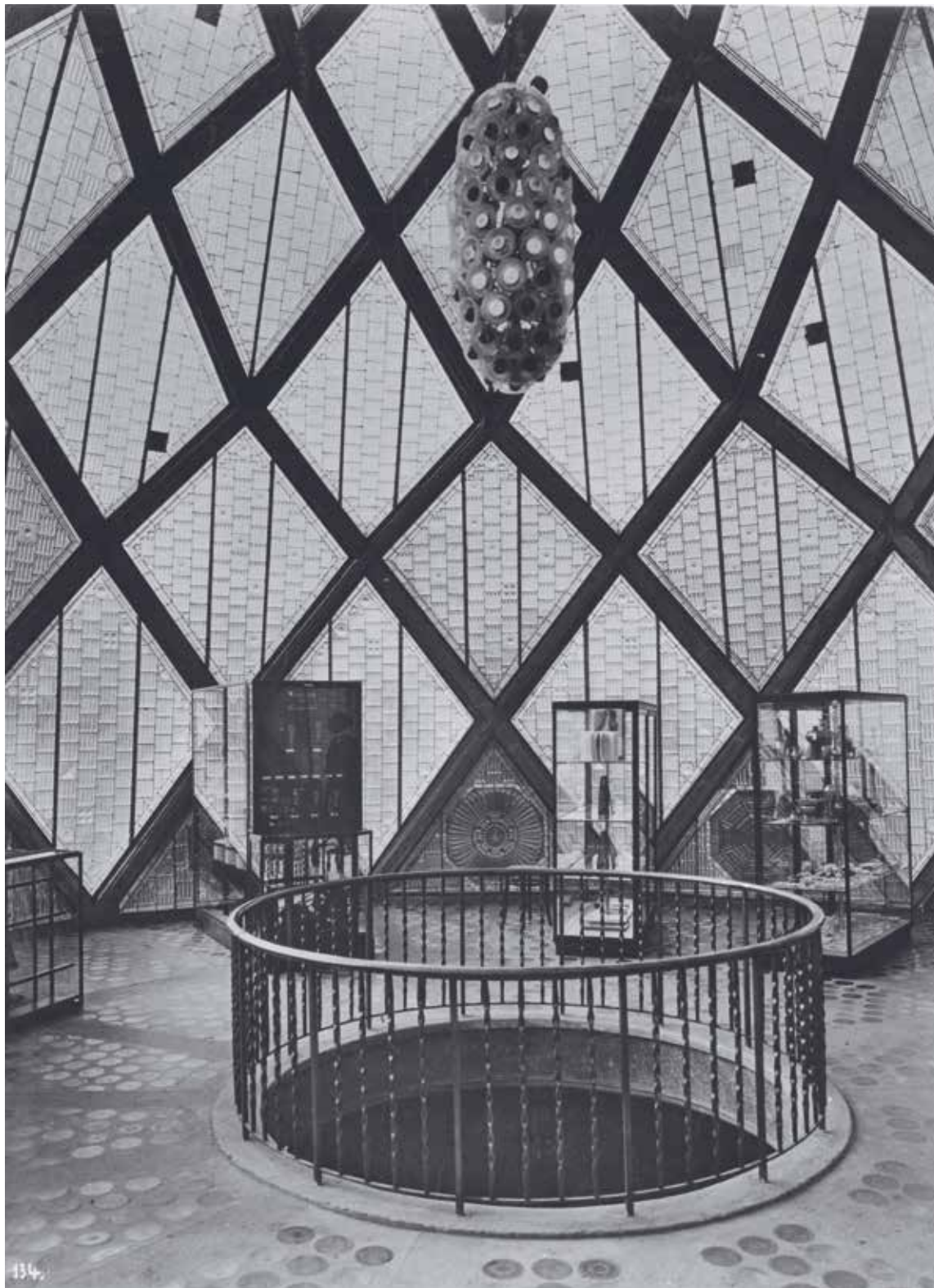


...NE LASTIG... DAS BUNTE GLAS ZERSTORT DEN HASS... WAS WARE DIE...



Noam M. Elcott

“Kaleidoscope-Architecture”: Scheerbart, Taut, and the Glass House

“The Glass House has no purpose [*Zweck*] other than to be beautiful.”¹ With these words the architect Bruno Taut commenced his promotional pamphlet for his glass industry promotional pavilion. Where stained glass once propagandized church teachings and divine light, Taut’s Glass House showcased a host of new, often proprietary construction materials, not least Luxfer Prisms, an innovative type of glass tiles that, as their name announced, carried light into the dark recesses of rooms.² Purposelessness—to adapt Kant’s famous definition of beauty—acquired purpose as exhibition architecture. Taut’s portentous prose and industry backing notwithstanding, the architect had his sights set on goals loftier than patented building materials or even a universal sense of beauty. For the structure was dedicated to Paul Scheerbart, that inscrutable evangelist of glass, and was emblazoned with the poet’s maxims: rhyming couplets—“Colored glass/destroys all hatred at last” was inscribed above the entrance—too direct to be mystical and too romantic to be functionalist. In its debt to Scheerbart, the Glass House oriented its temporary inhabitants toward the uncharted utopia of glass architecture.³ Beauty and functionality were but facets of this new prismatic culture.

Taut and others described in detail one’s passage through the Glass House. Concrete steps led to a terrace; walls of Luxfer Prisms enclosed the interior; two iron staircases, outfitted with Luxfer glasses, ascended

The Glass House by Bruno Taut, Cologne Werkbund Exhibition, 1914. Interior view showing the domed exhibition hall and the railed oculus opening into the cascade room below. An exhibition including historical Venetian, German, and British glass; contemporary examples of Tiffany and German glass; a model of a botanical museum inspired by Scheerbart’s writings; and samples provided by the glass industries involved in the construction of the Glass House of the most recent developments in glass architectural materials were showcased in the vitrines surrounding the oculus. The dome of the Glass House was constructed of colored and clear glass, but little is known about the colors themselves except that, as Taut described, there were “reflections of light whose colors began at the base with a dark blue and rose up through moss green and golden yellow to culminate at the top in a luminous pale yellow.”



The Glass House by Bruno Taut, Cologne Werkbund Exhibition, 1914. Interior view from the lower part of the cascade room with the oculus to the exhibition hall visible at the top of the cascade. Taut's brochure credits the many artists, artisans, and companies that provided the experimental construction materials, glass prisms and brick, stained glass, metalized ceramic tiles, glass globes, and other new uses of glass and concrete documented in the installation views illustrating this essay (see page 105).

to the Glass Hall or cupola; an opening in its floor descended into a basement with walls of silver and gold glass furnished by the firm Puhl & Wagner, a cascade waterfall assembled by United Zwieseler and Pirnaer Colored Glass Works, and, strangely, a darkened niche for kaleidoscopic projections. The commercial and utopian aspirations of glass industrialists and evangelists culminated paradoxically in an obscure niche whose dark drapery swallowed the light carried inward and downward by Luxfer Prisms so as to enhance the brilliance of the infinitely variable and variegated forms rear-projected onto a milky glass screen by a giant projecting kaleidoscope.⁴ The inclusion of a milky glass screen was sensible on commercial and aesthetic grounds. The glass industry was promoting dulled and silvered plate-glass projection surfaces—in short, mirror-screens!—as a more luminous alternative to painted canvas or plaster film screens.⁵ And Scheerbart himself had recently announced the imminent arrival of glass theater, featuring glass sheets of no more than 2 to 3 meters [6½–9 feet] in width.⁶ (The Glass House's glass screen measured a tolerable 120 cm



The Glass House by Bruno Taut, Cologne Werkbund Exhibition, 1914. Interior view showing the upper part of the cascade room. Among the list of collaborators are a number of electrical and technology companies (including the famous Osram Lighting Corporation) and the companies providing the motors and pumps for the cascade, whose rushing water formed a soundtrack for the artistic images displayed by the kaleidoscope.

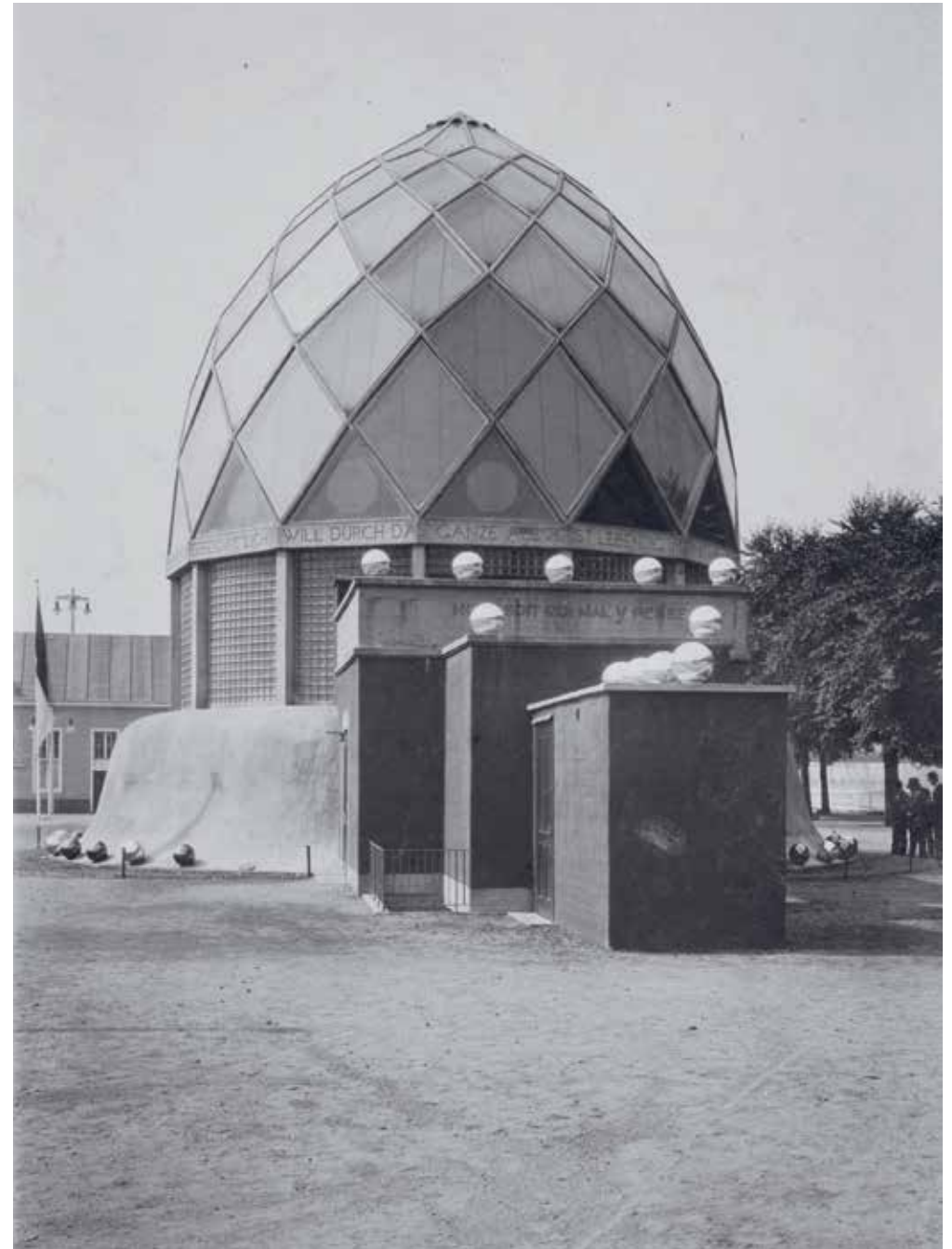
[4 feet] across.) The curiosity lay instead in the kaleidoscope, which produced the last images consumed by visitors before they exited the Glass House. Why crown a glass pavilion with projected, abstract moving images?

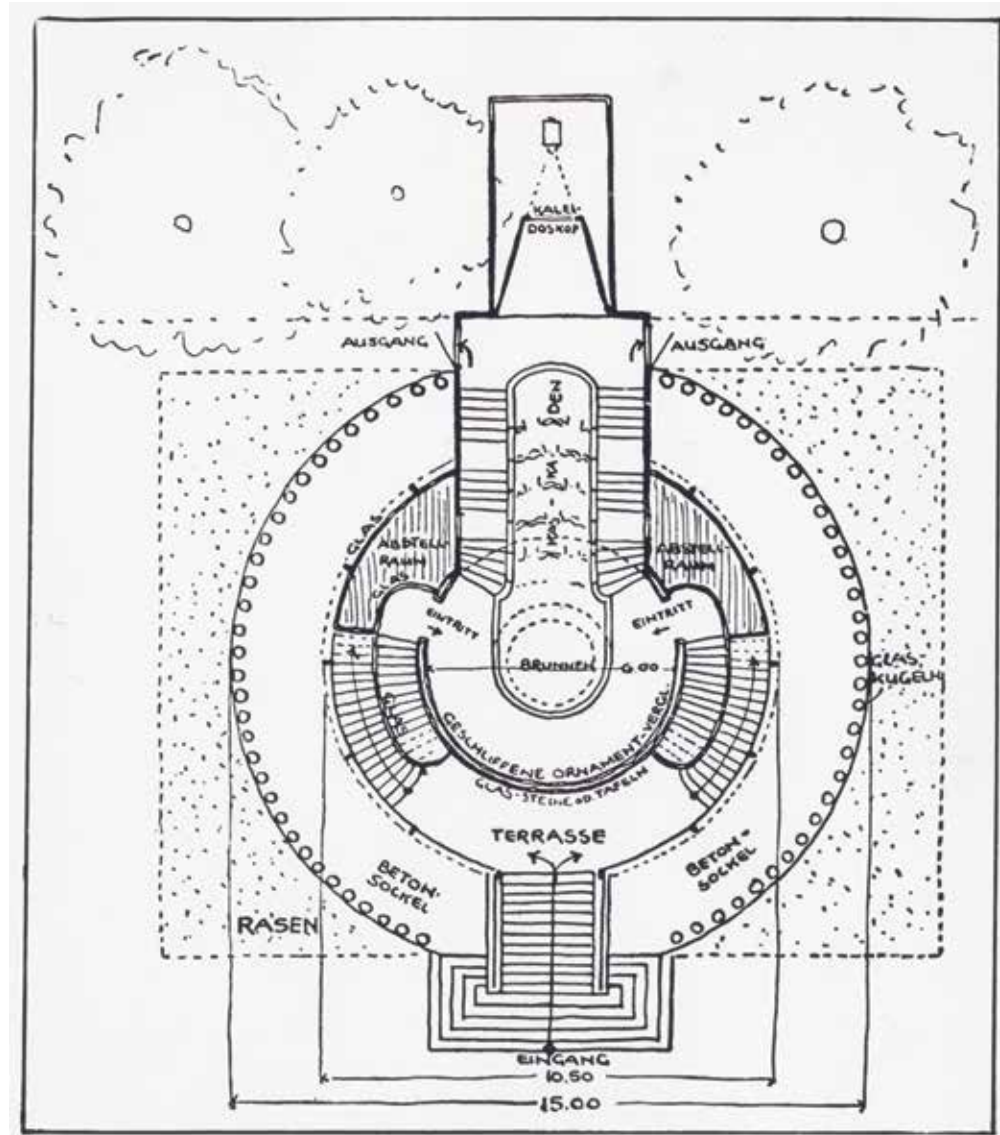
A first answer might again be gleaned from Taut's pamphlet: "The Glass House has no purpose other than to be beautiful." The glass bead filling of the kaleidoscope was assembled by artists—not least Franz Mutzenbecher and Adolf Hölzel, both significant, if not highly successful artists; Hölzel, in particular, was an influential teacher of younger abstract painters. Here, perhaps, was the fulfillment of purposive purposelessness: even though chance played a role, artists could still create individualized works. Alternatively, the achievements were of a technological kind. As Taut avowed, visitors might remember the kaleidoscope from childhood, but here was a larger projection version, indeed the first successful projection kaleidoscope. The assertion was, at best, half right. Earlier attempts at projection kaleidoscopes may have met with varying degrees of success, but they date back to the invention of the apparatus.

Sir David Brewster, a nineteenth-century scientist who vastly improved the stereoscope and invented the kaleidoscope, enumerated its application to the magic lantern, solar microscope, and camera obscura: “It is by no means difficult to fit it [the kaleidoscope] up in such a manner as to exhibit them [the pictures] upon a wall to any number of spectators.”⁷ Once again, Taut’s exploits cannot easily be restricted to artistic whimsy or techno-commercial utility. A third way was initiated by Scheerbart.

Scheerbart had long admired kaleidoscopic effects and peppered his prose with the moniker. Comets and stars, color and light-plays, appeared like “a perpetually spinning kaleidoscope.”⁸ A fictional World’s Exposition in Melbourne boasted “kaleidoscopic ornamentation.”⁹ But in the years just prior to the Werkbund Exhibition that hosted the Glass House, Scheerbart described in detail a fictional glass exhibition in Peking that closely anticipated the kaleidoscopic ensemble produced by Taut and company. “To begin, a hall with kaleidoscopes on the walls. Everything else black velvet. In the middle of the sixteen walls, however, appeared a large circle with kaleidoscopic effects. The kaleidoscope transformed every minute. Always different. Every magic lantern overhead, above the black velvet ceiling.”¹⁰ With the perfunctory shift from front to rear projection, Scheerbart’s 1912 fantasy described almost perfectly the disposition of elements at the terminus of the Glass House circuit. A dozen years prior, at the turn of the century, Scheerbart had named this disposition with a terminological precision matched only by Taut’s later design: “kaleidoscope-architecture.”¹¹ For Scheerbart, kaleidoscope-architecture was but one of many half-rhymes for the glass architecture he systematically and devoutly prophesied. But it behooves us to take the term seriously and literally in regard to Taut’s Glass House. Already Brewster, the inventor of the kaleidoscope, had envisioned kaleidoscopic images enlarged with the help of magic lanterns and other devices. Taut and Scheerbart recognized the power and potential of expanding not only the image but also the apparatus, so as to create a kaleidoscope one could enter. The raked steps, darkened niche, luminous screen, and moving images channeled nineteenth-century attractions like the diorama and

Rear view of the Glass House by Bruno Taut, Cologne Werkbund Exhibition, 1914. Note the last words of the Scheerbart motto *DAS LICHT WILL DURCH DAS GANZE ALL UND IST LEBENDIG IM KRISTALL* (Light passes through the universe/And comes to life in crystal) beneath the dome, as well as the epigraph to Scheerbart’s *Glass Architecture*, *Honi soit qui mal y pense* (Shamed be he who thinks evil of it), inscribed beneath the row of mirrored glass globes.





coincided with the emergent architectural form of cinemas. The Glass House, in short, was kaleidoscope-architecture in its most literal—that is, etymological—sense: *καλός* (*kalos*, beautiful), *εἶδος* (*eidos*, a form), and *σκοπέω* (*skopeō*, to see).¹² A machine for seeing, the Glass House did not oppose purpose and beauty. Rather, to amend Taut's declaration, the Glass House had no purpose other than the viewing of beautiful forms.

NOTES

1. Bruno Taut, "Glashaus: Werkbund-Ausstellung Cöln 1914" (1914). This book, Taut, "Glass House Cologne Werkbund Exhibition," 101.
2. The Luxfer Prism Company was founded in Chicago in 1897 and quickly established locally owned syndicates in several countries, including Germany. Among its first designers was the young Frank Lloyd Wright. The German Luxfer Prism Company produced the glass prisms for Taut's Werkbund project and for The Fairy Palace (1919–20), his children's game in glass.
3. See, most immediately, Scheerbart's contemporaneous treatise: Paul Scheerbart, *Glass Architecture*, trans. James Palmes (New York: Praeger, 1972). This book, 22–90.
4. Taut later described the apparatus as a "großprojizierten Kaleidoskop," a description from which "projecting" was inexplicably dropped in the contemporaneous English translation. Bruno Taut, *Die neue Baukunst in Europa und Amerika* (Stuttgart: J. Hoffmann, 1929), 28; Bruno Taut, *Modern Architecture* (London: Studio, 1929), 56.
5. See, for example, Frank Herbert Richardson, *Motion Picture Handbook* (New York: Moving Picture World, 1916), 173. These glass screens were for front, not rear, projection. Accordingly, the promotional value of the milky glass screen in the Glass House, which employed rear projection, was admittedly nominal.
6. See Paul Scheerbart, "Das Glas-Theater," *Die Gegenwart* 78 (1910): 914. This book, Scheerbart, "The Glass Theater," 187.
7. David Brewster, *The Kaleidoscope: Its History, Theory, and Construction*, 2nd ed. (London: John Murray, 1858), 117.
8. Paul Scheerbart, *Kometentanz: Astrale Pantomime in Zwei Aufzügen* (Leipzig: Insel-Verlag, 1903), 42.
9. Paul Scheerbart, *Münchhausen und Clarissa* (Berlin: Oesterheld, 1906), 29.
10. Paul Scheerbart, "Auf der Glasausstellung in Peking," in *Das große Licht: Ein Münchhausen-Brevier* (Leipzig: Sally Rabinowitz, 1912), 94–95. This book, Scheerbart, "At the Glass Exhibition in Peking: The Old Baron's Diary Entries," 200.
11. Paul Scheerbart, "Die wilde Jagd: Ein Entwicklungsroman in acht anderen Geschichten," in *Rakkóx der Billionär und Die wilde Jagd* (Berlin: Insel-Verlag, 1900), 97. Enticing precedents for kaleidoscope architecture include the improbable convergence of "Oriental" and glass architecture in a replica of the Alhambra's Hall of Abencerrages, presented in the Crystal Palace at Sydenham; according to contemporary sources, both the replica and its glass container were experienced as giant kaleidoscopes. See Arnaud Maillet, "Kaleidoscopic Imagination," *Grey Room* 48 (2012): 46.
12. Brewster, *The Kaleidoscope*: 1.

Hand-drawn plan of Bruno Taut's Glass House. Note the custom-built kaleidoscope and motorized projector at the rear of building, the 4-foot (1.2 meter) screen just in front of the projector, and the special recess used to darken the viewing space in front of the screen. The Glass House projector has previously been misidentified as a cinematograph but was a possibly unique motion-producing kaleidoscope with a lamp for projecting the images created by artists, a visual program commissioned by Taut specifically for this project.