Typehouse II

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At first, there was mostly soil and self-seeded weeds outside the windows. Construction has taken place here; machines have been here. Little by little, plants are finding their way back to the surface. We have added more, planted trees and laid flower bulbs, and we follow the course of the year closely. On the first floor, it is the neighbours' treetops we see through the windows. Every year in April, the large cherry tree just outside the shower blooms, casting a pale pink hue. And then it is that time of year when the house with the thick walls always has its windows open: it airs, and things rattle.

This project is an afterthought – or rather, a further thought – about a house that has been built twice and is now being built again as a model. We call it a type house, as two identical houses already exist in two different locations, and in this text, we reflect on the meaning and potential of the type house. Through the model, the type is further developed, allowing us to consider the personal experience of inhabiting the house alongside the rational logic of industrialised type house. The type house becomes a vessel for inhabitation, where culture and technology converge through movable elements and systems that regulate interior climate.

TYPEHOUSE TOPOGRAPHIES

As the architect Witold Rybczynski writes: "´Inhabiting´ does not only mean living within. It means occupying – infusing a particular site with our presence, and not only with our activities and physical possessions but also with our aspirations and dreams. We live in a house, and in the process we make it alive."[1] The relationship between the house as a type, the site, and inhabitation appears particular in this project as it is both interwoven and separated. The exhibited model is a further development of two identical houses built in different locations in Humlebæk, Denmark between 2020 and 2023. One of them we live in [fig. 1]. The model represents the tectonics and geometry of the house. It is separated from its sites and is developed drawing upon experiences gained through inhabiting the house, knowledge that we did not have when we designed the house before it was built; experience from the construction process and from seeing the house at full scale. And experience of moving furniture around, maintaining the house, and continuing to build on it. We have seen and felt the seasons change, and we have adjusted temperatures and airflows. We have observed the

house with the awareness that we could have done some things differently. We have seen how the two houses are identical, yet different, influenced by the site and the inhabitants.


Figure 1. The roof of the house seen from the street. (Photograph by the authors.)

Up beneath the roof, we sleep. We wake with a view of the rooks' trees on the other side of the railway. The scheduled noise from the train we only rarely hear. Out in the corridor, the sun rises as we move down the stairs toward preparing the day's first meal. We heat and brew, sensing the now snow-covered garden.

The two built timber houses contain 138 m² of living space; they are compact, with a footprint of 8.6 × 8.6 meters and a height of 8.5 meters. The primary material of the house is timber. Resting on four concrete foundations, a timber structure supports a fully vaulted roof. The timber structure remains visible outside the house's thermal envelope, shaping its appearance and creating a free, open space beneath the roof [fig. 2 and 3]. At a scale of 1:5, the model represents the two houses but as a further development. Certain elements are omitted, while new ideas are introduced. Where the completion of a building often marks the end of a process, the model allows the project to continue.
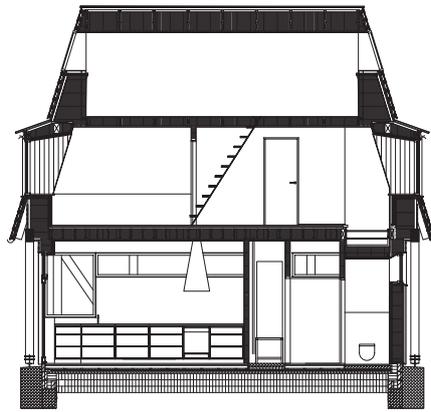
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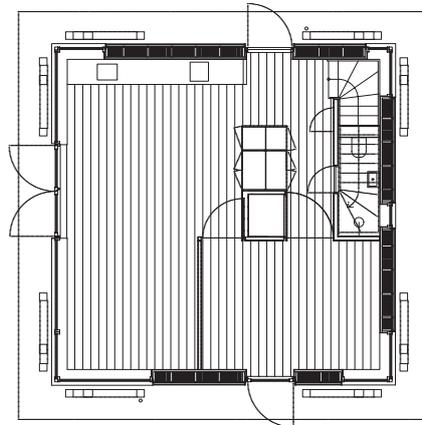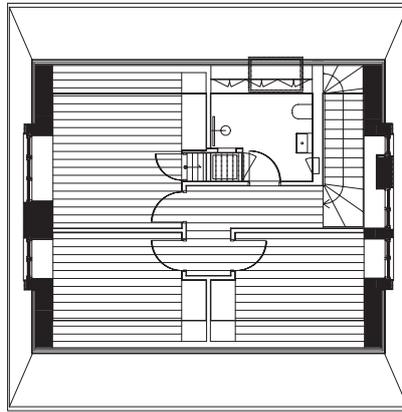
Figures 2, 3. Section and plan drawing, ground floor and first floor of Two Houses in Humlebæk.

(Drawings by authors.)

Type (typology), understood as an ideational and abstract conception of a work, is contrasted by Aita Flury and Roger Boltshauser with topography, which in its broadest sense can be understood as the context of a work, representing a field of existing conditions such as landscape, climate, culture, and material.[2] By rebuilding the house as a model, its spatial idea is clarified and abstracted, temporarily removing it from its specific site in order to reconsider the relationship between type and topography. As Flury and Boltshauser note, the act of constructing analytical models embeds spatial strategies bodily, making the physical model essential to imagining how architecture can become something else.[3] In this project, the model similarly functions as a tool for rethinking spatial formation beyond the built house. They further write that when a work is approached as a type, attention shifts toward its expressive qualities - those aspects that actively shape spatial perception and experience.[4] The model can be understood as a type without topography or awaiting topography – and it can be experienced as a very large model in the context of an exhibition. The intention is to discuss both the separation and the interaction between type and topography.

AIR, TECHNOLOGY, AND CULTURE
The French philosopher Gilbert Simondon's theory of *the technical object* concerns how technical artifacts develop, are understood, and become increasingly coherent through use, adaptation, and integration with its environment[5], which has interesting implications for architecture and inhabitation and introduces a common ground that encompasses both culture and technology. About buildings he writes:

"Buildings insert themselves between Man and the geographical milieu by producing a microclimate on the inside, they are adapted by Man by […] the possibility of heating and lighting, the absence of rain or wind; on the outside, they are adapted to the milieu, in terms of stability and balance, by their foundations, the way the material are assembled; they are also adapted to their milieu by their roof cover […]"[6]

The compact and directionless geometry of the house allows it to adapt to different sites and orientations, prompting ideas of further repetition and of rationales associated with the prefabricated house. The framework of the *Technical Object* offers a way to think of the type house, as both cultural and technical – generic, yet capable of becoming meaningful through use. The premise of the type house is that it must be understood without a specific site – topography is largely reduced to climatic conditions and the basic notion of inhabitation. By inhabiting a house, one comes to know

it, and over time one becomes better at living with it and using it as an instrument that regulates light and dark, water, air, and temperature. There is significance in living with variations, for example in temperature – differences that a digitalised ventilation system, designed to maintain a constant and undisturbed climate, may erase.

After showering, we open the window, and cold outdoor air dissolves the steam from the hot water. The floor is warm, heated by water pipes supplied by a heat pump that exploits temperature differences in the air. The thick walls and the large roof retain heat. In summer, that window is open most of the time, as are the two windows on the second floor, which act as a funnel drawing air up through the house.

In *The Four Elements of Architecture* (1851), Gottfried Semper identifies the hearth as the primary and original element of architecture. For Semper, architecture does not begin with structure, enclosure, or form, but with fire and the social practices that gather around it.[7] But the modern house no longer requires fire, as contemporary technical demands of airtightness and maximized insulation, have changed the conditions. The anatomy of Gottfried Semper's description of architecture's four elements has been turned upside down, and the tectonics that Semper describes as a mediating link between the technical properties of building elements and their cultural significance, appear to be challenged by the influence of technology, as Sebastien Marot claims.[8] Instead of a fireplace, the model introduces an air-place: a funnel that connects the cool air of the ground with the heated spaces of the house. Inspired by the existing airflow in the house, it is here formalized as a physical structure with connections to different levels and rooms [fig. 4]. The heat pump is replaced by ground-source heating through a vertical borehole. It is a combination of a very old and low-tech system with a highly technological system comparable with the statement of Bruno Latour: "I may use an electric drill, but I also use a hammer. The former is thirty-five years old, the latter hundreds of thousands [of years old] … show me an activity that is homogeneous from the point of view of modern time."[9]

TYPEHOUSE MOBILITY
Grass has grown in, and the fox passes by at the same time every evening. A pile of bricks, no longer needed elsewhere, has been placed in front of the garden door, forming a large surface in the garden. Beneath the house's load-bearing columns are concrete foundations, heavy and anchoring. Between them are doors and stepping stones; around them are plants and bricks. The house and the garden draw closer to one another.
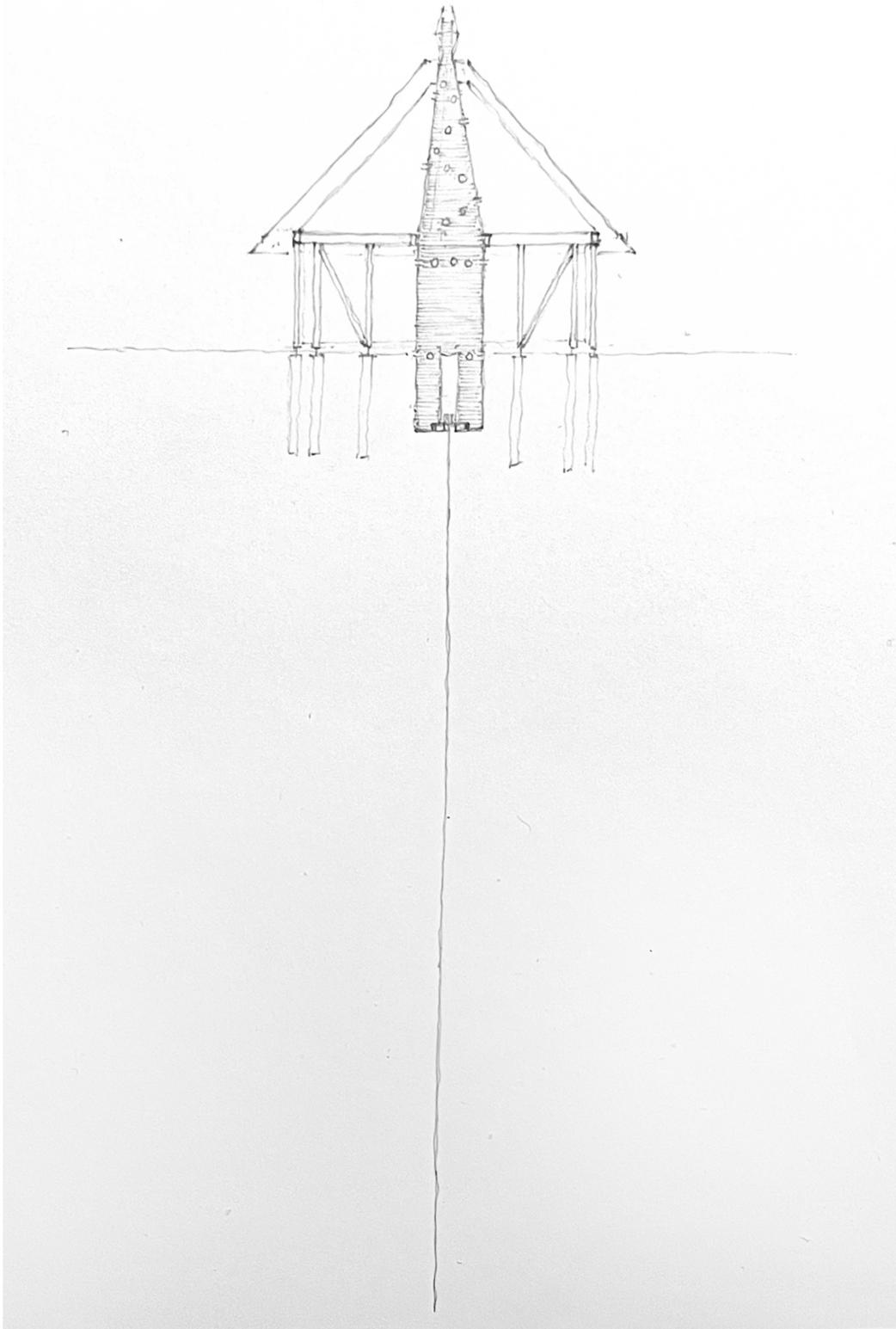
Figure 4. Section sketch of the air funnel and vertical heat borehole. (Drawing by authors.)

On the four corners of the house are foundations beneath its sixteen columns, anchoring the large roof to the ground. Between the foundations is a cast concrete slab forming the floor deck. In the model, the foundations screw more gently into the ground, and the deck hovers as a light structure above the ground between the sixteen points. With its point-based construction, the house situates itself almost gently on a site, and perhaps it can move again. Due to the scarcity of timber and the craft-based nature of construction, historic timber-frame houses generated a shared understanding in which houses were commonly dismantled without being destroyed, moved, and re-erected when a family settled in a new place. Although vernacular building is in many ways outdated, it appears to contain forgotten potentials and meanings.

Both industrial prefabricated constructions and vernacular movable houses are designed with mobility in mind; yet while vernacular houses accommodate initial idea of replaceable elements and movement across sites and uses, prefabricated construction is optimized solely for the building process itself. Perhaps the type house, in its most radical interpretation, can be understood as something one can take along – as a house that borrows a place. In this sense, the house becomes more of a vessel or a technical object than something permanently tied to a site. It can incorporate rationales from both industrialised prefabrication and vernacular building systems, including replaceable elements and the potential for movement.

TYPE MODEL, REDISCOVERED

The model's construction follows the same logic as that of the houses [fig. 5], but the joints are re-interpreted as wooden connections, drawing on the idea of a building kit that can be assembled efficiently and carefully on a given site [fig. 6]. The size of the model is large for a representation – it could also be seen as a very small pavilion or a large dollhouse. Often the material of a model represents another material and is not as direct a representation as in this project, which could inspire new readings. Gottfried Semper famously describes how stone temples preserve traces of earlier timber tectonics, illustrating the principle of material substitution without loss of form. With the theory of *Stoffwechsel* (material transformation), Semper proposes that forms once bound to the processes of a specific material may be transformed into other materials. He describes how all forms maintain connections to their original techniques and materials yet may be released from these connections in relation to new conditions, materials, and techniques[10].

Figure 5. Element from the timber construction during the building process. (Photograph by authors.)

Figure 6. Elements from the the model's building process taking place in the house. (Photograph by authors.)

The idea of *Stoffwechsel* offers a possible opening through which ideas may shift and be transformed into new contexts and conditions. In this project, the fireplace is reimagined as a climatic or atmospheric device – an air funnel – through which environmental flows are organized. The model thus becomes a medium for further interpretation.

Can this model point toward a type house that extends the rationales of the prefabricated house beyond the construction process alone? And can a type house become meaningful through inhabitation and local topographies, despite not being site-specific? The house's simple geometry is, in several respects, optimised according to constructional rather than domestic rationales. While the plans are intended for habitation, the square – as an abstract figure – and the underlying module remain primarily constructional logics. The house is inhabited despite, and not because of, its geometric dispositions.

Thinking of the type house as something that moves in and becomes meaningful through use offers a productive way of reimagining the prefabricated house. In this project, we explore how the house might enter a site more gently. The elements are conceived through an idea of mobility – both as components assembled on site and as parts capable of being shifted or relocated. By combining old and new technologies, the project seeks to reconnect the house with a culture of inhabitation in a direct, intuitive, and atmospheric manner – through the orchestration of air flows.

Our daughter says that the fox tapped on the window, as our cat usually does. No one knows whether it was dream or reality.

Notes

[1] Witold Rybczynski, *The Most Beautiful House in the World* (Penguin Books, 1990), 171.
[2] Aita Flury & Rodger Boltshauser. *Elementares zum Raum / A primer to Space : Roger Boltshauser Werke / Works.* (Springer, 2008), 82-84.

[3] Flury & Boltshauser. *Elementares zum Raum / A primer to Space,* 45.
[4] Flury & Boltshauser. *Elementares zum Raum / A primer to Space,* 82-84.
[5] Gilbert Simondon, *On the Mode of Existence of Technical Objects* (University of Minnesota Press, 2017)
[6] Gilbert Simondon, *L'Invention dans les techniques*, (1971) Seuil 2005 quoted in Sébastien Marot, "Hearthbreaking" in *Elements of Architecture, book 10, Fireplace* ed. Stephan Trüby, (Masilio, 2014), 119.
[7] Gottfried Semper. *The Four Elements of Architecture and Other Writings*. (Cambridge University Press, 1989), 102-103.
[8] Sébastien Marot, "Hearthbreaking" in *Elements of Architecture, book 10, Fireplace* ed. Stephan Trüby, (Masilio, 2014), 106-123.
[9] Bruno Latour, *We Have Never Been Modern.* (Harvester Wheatsheaf / Harvard University Press, 1993), 75.
[10] Ákos Moravanszky. *Metamorphism: Material Change in Architecture*. (Birkhäuser, 2017) 15-25.

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BIOs:

Emilie Henriksen runs Emilie Henriksen Studio and co-heads the Bachelor program *Architecture's Anatomy and Fabrication* at the Royal Danish Academy. Architect Høgni T. Hansen, initially trained as a carpenter, specializes in timber construction and combines practical building knowledge with artistic and theoretical inquiry; he also teaches in the Master's program in Art and Architecture at the Royal Danish Academy. They have realized projects across Europe that explore the intersection of architectural requirements, artistic method, and inhabitation, including *Two Houses in Humlebæk* (2023), featured in *60 Small Houses – Danish Architecture 1915–2023* and *Biogenic Materials, Tectonics, and Architecture.*