EVAPORATED ROOMS AN APARTMENT FOR A YOUNG DOCTOR

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KEYWORDS: TEMPERATURE, AIR FLOWS, SECTION, DOMESTIC SPACE, APARTMENT.

In the renewal of this apartment, the assumptions made in Domestic Astronomy have been tested in the real world. Given a predefined floor plan, the intervention focuses on relocating the functions in section according to the temperature, light and humidity that each one needs. Thus, form follows the flows of energy, completely redefining the usual logics of architectural composition.

For this apartment in Lyon, we used the most recent recommendations for domestic internal temperatures to reduce energy consumption in the built environment. This approach led us to shift from working in plan to composing in section based on atmospheric gradations.

The new recommendations advocate reduced temperatures in spaces such as the corridor (16°C), kitchen (18°C) and bedroom (16°C),

where we are engaged in movement and activities that generate heat and where we are conventionally dressed. Areas where we are not in movement or where we are not conventionally dressed such as the living room (20°C) or bathroom (22°C) will instead be heated to a greater extent.

If we were working in plan, and we would like achieve these objectives of reducing energy, we would need to physically separate the different rooms –each with its own

function—by using walls and closed doors to prevent air from rooms at different temperatures to mix and become homogenized in a manner similar to the way in which hot and cold water become mixed. Therefore, to strictly follow these contemporary recommendations it would imply abandoning the free plan and spatial continuity acquired during modernity and returning to the plans that were drawn in the XIX century, where each room was separated from the others by walls and doors.

We can avoid this regression by working in section, based on the intrinsic physical behavior of air, which rises when hot and sinks to the ground when it is cold. We can start composing rooms and spaces, or rather begin dividing programs in space, without the use of these walls

delineating the contours of the parts. We can compose using only the spatial distribution of temperatures and luminosities in the air to divide the program. The goal is no longer to design the plan but rather to design an atmosphere, with its various weather gradations, through which one moves to find a certain temperature or a certain light.

We propose not to draw rooms and spaces but to situate the furniture and its usages at particular heights, temperatures, and light intensities. This methodology would make an atmosphere a bit like a natural landscape, where one might take refuge under a tree when it rains or where one might sit in the shade of a rock when it gets too hot. Thus, the chair where you sit alone is the

Corte AA – humedad /
Section AA - humidity
E./S. 1: 100

Corte AA – térmico / Section AA - thermal
E./S. 1: 100

Corte BB / Section BB
E./S. 1: 100

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Corte CC / Section CC
E./S. 1: 100

Planta nivel / Floor plan level $\pm 0,5$ m

Planta nivel / Floor plan level $+1,0$ m

Planta nivel / Floor plan level $+1,5$ m
E./S. 1: 200

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highest point in the upper, warmer air, just like the shower where you are naked. The sofa, on the other hand, where one is more social and interactive, will be somewhat lower, as its temperature will rise due to the multiplication

of warmth that occurs when several individuals are sitting on it. The kitchen floor would be placed lower still, reducing its temperature, while the bed would be found in the coldest part of the house, on the floor. **ARQ**

HABITACIONES EVAPORADAS, DEPARTAMENTO PARA UN JOVEN DOCTOR
EVAPORATED ROOMS, AN APARTMENT FOR A YOUNG DOCTOR

Arquitectos: Philippe Rahm architectes

Equipo / Team: Renaud Pinet, Mathieu Bujnowskyj y Marina Huguet i Blasi

Ubicación / Location: Perrache, Lyon, Francia

Encargo / Commissioned by: Louis Malachane

Superficie total / Surface Area: 75 m²

Año de construcción / Year of construction: 2011

Fotografías / Pictures by: Nicolas Pauly.

Architect, Ecole Polytechnique Fédérale, Lausanne, Switzerland. Principal in the office of Philippe Rahm architectes, based in Paris, France. His monographic books include *Physiological Architecture* (2002), *Distortions* (2005), *Environ(ne)ment: Approaches for Tomorrow* (2006), *Architecture Météorologique* (2009), and *Constructed Atmospheres* (2014). He has lectured in renowned universities such as Yale, Columbia, Cooper Union, UCLA and the ETH Zürich. From 2010 to 2012, he held the Jean Labatut Professorship in Princeton University, USA. Since 2014 he teaches architecture design at the GSD, Harvard University, USA.