comprised an essential functioning unity. Further they proposed that a universal geometrical system would impart to design a rhythmic and harmonious authenticity. Initially the two focused on the ordering principles of geometry and number that were found in musical harmony and natural phenomenon. Rooted in science, but given spiritual significance through the long history of the sacred associated with mathematical constructs, their theory appealed especially to artists associated with Art Nouveau and later expressionism, and its evolution paralleled similar tendencies in many of the art movements of the time, symbolist painting for one. One can follow an early phase in which they evolved a highly symbolic and iconographic language—most notably in their furnishings and woodcuts—then shifted away from this explicit vocabulary towards attempting a direct pathway to enlightenment through abstraction.[13] (fig. 1) The challenge to the architect, as de Bazel and Lauweriks came to believe, was to imbue modern buildings with the essence of the divine without resorting to a naturalistic mode.

Their researches began with classical science. They found that the idea that geometric order is a fundamental aspect of the universe, for example, was consonant with

the cosmology of Pythagoras. Even more compelling was his proposition that the truth of human existence is the occult and not the physical self. In *Timaeus* Plato furthered the Pythagorean theory of rational harmony in the cosmos and posited the concept of the world soul as the basis of ideal numbers.[14] Lauweriks and de Bazel next traced this line of thinking to the work of Vitruvius who proposed that geometry was integral both to character and structure. Forward to the Renaissance when lessons such as the Pythagorean harmony of the spheres became the basis for a deeper meaning inherent in architectural harmony.[15] They also absorbed the work of P. Desiderus Lenz (1832-1928), a Benedictine monk who instituted the so-called School of Beuron. Lenz's attempt to renew Christian art led him to similar studies to the Theosophists', to mysticism and ancient art, in this case of Egypt, Greece and the early Christians. In 1899 Lauweriks wrote a long article concurring with Lenz's belief that the Egyptians provided the authentic wellspring of all art in founding its bases in mathematical law.[16]

Lauweriks and de Bazel's interest in Viollet-le-Duc's studies of Gothic architecture was one they shared with Cuypers.[17] However, while they pursued similar constructs, de Bazel and Lauweriks were estranged from Cuypers's nationalist and materialist philosophy. Through Theosophy they found a way to extend the ideas of Viollet-le-Duc to underscore the importance of architecture and art in establishing the connection of daily life's experience to universal forces. Revealing the divine in human experience does not fundamentally contradict the rational underpinnings of modernity, but tempers it with spiritual significance, they believed. Through an analysis of ancient architecture they had discovered an expression of the sacred order of the universe. Tracing the source of order to that ancient past, they established the ideal of continuity while rejecting historicism. Their Theosophical theory exhibited a reconciliatory tendency that maintained an historical foundation for architectural language as inherited from the nineteenth century, but recast within a rigorist framework.

In its specifics Lauweriks and de Bazel's method incorporated the grid and proportion to reflect harmony and unity in the universe. The imposition of a gridded order was perhaps the most potent aspect of their method, at least it resonated most readily with their non-Theosophist peers.

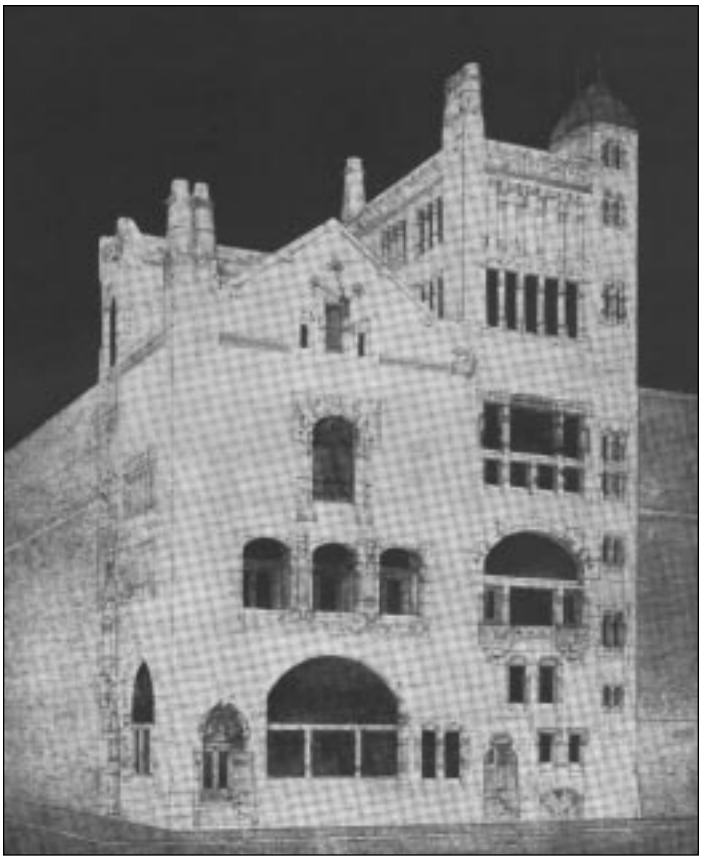

Figure 2. K.P.C. de Bazel, Architects' Association Hall, competition entry, 1897.

Every aspect of a spiritually attuned architecture accorded with a modular interpretation: the plan, spatial relationships and ornamentation. Until around 1903 both men worked primarily with triangulated grids, a system derived equally from Viollet-le-Duc and from the esoteric fascination for the so-called Egyptian triangle.[18] They would revise this system around 1900, replacing triangulation and its diagonally inscribed grid, with the quiet and immovable square, and Lauweriks, with the definitive diagram of a gridded square inscribed with a circle.[19]

In the same years Lauweriks embarked on his career as a writer and teacher. He began in 1893 with an article addressing the subjects of art and architecture in Theosophical terms. Over the next five years, his articles appeared in *Theosophia*, the official journal of the Dutch Theosophical Society, and the professional journal, *Architectura*. Under his editorial direction from 1893 through 1904, *Architectura* functioned as a platform for the discussion of French rationalism, a discussion focused on the systems of geometry and proportion found

in ancient buildings as potential methods for contemporary design.

The significance of de Bazel and Lauweriks's contribution can be measured by the response of their contemporaries. While Lauweriks's contributions remained largely in the realm of theory, de Bazel continued an active architectural practice and had more of an immediate impact. The controversy over the source for H.P. Berlage's revised plan and elevation for the Amsterdam Exchange of 1897 is such a case.[20] In 1895 and again in 1897 Berlage served as a judge in competitions that premiated two of de Bazel's designs, the first for a library, the second for an architects association hall.(fig. 2). In both works de Bazel employed a gridded order to which all elements and details were subordinated. This approach provided a fresh, somewhat abstract discipline to the work, displacing much of the archaeologizing that typically dominated the work of revivalists. In the initial schemes for the Exchange from the mid-1890s Berlage's elevations displayed the typical historicizing incrustations of Cuypers's vocabulary, Gothic architecture revisited rather than transformed. But the later drawings show Berlage's elevations subjected to the discipline of a tightly configured, triangulated grid, with a clear affinity to de Bazel's works. Like them, the walls have become flat and taut, a smooth skin of brick and stone.(fig. 3) The modular continuum is clearly legible. Berlage's familiarity with de Bazel's approach did not rest on these designs alone. In the small society of professionals their paths crossed constantly. Along with Lauweriks both were active members in *Architectura et Amicitia* and they entered into professional debates in print. Lauweriks, for example, wrote reviews of Berlage's Exchange for *Architectura*.[21]

Berlage's fascination with geometric systematization was motivated by much the same drive as his young colleagues: to provide a discipline that connected the new architecture to the monumental works of the past to find a path leading away from naturalism. In the introduction to his book *Grundlagen und Entwicklung*, a transcription of four lectures given at the Zurich Kunstgewerbemuseum in 1907, Berlage cites triangulation as the module common to the major architectural traditions from the Greeks to Gothic architecture.[22] He establishes his argument for a timeless standard of measure through Semper, Hegel and Viollet-le-Duc. And he notes that Dutch architects had developed such methods. He cites Lauweriks's work at Düsseldorf Kunstgewerbeschule [School of Arts and Crafts] as the most evolved, and he reproduces examples of student work, in particular a project by Adolf Meyer.[23] To whatever degree Berlage's later scheme for the Exchange was indebted to Lauweriks or de Bazel, its history elucidates the importance of an ascription of universal meaning to geometry, and the desire for a profundity beyond the particularities impelled by rationalism.

In 1900 Lauweriks and de Bazel had a parting of ways. By this time de Bazel's chronic illness had worsened and the partnership was dissolved when he moved to the country to convalesce. Meanwhile, Lauweriks entered the period of his greatest influence as a teacher and architect.

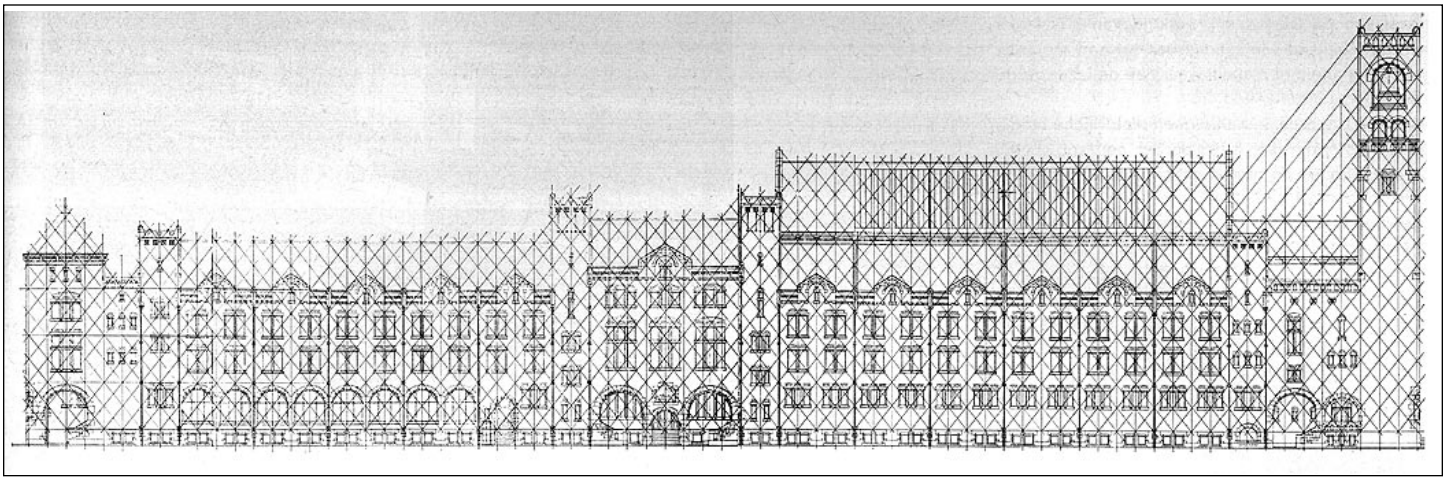

Figure 3. H.P.P. Berlage, Amsterdam Stock Exchange, west facade, as revised in 1898.

Peter Behrens and Lauweriks

> At the *Kunstgewerbeschule* in Düsseldorf, for example, all design is worked out according to a similar but very stringent method as directed by the Dutch teacher Lauweriks. Indeed he takes it farther than anyone else.
>
> H.P. Berlage, 1908[24]

The early architectural projects of Peter Behrens through 1903 drew heavily from Viennese Jugendstil and the work of Charles Rennie MacIntosh. The dining rooms of the Exhibition of Modern Living at the Wertheim Department store in Berlin (1902) and the Dresden Workshop for the Arts and Crafts Exhibition (1903), the Reading Room for the Düsseldorf Public Library (1903), and the Alcohol-free Restaurant at the Garden Fair in Düsseldorf (1904) all possess the angularity and organicism of Jugendstil. Then in the watershed year of 1904 the obsessive ornamentation, the attenuated and sinuous lines, and the complex textures and surfaces all disappear. Behrens's architecture becomes pronouncedly ethereal: an array of abstract spatial grids, simple non-tectonic and ideal solids, and smooth surfaces skimmed by ranks of circles and squares. We see it in the abstract and geometric frames of the Oldenburg Exhibition Pavilion (1905), and the Music Pavilion in Cologne (1906).(fig. 4) Like Berlage, Behrens had been drawn to a study of geometry as a foundation for architectural method and cultural meaning.[25] Among the many competing expositions on geometric order that influenced him were the School of Beuron and the work of von Thiersch, especially his essay "Proportion in Architecture" in which he pronounced the importance of the repeated figure, particularly the square, as the basis for intelligibility and harmony.[26]

In 1903, as the newly-appointed head of the Düsseldorf Kunstgewerbeschule Behrens determined to found the studio pedagogy on a geometrically-based system in a fashion similar to von Thiersch's studio in Nuremberg. His search for faculty began in Holland where he understood such systems were studied with particular attention. Through contacts with Berlage he first learned of de Bazel, who declined an offer for health reasons. Introductions were then made to Lauweriks. With Lauweriks's acceptance in 1904, Behrens himself withdrew from studio teaching, the school's graduates in the coming years being largely the product of Lauweriks's tutelage.[27] Behrens's search for timeless form was certainly in sympathy with Lauweriks's, whose work he studied at close hand. Lauweriks's appeal to Behrens was that he based his system on suppositions that lay beyond convention as espoused by von Thiersch, and sought to redefine the goal of art as something sublime. The two planned to write a work on architectural theory together, a project that unfortunately never came to fruition.[28]

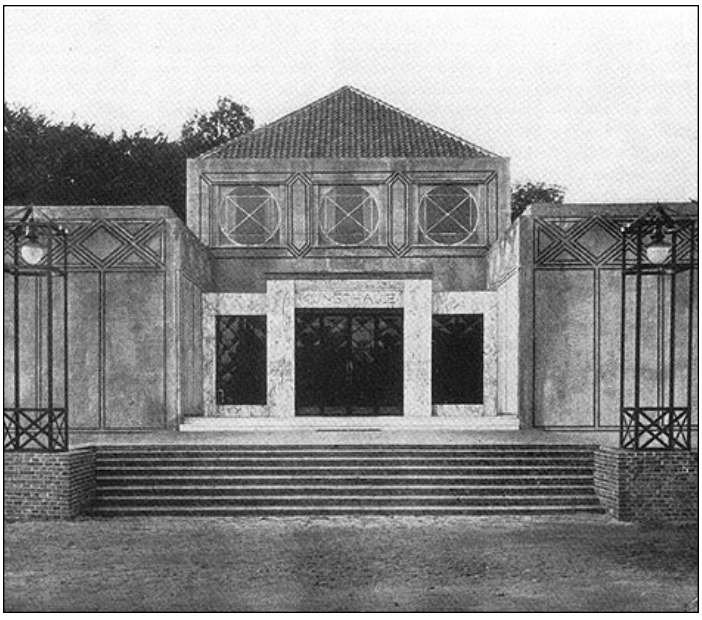

Figure 4. Peter Behrens, Oldenburg Exhibition Pavilions, Oldenburg, 1905.

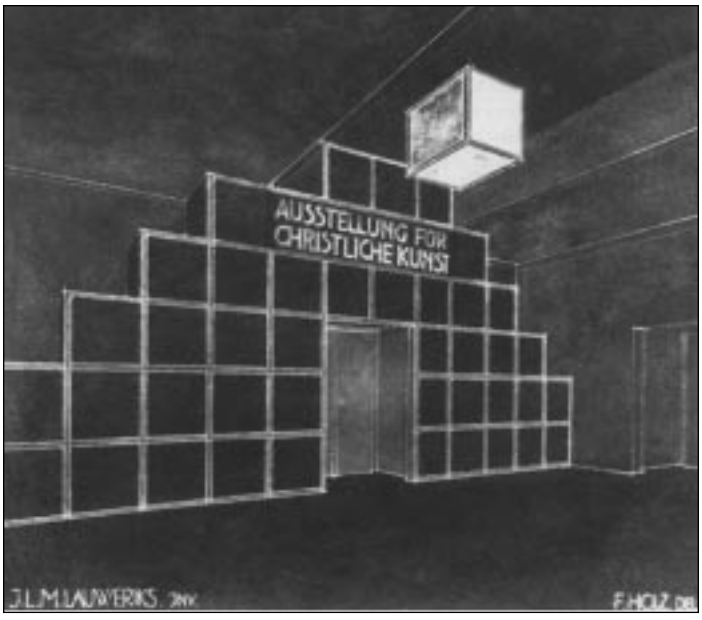

Figure 5. J.L.M. Lauweriks, Gallery for Christian Art, Werkbund Exhibition, Düsseldorf, 1909, interior gallery entry.

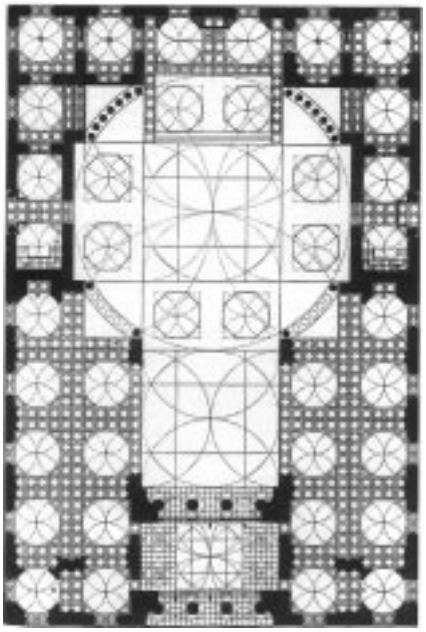

Figure 6. Christian Bayer, design for a church, project from the studio of J.L.M. Lauweriks at the Düsseldorf Kunstgewerbeschule, 1906.

Lauweriks's one built work of the period, the gallery for Christian Art at the German Werkbund Exhibition held in Düsseldorf in 1909, was an essay on the immanence of the grid.(fig. 5) The consonance between this and Behrens's work is easy to see. If one compares it to the Oldenburg pavilions, for example, there is the striking similarity in the use of the three-dimensional square grid making reference to an ever-present geometrical order. In articulating the grid, both emphasize transparency and the line and defy any reference to structural weight or mass. The catalogue described Lauweriks's contribution as a method based in Vitruvius and the middle ages that would systematically advance modern architecture. "Its purpose it to create a building that is totally unified and to bring rhythm to its form."[29]

Lauweriks also had a profound impact on the work produced at the Kunstgewerbeschule. While his students worked out the design implications of his theory in the design studio, Lauweriks celebrated their works as examples of his method in a continued flow of articles. Both Adolf Meyer and Christian Bayer had projects published by Lauweriks in expositions on his theory. An essay entitled "Towards Designing from a Systematic Basis in Architecture" in the journal *Ring*, Lauweriks illustrated his ideas with a church determined by an obsessive inscription of the circle and square, the work of Christian Bayer.[30] (fig. 6) Demonstrating a somewhat cooler approach, Adolf Meyer's thesis project for a school based on a pillared grid appeared, as previously mentioned, in Berlage's discussion of Lauweriks's theory in *Grundlagen und Entwicklungen.*[31]

Over the next ten years Lauweriks continued to evolve his design method through his writings and teaching.[32] A major part of his tutelage involved weaning students away from conventional design strategies. Typical exercises subjected a contemporary project to geometric systematization, a process aimed to winnow out extraneous elements in favor of a crystalline rigor. At the Dresden Arts and Crafts Exhibition of 1906, the school displayed the results of this training in temporary galleries designed by Lauweriks and his students to house the school's work . The main hall, set within an existing exhibition building, was a square articulated as a Greek cross. It was approached by a gallery flanked by a procession of square niches. From the plan to the proportion of the pilasters and frieze zone, every detail conformed to a quadratic modulus. Details were flat and linear: scored surfaces on the pilasters, stenciled meanders on the frieze zone.[33] The centerpiece was a cubic vitrine designed by Adolf Meyer; six squares of light sunk into the ceiling surrounded it above.(fig. 7) Flanking the centerpiece were two lecterns, one open to a copy of the Upanishads, the other to a life of Michelangelo. With its quasi-basilical approach and the climactic "chapel," complete with crystalline altar piece and flanking icons, the exhibit presented a polemic of a contemporary art that pointed towards a

Figure 7. J.L.M. Lauweriks with students Bernhard Weyrather and Heinrich Daners, vitrine by Adolf Meyer, Third German Arts and Crafts Exhibition, Dresden, Düsseldorf School of Arts and Crafts Exhibition, 1906, main hall, interior.

new reverence, a path to perceive the sacred as immanent in the everyday.

Karl Ernst Osthaus and Hagen

> Hagen was then a provincial city the old core of which had been virtually consumed by its numerous industrial concerns; a hideous sight. No less hideous was the effect of the ostentatious villas of the industrialists built in the *Grunderzeit* and crammed into small gardens where one could hardly breathe. The lawns were wretched, the shrubs sickly, and everything lay under a thick cloud of coal smoke.[34]
>
> Henry van de Velde

The grandson of a successful industrialist and heir to the family fortune, Karl Ernst Osthaus (1874-1921) chose the life of community patron over that of entrepreneur in his hometown of Hagen located in the Ruhr Valley. From an early age Osthaus dedicated himself to social reform, specifically the enrichment of the intellectual and creative life of the population. In addressing what Osthaus believed was the cultural and material degradation of the people, he was little concerned with such issues as housing and urban reform, focusing his efforts instead on culture and public education. He sponsored an unending series of building projects, exhibitions and associations, and fostered local crafts guilds and educational projects. Osthaus was one of a growing number of patrons, many associated with the Werkbund and the early Bauhaus, who believed that traditional crafts could invigorate modern industry. Conceiving of the Ruhr Valley as one vast city, he endeavored to catalyze a regional renaissance of sorts. He founded the traveling German Museum for Commerce and Trade in 1909, and the Western German Federation for Applied Art in 1910. Known as the Guild, the latter organization encouraged Rhineland businesses to hire and promote younger artists, especially those involved in the decorative arts such as silver smithing and stained glass design. Eventually he succeeded in drawing a number of artists away from larger cities to settle in the region's towns.[35] Artists came to be in residence, to teach, others to contribute to the Folkwang Museum or participate in its programs. Peter Behrens, and a young Walter Gropius, van de Velde, and Lauweriks, the dancer Mary Wigman, and Jugendstil artist Thorn Prikker were some of those who came to Hagen under the patronage of Osthaus. Osthaus was also a founding member of the Deutsche Werkbund, and nurtured the careers of artists and architects beyond the bounds of Hagen: for a period of about ten years he was party to nearly all of Behrens's commissions.

Osthaus's building program in Hagen chronicles the evolution of his opinions and cultural priorities. Perhaps the most important single project was the Folkwang Museum.[36] After beginning the museum with a local architect in the 1890s, he approached Henry van de Velde in 1900 to complete it.[37] At that time, Osthaus envisioned a natural history museum that he hoped would impart the wonder of the natural world to a people overwhelmed by Germany's bleak industrial Rhineland. Following his visit to the Arts and Crafts Exhibition held Dresden in 1906, he commissioned van de Velde for a whole program of important projects intended to transform the civic discourse of Hagen.[38] It was van de Velde who convinced him to reconceive the Folkwang as an art museum to house his considerable collection.

By 1900 Osthaus had amassed a substantial art collection largely comprised of Far and Near Eastern art. He then began buying African sculpture and modern art, and by 1910 was a patron of Jugendstil artists as well as the burgeoning expressionist movement represented by die Brücke . The museum's galleries reflected his eclecticism in the supplanting of the usual historical and chronological narrative by themes based on formal consonances or materials. Typical juxtapositions displayed a Gauguin next to a temple painting from Bali, or Asian textiles alongside fabrics produced at the Hagen mills from designs by Behrens.[39] This ahistorical, largely aesthetic reading posed an alternative to the nineteenth century evolutionary interpretation. Clearly, Osthaus saw something within this range of artistic styles, cultures and periods as of a piece, that all art when uncorrupted sprang from a common source. Whether this life force emanated from the human spirit or a cosmic one, as the Theosophist would have it, it was a concept that answered the contemporary desire for a spiritual renewal beyond the constraints of history, geography and politics, and addressed a dominant plaint of the early modern period: the degradation of the spiritual and the broken bond between human and nature.

Believing that workers would be improved by living in exemplary dwellings Osthaus also endeavored to build

housing for the employees at his factory. This was the Waldorf Settlement designed by Richard Reimerschmid in 1907.[40] Made of local stone, according to plan types Riemerschmid used again at the Garden City Hellerau near Dresden, the settlement reflected the view that the people needed to rebond with the soil and reestablish a "pure domestic culture." Riemerschmid's solution captured a romantic and regional ideal of folkish tradition.[41]

Osthaus also hoped to reform domestic culture through example with the construction of a garden city suburb for the middle class. By 1906 he had purchased twenty hectares of land on a ridge overlooking the town. Over the next two years van de Velde designed Osthaus's new home there. Hohenhof was a rambling complex with a formal front that faced the town below.[42] Artists were frequently housed in the pavilion at the end of the service wing called the gardener's cottage. For the hilltop as a whole Osthaus conceived of Hogenhagen, a settlement that he hoped would epitomize new cultural sensibilities, much like the Mathildenhöhe at Darmstadt.[43] The residents would be friends and fellow industrialists who had joined Osthaus in efforts to reform the life of the city; their houses designed by sympathetic architects.[44] Van de Velde completed the master plan and several other homes on the hill; over the years Behrens and Lauweriks would make their contributions.

By 1910 Osthaus had achieved his goal of making Hagen an art center. The architecture of the city was also significantly changed. By 1912 the Folkwang catalogue could document thirty-three new buildings in Hagen that arose from Osthaus's patronage.[45] Behrens's works included the Hagen Crematorium (1907) and the Villa Cuno (1910). Van de Velde's contributions included several villas as well as the Folkwang and Hohenhof. Sympathetic local architects had contributed buildings that reflected the new ideas. In the decorative arts, Thorn Prikker's art embellished the Folkwang, Hohenhof, and city's new train station.

In his personal evolution with regard to architecture, Osthaus's philosophy paralleled the advancing debate as to the nature of the modern in contemporary society. Van de Velde, whose work was deeply embedded in the naturalism of Art Nouveau but lacked a strong spiritual base, was his first in-house architect. Behrens, whose work at Darmstadt suggested a rigorist basis, then came to the forefront. Finally, through Behrens, Osthaus came to know of Lauweriks and his theoretical and educational work. After Behrens resigned his post in Düsseldorf, Lauweriks influence at the school dwindled. On Osthaus's invitation, Lauweriks moved to Hagen to complete another group of hilltop villas, and to help foster a decorative arts industry in the city.

Lauweriks in Hagen

> The spiral power, Kundalini, also called the serpent power was often applied in Egyptian, Indian and Christian symbolism. Transferred to geometry this power is represented by the line. In architecture this line is represented by the perpendicular and horizontal lines, by columns and beams, separations of floors and in different ways of decorating.
>
> J.L.M. Lauweriks[46]

Behrens effected an introduction between Lauweriks and Osthaus in 1904. Five years later Lauweriks took up residence in the gardener's quarters at Hohenhof. There for the first and only sustained period, he applied his theory to his own built work. As citizen-artist Lauweriks also had a broader role to play. From 1909 through 1916 he was the director of the provincial craft seminars [Staatliche Handfertigkeitsseminars]; he spent eight more years as the artistic director of the Hagen silver smiths.[47] More immediately, Osthaus commissioned him to build a row of houses, a small colony along the ridge of Hohenhagen that would house artists and designers.[48] Its tenants included Thorn Prikker, the sculptor Milly Steger, the painter August Voswinckel, author Ernst Lorenzen, the head of the Hagen city planning office, Heinrich Schäfer and Lauweriks himself. A subsequent generation of "Hagen bohemians," many with radical political associations, would follow after the war.[49]

In 1904 Lauweriks wrote "A Theosophical Building,"an essay outlining basic design principles, and in which he introduces the Tantric concept of kundalini, or cosmic energy.[50] Kundalini is often represented as a coiled serpent that rests near the base of the spine, at the lowest

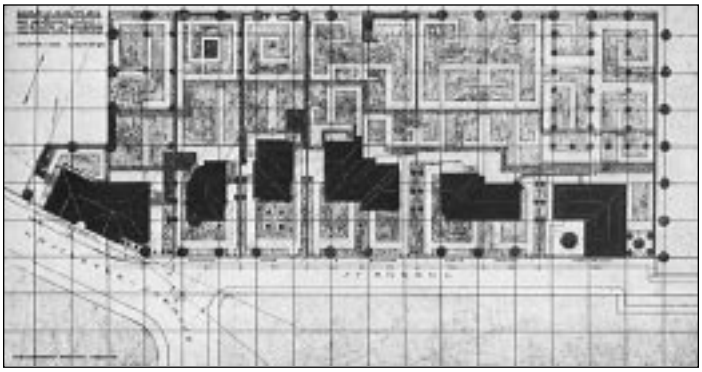

Figure 8. J.L.M. Lauweriks, Hohenhagen artists colony, 1910-1914, Stirnband site plan.

"cakra" or energy node. When this creative energy is awakened it spurs the "unfolding of consciousness" in a thin red line that ascends through the body.[51] Its symbols include the swastika and the meander. Kundalini was the second major principle of Lauweriks's Theosophical theory after proportion and measure, although it would have less of an impact on work beyond his own. It was present in the exhibition space at Düsseldorf in the symbolic meanders, and it appeared in the work of de Bazel in the same years.[52] At Hagen Lauweriks took it beyond symbolism, using it to determine the arrangement and order of the whole complex of buildings.

Lauweriks conceived of kundalini as a dynamic line that tied major design elements together. At Hagen the meander as the incarnation of kundalini generates and channels energy. It relates continuity and ignores structural events. The surfaces it inscribes appear at times ethereal, even irrational. Lauweriks's site plan for the Hohenhagen incorporated his projected five houses along Stirnband Street within a larger scheme for the neighborhood. An imaginary meander connected all the houses along their roof ridges and eventually turned back on itself, essentially building a linked chain, like the cakra of the spine; the necessary turning movement of the meander generating a further turn in each roof ridge before it moved to the neighboring house, which in turn produced the stepping back and then back forward in the site plan.[53] (fig. 8) Lauweriks reiterated the meander on the house facades with a single course of rusticated stone running along the base of each house, and a second just under the eaves. Along the street, the bounding wall echoed the line, the stone wall popping up to create occasional portals framing entry walks.(fig. 9) The gardens linked the houses

Figure 9. J.L.M. Lauweriks, Hohenhagen artists colony, 1910-1914, entry gates fronting the Bockskopf and Prikker houses, 1996 photograph.

with large squared spirals drawn in plant beds.[54] Leading from house to house the stone coursing culminated in the upper gable of the last house with a labyrinthine encircling of Thorn Prikker's atelier window.(fig. 10) The wood slats patterned in square modules, like an abstract mandala, demonstrate the unity of creative energy and cosmic order.

The bounding stone used to trace house-inscribing meanders negates its more usual role as structure, and gives the houses a vaguely troubling aspect. The massive blocks forming the shallow single-course foundations recede beneath the brick walls where one would expect them to form a projecting base; another course hangs uncomfort-

Figure 10. J.L.M. Lauweriks, Thorn Prikker House, Hohenhagen artists colony, 1910 photograph.

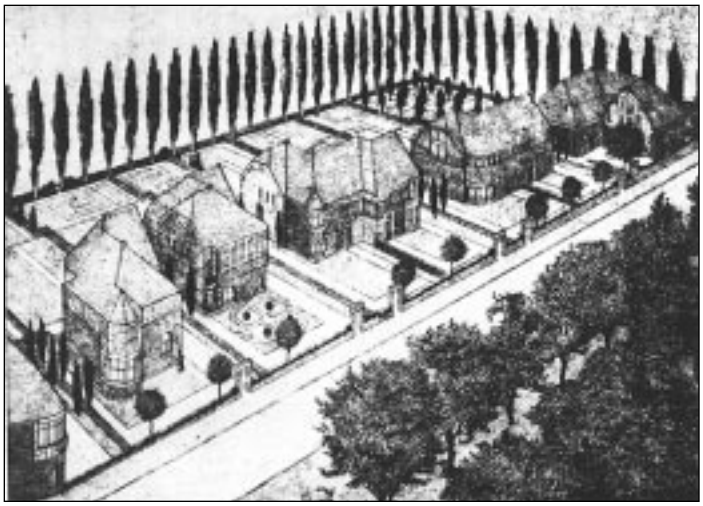

Figure 11. J.L.M. Lauweriks, Hohenhagen artists colony, 1910-1914, bird's eye rendering, 1910.

ably under the eaves where it appears to act as an awkward and heavy soffit.(fig. 11) An attenuated line traces the building's corners, much as Josef Hoffman was doing at Palais Stoclet with thin bronze moldings. But here the vertical courses in the rusticated stone contradict the substance and weight of the material. Bay windows on the second story that are framed in the same stone hover precariously above the ground. This local stone appears in many of the Hagen projects: Riemerschmid's Walddorf was built entirely from it in a speculative recreation of the regional vernacular; Behrens's Cuno House (1911) sits on a firm rusticated base, the classicism of the superstructure gaining a certain mannerist edge. It is at Behrens's earlier Hagen Crematorium (1906) where we see an interpretation of the stone in sympathy with Lauweriks's. In explaining his approach to the Crematorium, Behrens argued for a new religiosity in art, and cited the medieval and early renaissance buildings of Tuscany as sacred architecture (although among his examples only San Miniato al Monte was so), and Alberti's *Ten Books* as a source for centralized and cubic plans and sections. The exterior of the Crematorium is reminiscent of San Miniato, with a smooth white stone articulated with a black intarsia of square compartments subdivided by smaller squares and circles. In contrast, the base of the building is the local stone, and would have comprised the structure and parapets of a proposed terraced cemetery with broad arms flanking the Crematorium itself. As first projected by the architect F. Sander and as later completed by Behrens, the furnace at the back of the building was also of stone and projected from the building as a separate wing. But in Behrens's redesign of 1906 this wing receded into the idealized planar surfaces of the main building.[55] The rusticated wall sat just off the surface of the main block in the depth of only a single course.(fig. 12) Here, and in Lauweriks's stone meanders, what we would ordinarily read as a material or structural substance is subjected to an intellectual reading, earthly substance is contrasted with and ruled by an ethereal order.

Lauweriks maintained that his geometrical system was eurhythmic. From the Greek, eurhythmics refers to rhythmical order and movement, or to the proportions of the body and its harmony with nature. The term had widespread currency in the early twentieth century with regard to numerous aesthetic and social theories. It was commonly associated with dance and gymnastic exercises such as those practiced at Hellerau under Émile Jacques-Dalcroze, and it was a watchword of educational reform spearheading a movement to include athletics in school curricula. In this context eurhythmics was associated with a new freedom of the body and an aspiration to lift the working class out of the physical and spiritual impoverishment of factory life. In architecture eurhythmics referred to a three dimensional proportion system that generated space as well as structure. For the Theosophists and other life reform movements the concept of eurhythmics also entailed a retuning of human action in consonance with a higher order of things.

In applying a theory of eurythmics to architecture, Lauweriks also made a contribution to the theory of architectural space. His theory was gleaned from his mentor,

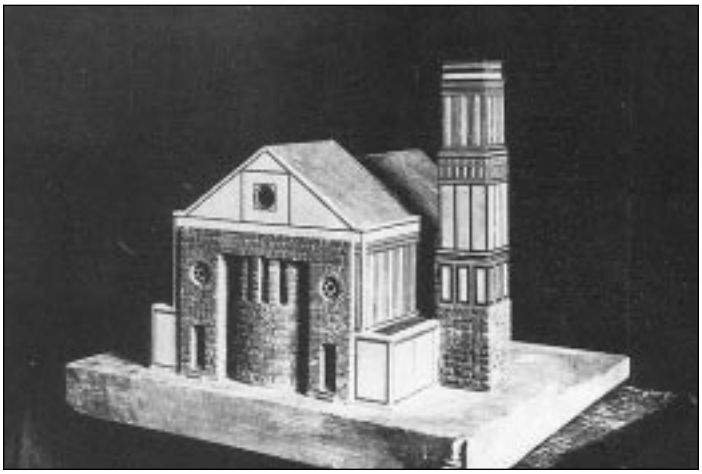

Figure 12. Peter Behrens, Crematorium, Hagen, 1906 version, model,.

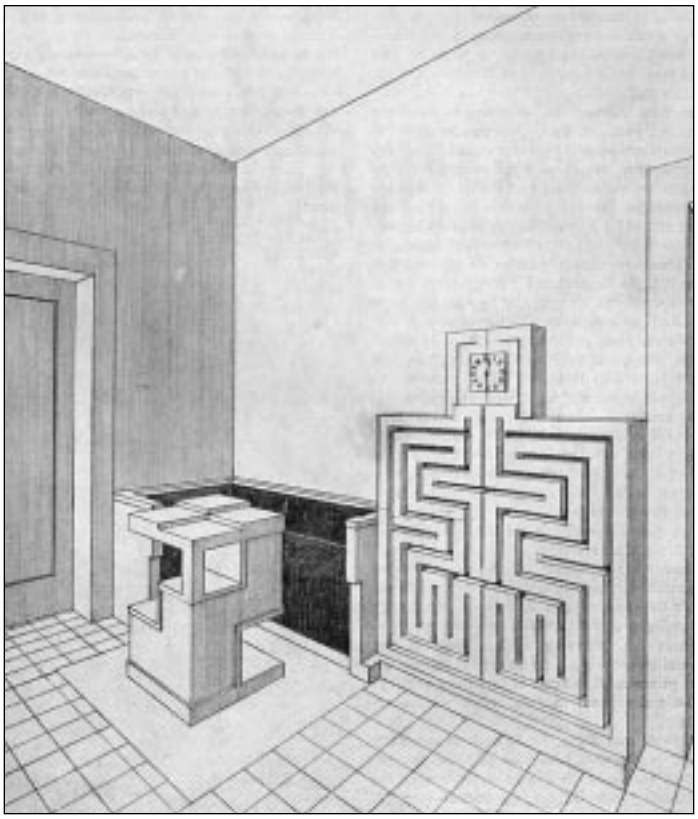

Figure 13. J.L.M. Lauweriks, house for Dr. Stein, Göttingen, 1913, interior perspective with furnishings.

C.W. Nijhoff, a teacher at the Amsterdam Kunstgewerbeschule. Nijhoff argued that the art of building was the art of space making.[56] In Lauweriks's totalizing view space became the unseen substance of the universe; the architect's role was to articulate it through an interaction with built form. Together the dual aspects of his system, the structured order of the grid and the dynamism of the meander, constituted a unity and the "substance" of space. A small table designed for the house for Dr. Stein of 1911 captures this concept with a clarity and abstractness that one associates with De Stijl.(fig. 13) The square establishes plan, section and module; the spiral links quadrants of open and enclosed space up through the structure. The house for Thorn Prikker shows Lauweriks developing the same themes in a more challenging context: the plan is a square that, with one quadrant missing, initiates the spiral. The proportions of the plan and section of this, as all the houses, is based on the square root of two, a measure Lauweriks associated with order and harmony. The resulting volumetrics of the house interrelate and define a quasi-Palladian systematization of the space.[57] The larger spiral implied by the plan recurs on the house interiors, on doors and gates, in meanders in ceiling plaster and inscribed lines on wall panels that bound rooms in a cosmic knot. The creative energy that the meander or spiral embodied were intended to activate the space and imply a new and modern dynamism. Lauweriks was not successful, though, in creating a similar link among the spaces within the body of the house. The use of walls and the concept of rooms are stubbornly traditional, and spatial movement remains constrained by discreet floors. Only the small table sculpts space interior to its structure in a way akin to a Loosian Raumplan. While the implications of the written theory never were fully realized in the buildings, the theme of spatial dynamism remained a tantalizing speculation in Lauweriks's work.

By the time of his Hohenhagen houses, Lauweriks had resolved a system comprised of a modular order and a dynamic spine that together produced an "an architectural organism." The two together described and contained space, while the building achieved a life spirit evident in its rhythm "without which the design of a building is impossible." This nonrational, mythic quality, envisioning a building synchronized with the cosmos, released it from the usual modes of explanation and ultimately from the contingencies of modernity. Lauweriks living building becomes a sacred totem standing outside of time.

In the final analysis Lauweriks's unorthodox approach to architecture places his work alongside that of the expressionists, while his move towards abstraction link him to early modern experiments assayed by the de Stijl group and Adolf Loos. For his part, de Bazel sought a kind of harmony consonant with regional tradition. De Bazel's conservatism in this regard, his refusal to attempt the invention of the modern style—ironically later criticized by his elder, Berlage—meant that his influence after 1900 was muted compared to Lauweriks's and, though his work continued to be admired, discussion of it was contained within a rather narrow circle in the Netherlands. Lauweriks's work, however, was central to the millennial fray in the years prior to the war. Instead of the imagism of Bruno Taut's fantastic glass architecture, or Wenzel Hablik's crystalline mountains, Lauweriks's abstract system had a ready consonance with those seeking a modernism grounded in timeless principles rather than pragmatic functionalism. In this regard the question of influence, the direct impact of a project by Lauweriks, or earlier by de Bazel, on specific works, is perhaps less telling

than the response of their peers. The interest generated by their work among early modern masters like Berlage and Behrens; and later on the younger generation of J.J.P. Oud, Adolf Meyer, and le Corbusier, signals its pertinence to their debates. For these men, in 1910, Lauweriks's Theosophical propositions bore no overwhelming stigma. Rather his theories pointed to a way beyond style, towards a methodological and ontological basis for a modernism grounded in an universalistic idealism. Leached from its immediate Theosophical roots, their interpolations transposed Lauweriks's cosmology into a secularized modernism tied to timeless universal truths, an idyll of clarity and harmony in an otherwise tumultuos time.

I would like to thank Kristen Schaffer and Jeff Hannigan for their careful reading of this article, and the DAAD for its support of my research.

[1] Terry Eagleton, *Heathcliff and the Great Hunger. Studies in Irish Culture* (New York, 1995), 281.

[2] The account occurs in *The Modulor, a harmonious measure to human scale, universally applicable to architecture and mechanics* (Cambridge, 1954), 26.

[3] Reyner Banham, *Theory and Design in the First Machine Age* (London, 1960), 142.

[4] Ibid.

[5] A number of historians have suggested that Le Corbusier evolved his modular system directly under the influence of Lauweriks's theory. Nic Tummers, for example, compares Lauweriks's use of the golden section to the regulating lines that first appear in *Vers une Architectur* (1922); he also posits a strong link to Le Corbusier's *The Modulor* of 1954. Indeed the Domino House and the settlement at Pessac are assembled in much the same way as the ensemble at Hohenhagen; and a meander typical of Lauweriks work forms the plan of the Wachende Museum of 1939.
Tummers speculated that the "gardener" was Lauweriks himself, who was then living in the so-called gardener's house on the Osthaus estate. But it is hard to imagine Lauweriks describing his work in such a fashion. N.H.M. Tummers, *J.L. Mathieu Lauweriks. Zijn werk an Zijn Invloed. Op Architectuur en Vormgeving Rond 1910: "De Hagener Impuls*" (Hilversum, 1967), 35-36.

[6] The primary source on de Bazel is A.W. Reinink, *K.P.C. de Bazel* (Amsterdam, 1965); an early account of Lauweriks's career is contained in Jan de Meyer, "J.L.M. Lauweriks," *Wendingen* 8 (1929): 3-18.

[7] The anarchist group was called "Wie Denkt Overwint," ibid., 16-34.
In the 1890s anarchism was closely linked with experimental art. For the Dutch Symbolists the anarchist movement provided a political context for their individualist and anti-institutional propositions. See Bettina Polak, *Het fin-de-siècle in de Nederlandse schilderkunst. De symbolistische beweging 1890-1900* ('S-Gravenhage, 1955), 80-83.

[8] J.L.M. Lauweriks, "Het nut en doel der kunst," *Theosophia* (1907) quoted in and translated by F.G. Evelein, "'Pure Theosophical art.' cosmogenesis, cosmic consciousness and evolution." Paper presented at the Society of Architectural Historians Annual Meeting, April 1996.

[9] Indeed they established education as the primary mission of the Vâhana Lodge. Reinink, *K.P.C. de Bazel*, 41.

[10] Walenkamp's interests included the geometrical systems of Islam. See, for example, his article in a compilation of essays by members of the "Architectura et Amicitia" Society, including ones by Cuypers, Berlage and Kromhout among others, *Zeven voordrachten over bouwkunst* (Amsterdam, n.d.).

[11] Cees Zoon recounts this evolution with regard to Lauweriks in Cees Zoon, "Auf dem Wege zu einer monumental "Nieuwe Kunst"—die Proportionslehre und Entwurfstheorie von J.L.M. Lauweriks," *Maßsystem und Raumkunst: Das Werk des Architeckten, Pädagogen und Raumgestalters J.L.M. Lauweriks*, exhibition catalogue (Krefeld, 1987), 32-53.

[12] An influential teacher at the Munich *Technische Hochschule*, von Thiersch's pedagogy was geometrically-based.

[13] Bettina Polak traced a similar evolution in symbolist painting in Holland through the 1890s in .Polak, *Het fin-de-siècle in de Nederlandse schilderkunst . Okkultismus und Avantgarde. Von Munch bis Mondrian, 1900-1915*, exhibition catalogue (Frankfurt, 1995) illustrates a similar transition within the ranks of esotericists.

[14] Pythagoras and Plato were both designated members of Blavatsky's "Brotherhood of Masters." The Theosophical hierarchy, dubbed the Brotherhood, included all great religious and occult leaders, among them Christ and Buddha.

[15] Gerda Breuer, "Gedankengebäude—Kosmomorphe Bausteine zu einer künstlerischen Kultur," *Maßsystem und Raumkunst*, 23 ff.

[16] Lauweriks's commentary on the Beuron School is contained in J.L.M. Lauweriks "Schoonheidsleer," *Architectura* 7 (1899): 218 ff. Also, see Reinink *K.P.C. de Bazel*, 38-39; and Guglielmo Bilanconi, *Architecttura esoterica: Geometria e teosofia in Johannes Ludovicus Mattheus Lauweriks* (Palermo, 1991), 52- 56.

[17] Both de Bazel and Lauweriks have been counted among the so-called Dutch Viollet-le-Duc School.

[18] The Egyptian triangle is an isosceles triangle with an altitude to base ratio of 5:8. It is often elaborated with the insertion of a section triangle with a hypoteneuse that stretches from the midpoint of the vertical side to the outer point of the base.

[19] With regard to this tendency in de Bazel's later work see the headquarters of the Koninklijke Nederlandsche Heidemaatschappij in Arnhem (1912) or the influential main office of the Nederlandsche Handel-Maatschappij in Amsterdam (1920). While the plans and the spatial conception were based on a squared grid, there is a new quickened bay rhythm and inscribed surfaces of striated bands and meanders appear. His interiors of the same period are notable for the use of wood paneling that repeats the module lending a resposeful quality similar to his earlier, planar exteriors. Reinink, *K.P.C. de Bazel*, 136-137; 171-179; J.L.M. Lauweriks, "Ein Beitrag zum Entwerfen auf systematischer Grundlage in der Architectur," *Ring*, no. 4 (1909).

[20] Berlage's biographers Manfred Bock and Peter Singelenberg take the position that Berlage's young colleagues were of minor importance; while Tummers and Reinink, who write on Lauweriks and de Bazel, respectively, take the view that de Bazel's competition entries and the philosophy behind them virtually transformed Berlage's method, in particular the design of the Exchange. Part of the problem is that Berlage himself provided alternate versions of the relative importance of these other players in a series of remarks that are brief and likely were not intended to suffer the scrutiny they have since received. In 1898 Berlage showed his revised elevations for the Exchange and cited de Bazel, Lauweriks and de Groot, along with Viollet-le-Duc, as sources for his new approach. Jan Hessel de Groot (1865-1932), a teacher in Amsterdam at the Quellinschule, spent most of his career developing a systematic, modular method of design. Although his work and influence are parallel to de Bazel and Lauweriks's, he did not work directly with them. By 1934 Berlage was crediting only de Groot as an influence on his work. For his part, Lauweriks read Berlage's system as a corrupted and partial version of the theory that he and de Bazel had outlined; see J.L.M. Lauweriks, "de nieuwe beurs," *Architectura* 8 (1900): 269-271. For a general discussion of this history see Manfred Bock, *Anfänge einer neuen Architektur. Berlages Beitrag zur architektonischen Kultur der Niederlande im ausgehenden 19. Jahrhundert* (Wiesbaden, 1983), 55 ff.; Reinink, *K.P.C. de Bazel*, 80-82, 249-251; Peter Singelenberg, *H.P. Berlage. Idea and Style* (Utrecht, 1972), 91-93, and Zoon "Auf dem Wege zu einer monumental "Nieuwe Kunst," 38-40.

Walenkamp produced projects evidencing a similar line of development. His competition entry for a public library in 1896, and another for an academy of the fine arts in 1900 are characterized by planar surfaces and a rather redundant expression of a modular approach. See Bock, *Anfänge einer neuen Architektur*, 56.

[21] J.L.M. Lauweriks, "De nieuwe beurs," *Architectura* XI (1902): 273-283.

[22] H.P. Berlage, *Grundlagen und Entwicklung der Architectur* (Berlin, 1907).

[23] On Lauweriks see ibid., 57-60. The close relationship between Meyer and Lauweriks, and something of Lauweriks's magnetism as a teacher are recounted in Annemarie Jaeggi, *Adolf Meyer. Der zweite Mann. Ein Architekt im Schatten von Walter Gropius* (Berlin, 1995), 29-38. Adolf Meyer would later go into partnership with Walter Gropius and teach at the Bauhaus. In 1925 he moved to Frankfurt where he worked for the city in Ernst May's office until his accidental death in 1928.

[24] Author's translation. H.P. Berlage, *Grundlagen und Entwicklung* (1908).

[25] On Behrens and the Beuron School, see Gisela Moeller, *Peter Behrens in Düsseldorf: die Jahre von 1903 bis 1907* (Weinheim, 1991), 108.

[26] August von Thiersch, "Die Proportionen in der Architektur," *Handbuch der Architektur* 1 (Darmstadt, 1883): 38-77.

[27] Behrens also hired the art historian Wilhelm Niemeyer whose mentor August Schmarsow published *Principles of the Science of Art [Grundbegriffe der Kunstwissenschaft]* in 1905. Niemeyer termed his studies of proportion and geometrical studies in architecture a conscious renewal of classical principles. He described Behrens in these years as working in consonance with this generation's new affinity for Hellenism. Stanford Owen Anderson, "Peter Behrens and the Architecture of Germany, 1900-1917," Ph.D. diss., Columbia University, 1968, 159.

[28] Ibid., 103-108.

[29] Author's translation. *Ausstellung für christliche Kunst Düsseldorf, e*xhibition catalogue (1909), 74, quoted in Moeller, *Peter Behrens in Düsseldorf*, 106.

[30] J.L.M. Lauweriks, "Beitrag zum Entwerfen," 25-35.

[31] Berlage, *Grundlagen und Entwicklung*, 55 ff.

[32] Ibid., 212 ff.

[33] Ibid., 119 ff.

[34] Author's translation. Henry van de Velde, *Geschichte Meines Lebens* (Munich, 1962), 176.

[35] Jill Lloyd, *German Expressionism, Primitivism and Modernity* (New Haven, 1991), 9.

[36] A good overview of Osthaus's career is contained in *Der westdeutsche Impuls 1900-1914. Kunst und Umweltgestaltung im Industriegebiet. Die Folkwang-Idee des Karl Ernst Osthaus*, exhibition catalogue (Hagen, 1984).

[37] Van de Velde's account of this meeting is in van de Velde, *Geschichte Meines Lebens*, 174-180.

[38] For an overview of the these works see Léon Ploegaerts and Pierre Puttemans, *L'Oeuvre Architecturale de Henry van de Velde* (Brussels, 1987). At the Dresden exhibition Osthaus would also have visited the exhibition hall designed by Lauweriks's and his students from the Düsseldorf Kunstgewerbeschule. Moeller, *Behrens in Düsseldorf*, 119 ff.

[39] Lloyd, *German Expressionism, Primitivism and Modernity*, 10.

[40] Osthaus hosted the XIVth conference of the Zentralstelle für Volkswohlfahrt at the Folkwang Museum in 1905. This organization, formerly known as the Berliner Zentralstelle für Arbeiterwohlfahrtseinrichtungen, was the important reform precursor to the Deutsche Werkbund. The conference included Hermann Muthesius, Paul Schultze-Naumburg, and Karl Henrici among the lecturers.

[41] In the event only eleven of the eighty-seven houses projected were built. Winfried Nerdinger, *Richard Riemerschmid. Vom Jugendstil zum Werkbund* (Munich, 1982), 397-399; and Lutz Niethammer, "Am Ursprung des Wasserlosen Tales—Grenzen des Mäzenatentums beim Bau einer Gartenstadt," *Die westdeutsche Impuls*, 207-210.

[42] Karl Heinz Hüter. *Henry Van de Velde. Sein Werk bis zum Ende seiner Tätigkeit in Deutschland* (Berlin, 1967), 123 ff.

[43] Ibid., 122. Until 1920 Darmstadt was also home to a Theosophical college.

[44] Van de Velde, *Geschichte Meines Lebens*, 283; Niethammer, "Am Ursprung des Wasserlosen Tales," 186-231.

[45] Tummers, *J.L. Mathieu Lauweriks*, 31.

[46] J.L.M. Lauweriks, "Een theosofisch gebouw" (1904), quoted in and translated by Evelein, "Pure Theosophical Art."

[47] "Zwei Werke lokaler Architekten als Beispiele des 'modernen Bauen' in Hagen", *Das westdeutsche Impuls*, 181-185.

[48] Peter Stressig, "Die Häuser am 'Stirnband,' Maßsystem *und Raumkunst* ," 82-93; and Françoise Véry, "J.M.L.[sic]Lauweriks: architecte et théosophe," *Architecture, Mouvement, Continuité*, no. 40 (September 1976): 55-58.

[49] Stressig, "Die Häuser am 'Stirnband," 82-83.

[50] J.L.M. Lauweriks, "Een theosofisch gebouw;" Evelein, "Pure Theosophical Art."

[51] André Padoux, "Kundalini," *Encyclopedia of Religion*, vol. 8, Mircea Eliade, ed. (New York: 1987): 402-403, and ibid.

[52] See note 19 above.

[53] The original site plan included some houses never built so that the impression of the chain is confined to the few complete works along Stirnband Street.

[54] The meander is also closely associated with another principal cited by Lauweriks in his theoretical writings, that of the unity of opposites. In his built work this principal is not easily isolated but can be seen in the smooth connections between the horizontal and vertical, which again tends to deny an articulation of structural conditions.

[55] In the final built project the rusticated back wing reappears. A comprehensive documentation of the Crematorium is found in Moeller, *Peter Behrens in Düsseldorf*, 452-463.

[56] Bock, *Anfänge einer neuen Architektur*, 170.

[57] This description relies on Tummers, *J.L. Mathieu Lauweriks*, 29-34.