The endless model



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This research examines the influence of the physical scaled model for the Endless House, made in 1959, on architect Frederick Kiesler's process of designing. New laser scan data was used to create a 3D digital reconstruction of the scaled model providing for the first time an accurate, accessible, and permanent record. The digital reconstruction of the physical model helped to expand existing knowledge on the way Kiesler worked, facilitating a better understanding of how he used the physical model to embody and perceive the principle of continuity. In the context of digital architectural practice, we can learn from ways of making and design processes employed by pre-digital architects as a means to visualize new directions and possibilities for computational modelling.

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rederick Kiesler's scaled model for the Endless House, made in 1959, has historic and architectural significance with links to theories of digital architecture practiced today. The Endless House was conceived by Kiesler as a 'nuclei of spaces' held in continuous correlation. Kiesler (1966: p 566) stated that it should not be viewed as an object but rather as a coordination system, a series of living spaces composed depending on their association with other spaces and the external environment:

The "Endless House" is called

"Endless" because all ends

Meet and meet continuously.

It is endless like the human body –

There is no beginning and no end to it.

This paper explores the function of the scaled model for the Endless House, not merely as a presentation model commissioned for the Museum of Modern Art (MoMA) exhibition Visionary Architecture, 1960, but to better understand its influence on Kiesler's process of designing — the interplay between making and imagining (Figure 1).

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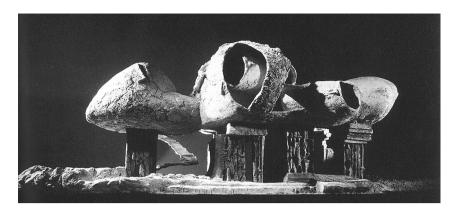


Figure 1 The model for the Endless House, 1959. © 2015 Austrian Frederick and Lillian Kiesler Private Foundation, Vienna.

There is no record of a 3D scan of the original scaled physical model for the Endless House prior to this research. New 3D laser scan data of the model is used as a research tool to enhance visualisation and provoke critique. This research concludes by reflecting on the value of conserving architectural scaled models through 3D digitisation.

1 The scaled model for the Endless House

To date, minimal conservational work has been required on the model, which measures an impressive 2490 mm long, by 485 mm wide and 890 mm high. It is elevated 460 mm, on a large rectangular concrete platform, with three separate piers (doubling as separate stair access to the house). Relative to the human body the organically shaped model is very large. It is a heavy construction made from approximately 25 mm thick wire-mesh and cement, and Plexiglas; yet, it is fragile, especially under vibration. Built at approximately a 1:16 scale, the model has a dominating presence within the room; it invites the viewer to interact with it — almost as if Kiesler had choreographed a sequence of interactive movements — only now, the viewer is not allowed to touch the artefact.

In 1958, Kiesler was commissioned \$12000 by Arthur Drexler — Director of the Department of Architecture and Design at MoMA from 1956 to 1987 — to draft construction plans for the Endless House to be erected in the garden of the MoMA museum. From the scaled model, Kiesler was able to interpret orthogonal sections, plans and elevations of the Endless House. The project later experienced funding difficulties and the challenge was too great to draft construction plans, and as a result the house was never built.

1.1 The role of scaled models

In the twentieth century, scaled models were extensively used as a way of testing new architectural ideas, breaking away from the Cartesian box or researching the sensitivity of materials. As Mills (2005: p IV) suggests 'During

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