

Hospital Building That Merges Science and Art: Alvar Aalto[†]

Marek H. Dominiczak*

Architecture is one of the fine arts—despite its high technical content. It belongs with painting and sculpture. Historically—from ancient Greece through Rome, the Middle Ages, and the Renaissance—painting and sculpture were closely associated with buildings. Sculptures and mosaics decorated buildings themselves—as, for instance, the Parthenon in Athens or the Byzantine churches—or they complemented them, like the altars in medieval cathedrals. Later, in the 16th and 17th centuries, the illusionistic frescoes, such as those by the Bolognese artist Annibale Carracci (1560–1609), created virtual open spaces in the interiors of palaces and churches. Such associations of painting with architecture can also be seen much later, as in Matisse's Chapel of the Rosary in Vence (Chapelle du Rosaire de Vence) in Provence or in the nondenominational Rothko Chapel in Houston, Texas. Lastly, contemporary public art is part of urban spaces.

Architecture relates also to health, of course. In fact, some architects probably see healthcare as part of culture more clearly than many other professional groups (1). Initially, hospitals were buildings designed for the care of the needy rather than as specific places for the ill. The *Shorter Oxford English Dictionary* defines the word “hospital” as “a house for the reception and entertainment of pilgrims, travellers or strangers” (2). During the Enlightenment, city hospitals were redesigned to provide healthier environments, and places like the Lariboisière Hospital in Paris became examples of “healing” architecture, with buildings designed to improve air circulation and hygiene. At the beginning of the 20th century, such designs were particularly relevant in the sanatoria built for patients with tuberculosis, where access to fresh air was regarded as the mainstay of treatment. Thomas Mann described life in such an institution in *The Magic Mountain*.

One such sanatorium was the Paimio Sanatorium near Turku in Finland, designed by the Finnish archi-

tect Alvar Aalto (1898–1976) (3–5). Aalto was born in Kuortane and graduated from the Helsinki University of Technology. His earliest work was associated with the style known as Nordic Classicism, which was adopted by architects in Sweden, Norway, and Finland between 1910 and 1930. This style reflected neoclassical trends then prevalent throughout Europe. In the 1920s, however, Aalto began to design in the Modernist style. A building that illustrates the transition between the 2 styles is the library in the town of Viipuri (today's Vyborg in Russia), built in 1927–1935. Aalto worked at the time when Le Corbusier was promoting his ideas of buildings as “machines for living.” Aalto's style, although emphasizing simplicity of form, was more conscious of nature and local traditions than mainline modernism. He was also influenced by László Moholy-Nagy (1895–1946), one of the key individuals in the German (and later American) Bauhaus (6). There is also an American connection: Aalto was a visiting professor at the Massachusetts Institute of Technology in 1941 and later designed one of MIT's student dormitories, the Baker House.

The Paimio Sanatorium opened in 1932 (7–9). It remains an active hospital today. The buildings stand in the forest, and the design beautifully integrates them with the surrounding nature (Fig. 1). At the top of the main building is a terrace where patients were to spend time in the fresh air. The large windows with low sills enable good views of the surrounding forest from the beds. The hospital is an example of Aalto's “total design,” which includes, besides the building itself, details of interiors and, in Paimio, furniture and fittings in patients' rooms.

Industrial design became another major strand of Aalto's activity. He and his first wife, Aino Aalto (1894–1949) designed extraordinary furniture and glassware (4). The birch wood chair known as the Paimio chair has been exhibited at the Museum of Modern Art in New York as a design classic (5). The glass Aalto vase, unveiled in 1937 at the Paris World Fair, continues to be marketed today. Alvar Aalto belongs to the fascinating group of 20th century architects that includes the Spaniard Antoni Gaudí, the American Frank Lloyd Wright, and the Scot Charles Rennie Mackintosh. They designed buildings that added another dimension to modernist architecture. Their interactions

College of Medical, Veterinary and Life Sciences, University of Glasgow, Glasgow, UK.

[†] This article is dedicated to the memory of Veikko Näntö (1930–2010), who was professor of clinical biochemistry at the University of Turku, Finland.

* Address correspondence to the author at: Department of Biochemistry, Gartnavel General Hospital, Glasgow G12 0YN, UK. Fax +44-141-211-3452; e-mail marek.dominiczak@gla.ac.uk.

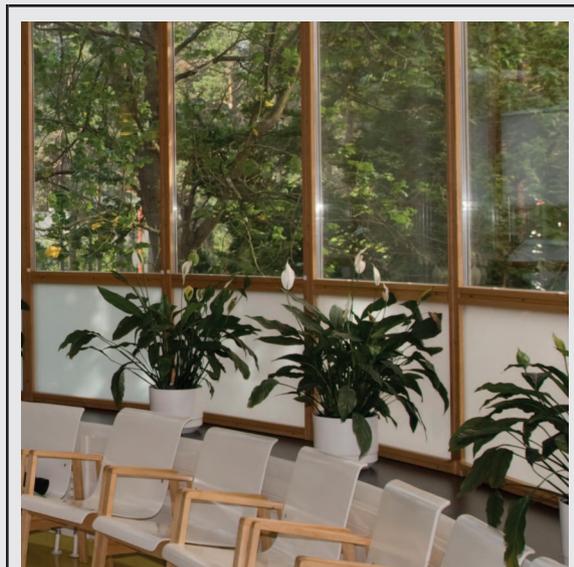


Fig. 1. Waiting area in the entrance hall to the Paimio Hospital.

Photograph by M. Dominiczak.

with nature and their indefinable “human factor” made them exceptional.

And what about contemporary hospital design? It remains a constant challenge. Hospitals are buildings that should—at least theoretically—not only respond to the requirements of science and have a built-in flexibility to meet future technological and public health demands, but also create an environment that has a positive effect on patients. Substantial evidence confirms that architectural design improves patient outcomes (9–11). The challenges of hospital design remind one of the importance of combining art and science in its application. When we consider the “two cultures”—the scientific one and the humanistic one—we talk theory. When it comes to designing a

humane hospital, these 2 cultures merge in a very practical way.

Author Contributions: All authors confirmed they have contributed to the intellectual content of this paper and have met the following 3 requirements: (a) significant contributions to the conception and design, acquisition of data, or analysis and interpretation of data; (b) drafting or revising the article for intellectual content; and (c) final approval of the published article.

Authors’ Disclosures or Potential Conflicts of Interest: No authors declared any potential conflicts of interest.

Acknowledgments: My thanks to the staff of Paimio Hospital for their hospitality during my visit there in 2009, and to J. Gardiner in Glasgow for her excellent secretarial assistance.

References

1. Wagenaar C, ed. The architecture of hospitals. Rotterdam: NAI Publishers; 2006.
2. Hospital. In: Brown L, ed. The new shorter Oxford dictionary. 3rd ed. Oxford: Clarendon Press; 1993. p 1266.
3. Wikipedia. Alvar Aalto. http://en.wikipedia.org/wiki/Alvar_Aalto (Accessed September 2012).
4. Aalto.com. About Alvar Aalto. <http://www.aalto.com/about-alvar-aalto.html> (Accessed September 2012).
5. Museum of Modern Art. Alvar Aalto. http://www.moma.org/m/explore/collection/art_terms/34/0/6.iphone_ajax?klass=artist#Individual (Accessed September 2012).
6. Borchardt-Hume A, ed. Albers and Moholy-Nagy. From the Bauhaus to the New World. London: Tate Publishing; 2006.
7. Paimio Sanatorium. <http://www.alvaraalto.fi/net/paimio/paimio.html> (Accessed September 2012).
8. National Board of Antiquities. Nomination of Paimio Hospital for inclusion in the World Heritage list. <http://www.nba.fi/410/nomination-of-paimio-hospital.pdf>. (Accessed September 2012).
9. Dominiczak MH. Of wandering doctors, cities, and humane hospitals. *Lancet* 2010;377:22–3.
10. Ulrich RS. View through a window may influence recovery from surgery. *Science* 1984;224:420–1.
11. Sternberg EM. Healing spaces. The science of place and well-being. Cambridge, MA: Belknap Press of Harvard University Press; 2009.

DOI: 10.1373/clinchem.2012.182055