Gilles Clément | Philippe Rahm

manières d'agir pour demain

environ(ne)ment

approches for tomorrow

sous la direction de | edited by **GIOVANNA BORASI**

SKIRA | CCA

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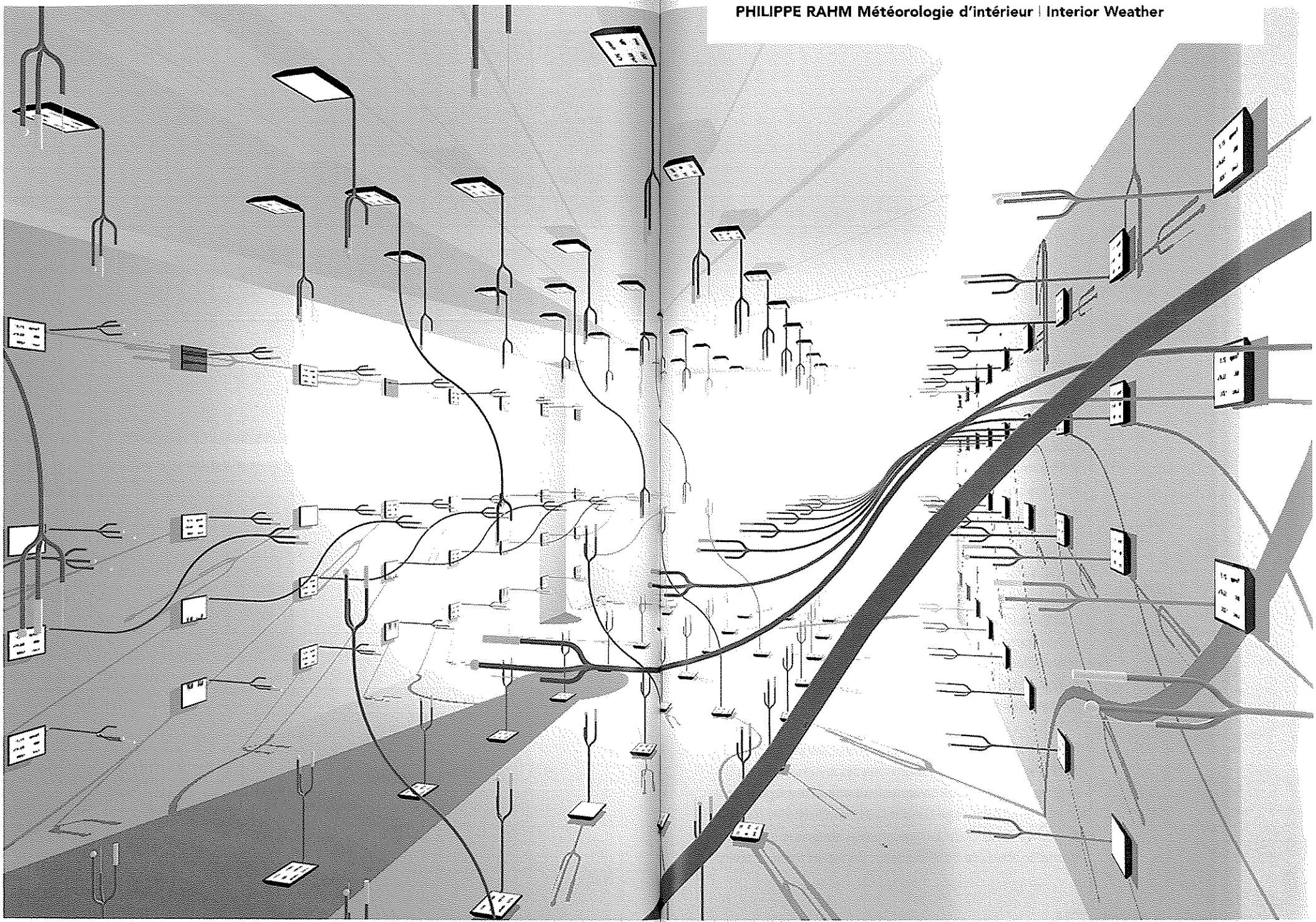


Interior Weather

Philippe Rahm

Philippe Rahm and Jérôme Jacqmin
Philippe Rahm Architects
with: Alain Robbe-Grillet
École cantonale d'art de Lausanne
Fabric.ch
Bram Dauw
Aude Genton
Tatiana Rihs

Interpretive architecture

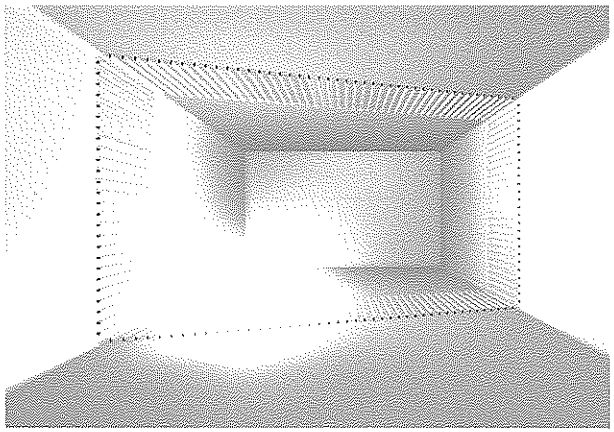
"Interior weather" is the spatial manifesto of "Form and Function Follow Climate." The installation at the CCA is conceived as two spaces, one gallery designated as the locus of production and measurement of an "interior weather" condition, and the other as the locus of interpretation of the resultant data. The first room could be described as *objective*, the second as *subjective*. The goal is to project an architecture that is capable of indicating possible uses of space which are dictated only by the chance confluence of three climatic parameters: temperature=T, light intensity=lux, and relative humidity=HR, so that T x lux x HR = form and function. The installation is conceived as a study to test the potential of fluctuating climatic conditions to generate new functions, and thus new architectural programmes. The proposals offered here are in no sense univocal, but represent the realm of sheer accident and possibility, one interpretation – and obviously not the only one.

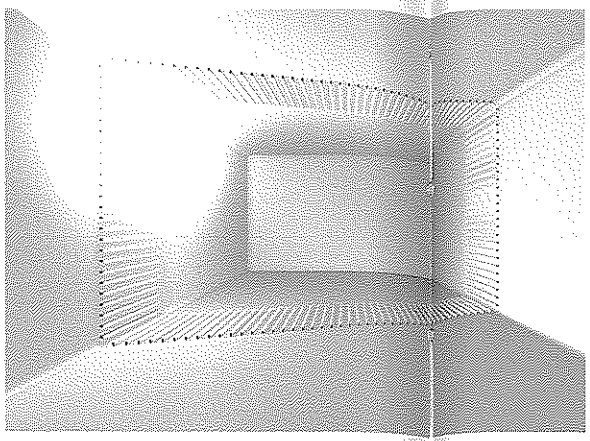
Taking inspiration from the history of dwelling, in which climatic conditions have been the traditional generator of functions, we have also drawn upon ergonomic recommendations for lighting, Swiss and EU thermal guidelines, and ambient temperature levels in relation to a range of different activities and types of clothing: precise manual work, for instance, calls for bright light, while heavy physical activity suggests a cool temperature.

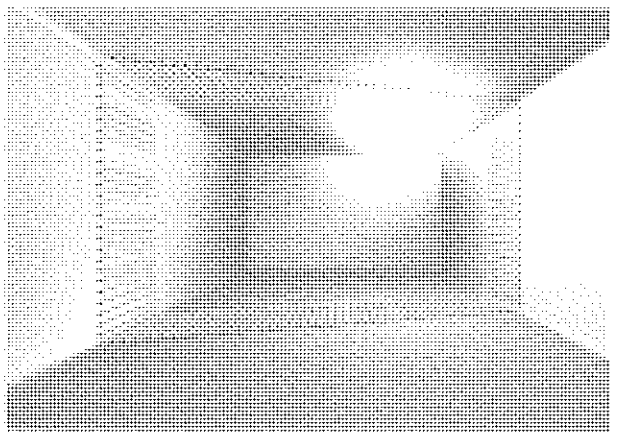
Our three parameters are keyed to sustainability-oriented reductions in energy expenditure. Temperature, light intensity, and relative humidity are understood as the three elements of a specific equation which translates into an atmospheric or climatic condition; the combination and recombination of these three parameters suggest an infinite number of possible interior weather situations. Temperature variations define what degree of clothing is appropriate, for example naked at 28°C, light clothing at 23°C, and outdoor wear at 16°C, and thus define the *subject*. Variations in light intensity define the activities in which this subject might engage in this space, becoming the *verbs* that animate the subject. The humidity level suggests a space as *complement*. Each equation invents certain activities for certain subjects in certain places, however these amount to purely *objective* readings.

Interior geography

In the first room, space becomes a micro-geography, "interior weather" that is constantly in flux. The meteorological data fluctuate in real time, giving birth to a variety of climatic moments and situations within the spatial volume. As an abstract reproduction of the earth's movement around the sun, the room's light source moves through space, generating modifications of the other climatic parameters via the appearance of micro-lows, convection mini-phenomena, and turbulence.







Météorologie d'intérieur, installation au CCA, octobre 2006. Études montrant le mouvement de la source lumineuse dans l'espace de la galerie, qui reproduit celui du soleil dans le ciel au cours d'une journée. | Interior Weather, CCA installation, October 2006. Studies showing how the light source moves through the space of the galliery to simulate the movement of the sun across the sky during day.

Some parts of the space are slightly warmer and more humid, others are cooler and more humid or cooler and less humid. A constantly evolving three-dimensional geography takes shape, with its temperate, tropical, and polar zones. Sensors distributed throughout the volume are plotted on a regular grid that is projected onto the six regular surfaces of the room, walls, floor, and ceiling. They measure variations of light intensity, relative humidity, and temperature in real time, providing a comprehensive meteorological reading of the entire space as its interior weather condition fluctuates.

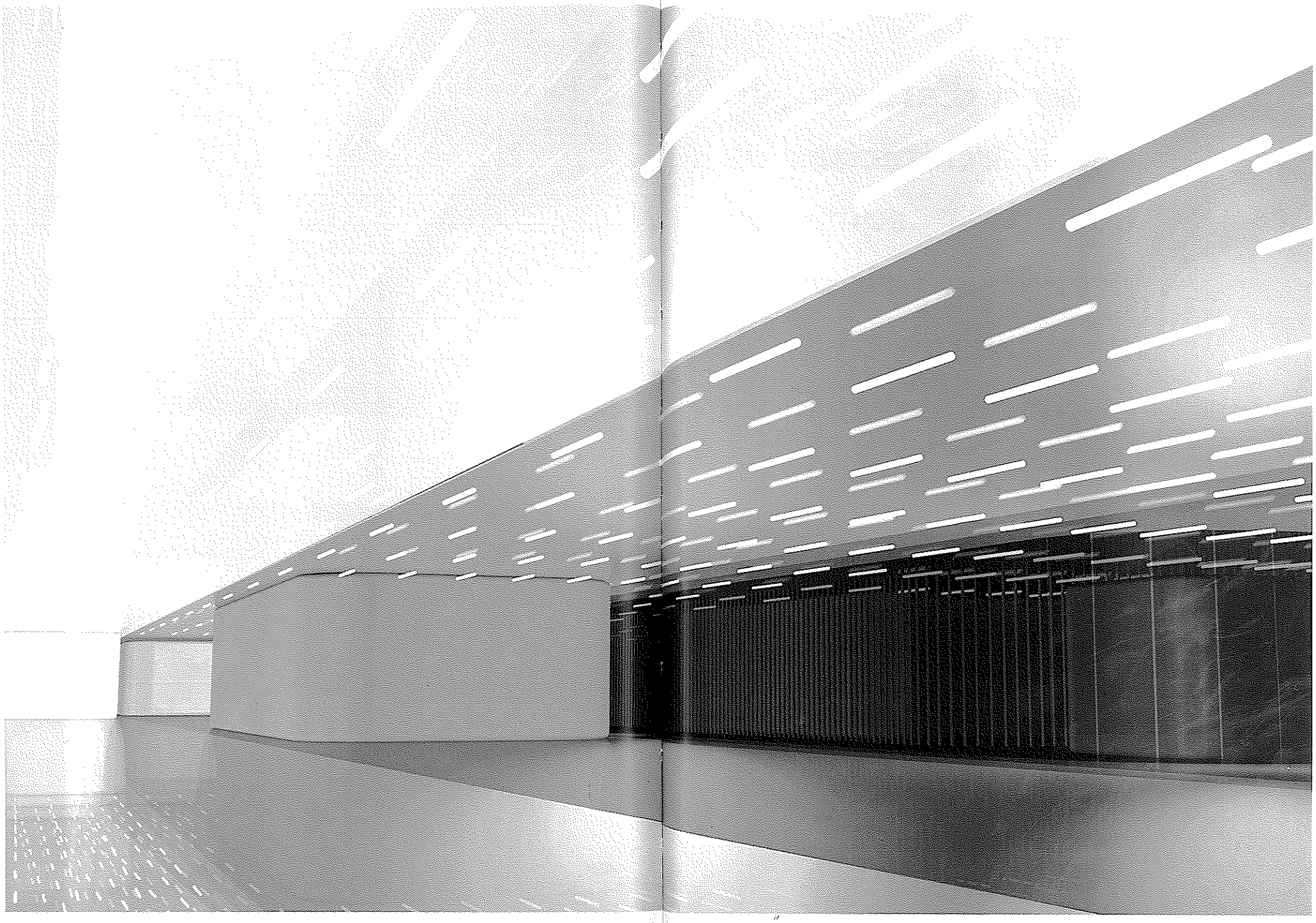
These measurements are transmitted to the second gallery, which is conceived as a space for reading and interpreting the data. Each set of coordinates indicating a point in space (with a latitude, a longitude, and an altitude) is analysed by a computer, which outlines a situation for it. The situations are then interpreted from different points of view: physiological, social, functional, etc. These interpretations initially draw on recognised physiological values, such as the relationship between the temperature of the space and the type of bodily activity or clothing it suggests, or between light intensity and hormonal activity. The data are then freely reinterpreted in "fictions" suggesting new spatial practices, new forms of social behaviour, and new urban and architectural forms.

An "interior geography" is inferred from these readings, which together constitute an "objective" language. Following Roland Barthes' 1954 essay "Objective Literature: Alain Robbe-Grillet," one might say that the descriptions they generate can be spatial or situational, but not analogous. Produced in a continuous present tense, the constantly changing climatic situations invoke Robbe-Grillet's 1956 prediction that gestures and objects in the novel of the future, will "be *there* before being *something*." In opposition to his own approach, we invited Robbe-Grillet to offer *subjective* interpretations of the various climatic situations that occur spontaneously, as if at the throw of the dice, in the space conceived for the CCA.

Philippe Rahm

Actualiser la relation de l'architecture au climat...

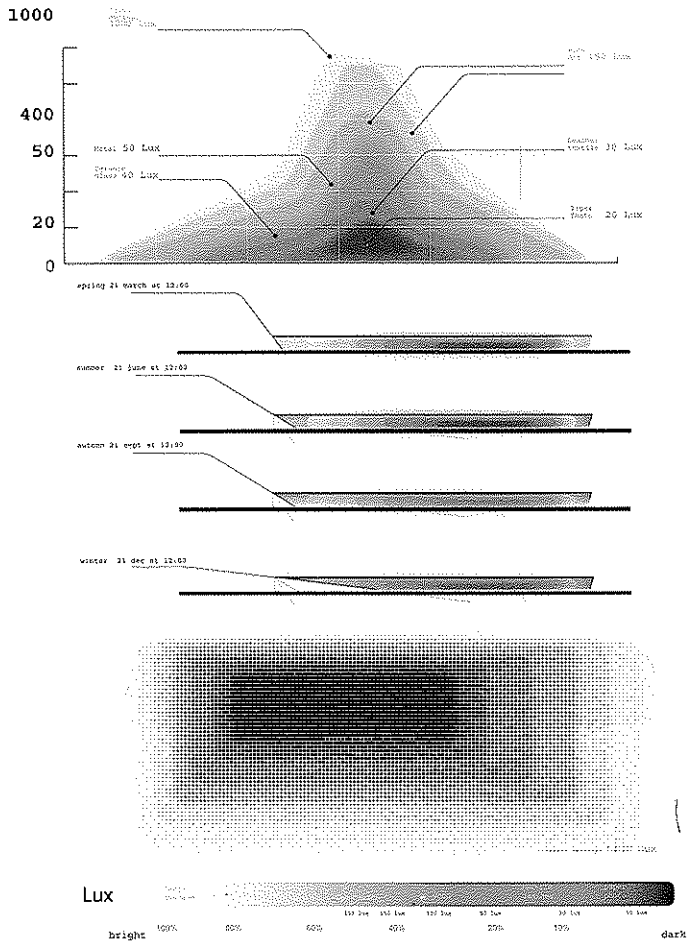
To actualize the relationship between architecture and climate...

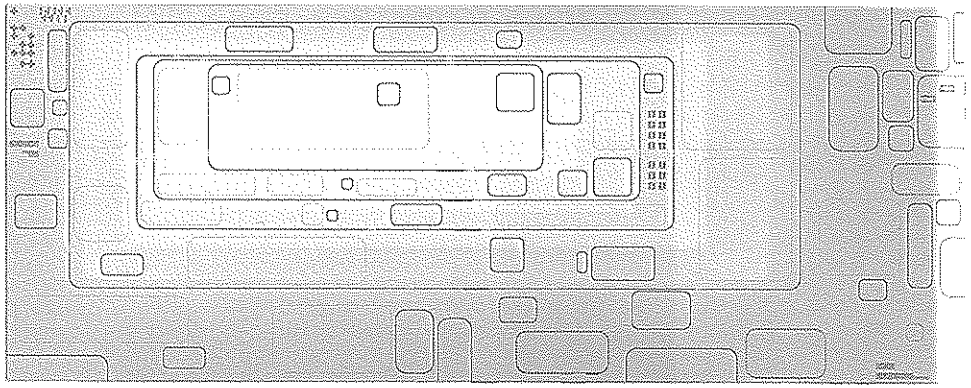


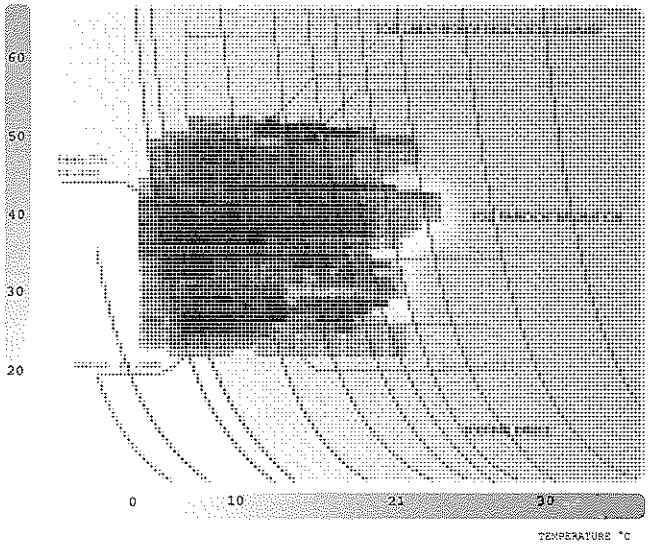
Climats atténués | Lowering Climates, 2005

Concours pour un nouveau
Musée national en Estonie /
Competition for a new national
museum in Estonia
Philippe Rahm architectes
Collaborateurs / Associates:
Cyrille Berger, Mustapha Majid,
Marc Eychenne

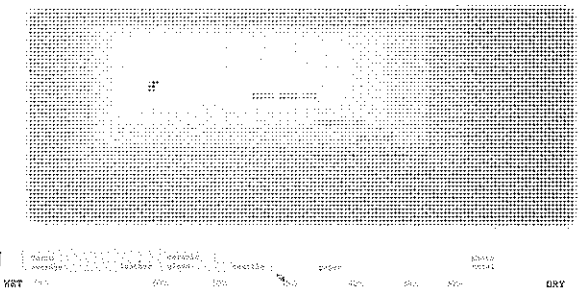
L'architecture n'est ici rien d'autre qu'un abaissement progressif de certaines valeurs climatologiques ambiantes telles que le taux d'humidité, la quantité d'ultraviolets, l'intensité lumineuse. L'objectif est de répondre à la nécessité du musée de conserver dans le temps les matériaux des œuvres d'art, en les soustrayant à certaines conditions chimiques et physiques naturelles qui entraînent leur détérioration. Le musée s'organise ainsi dans une dégradation du climat naturel, une progression rigoureuse et rythmée de l'extérieur vers l'intérieur, du plus humide au plus sec, du plus lumineux au plus sombre, du plus intense en ultraviolet au plus faible. Le plan du musée consiste en un emboîtement d'enveloppes en verre successives que l'on franchit les unes après les autres en passant du milieu ambiant naturel plus corrosif à un milieu de plus en plus dégradé et chimiquement neutre.





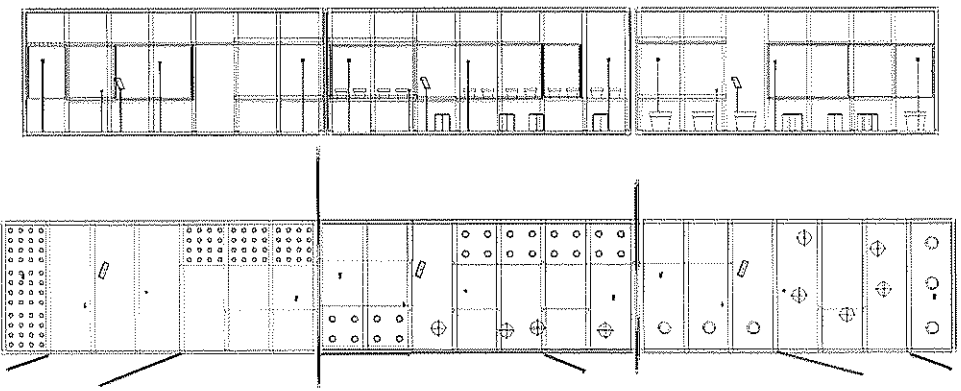


Here the architecture is no more than a gradual lowering of certain ambient climatic values, among them the humidity level, the quantity of ultraviolet rays, and light intensity. The aim is to meet the museum's need for long-term conservation by isolating works of art from natural, chemical, and physical conditions that cause deterioration. Via a steady gradation of the natural climate, the museum effects a rigorously controlled progression from exterior to interior, dampest to driest, lightest to darkest, maximum ultraviolet to minimum ultraviolet. The plan of the museum consists of a series of interlocking glass envelopes the visitor traverses one after the other as he moves inward from the more corrosive natural environment to one that is increasingly nuanced and chemically neutral.

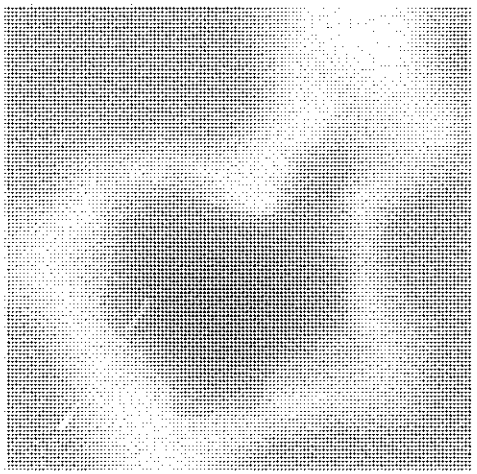


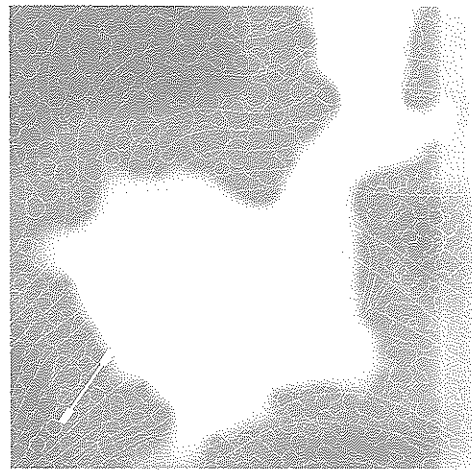
Maison dilatation | House Dilation, 2006

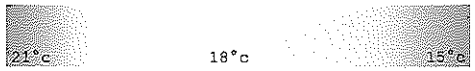
Philippe Rahm, Jérôme Jacqmin
Philippe Rahm architectes
Collaborateur / Associate:
Mustapha Majid
Maître d'ouvrage / Client :
Grizedale Arts

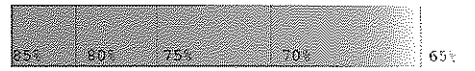


Le projet dilate les fonctions dans différents lieux, dans différents climats, dans différentes qualités de lumière, de température et d'humidité, qui sont définies selon les instants de la journée ou les saisons. Trois sites sont choisis (dans le pré, en lisière, dans la forêt) ; chacun d'eux est déterminé par rapport à des qualités climatiques spécifiques, en fonction de l'obscurité et de l'humidité créées par les arbres. Selon l'heure de la journée et la saison, la qualité intérieure des chambres variera. Selon l'activité, ce sera un certain type de climat qui sera recherché, la tiédeur de la forêt nocturne, la chaleur du pré en hiver durant la journée, la fraîcheur de la lisière au printemps.

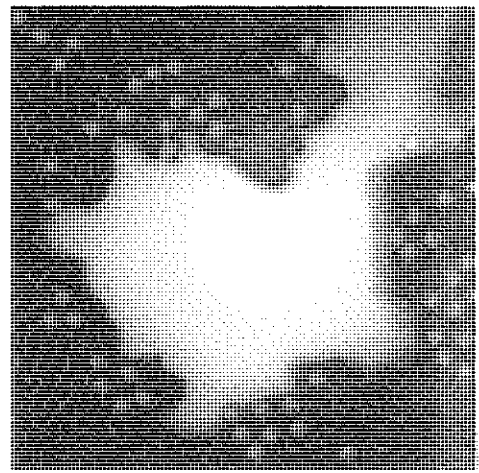


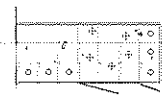


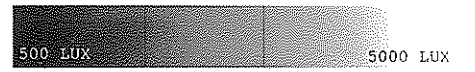


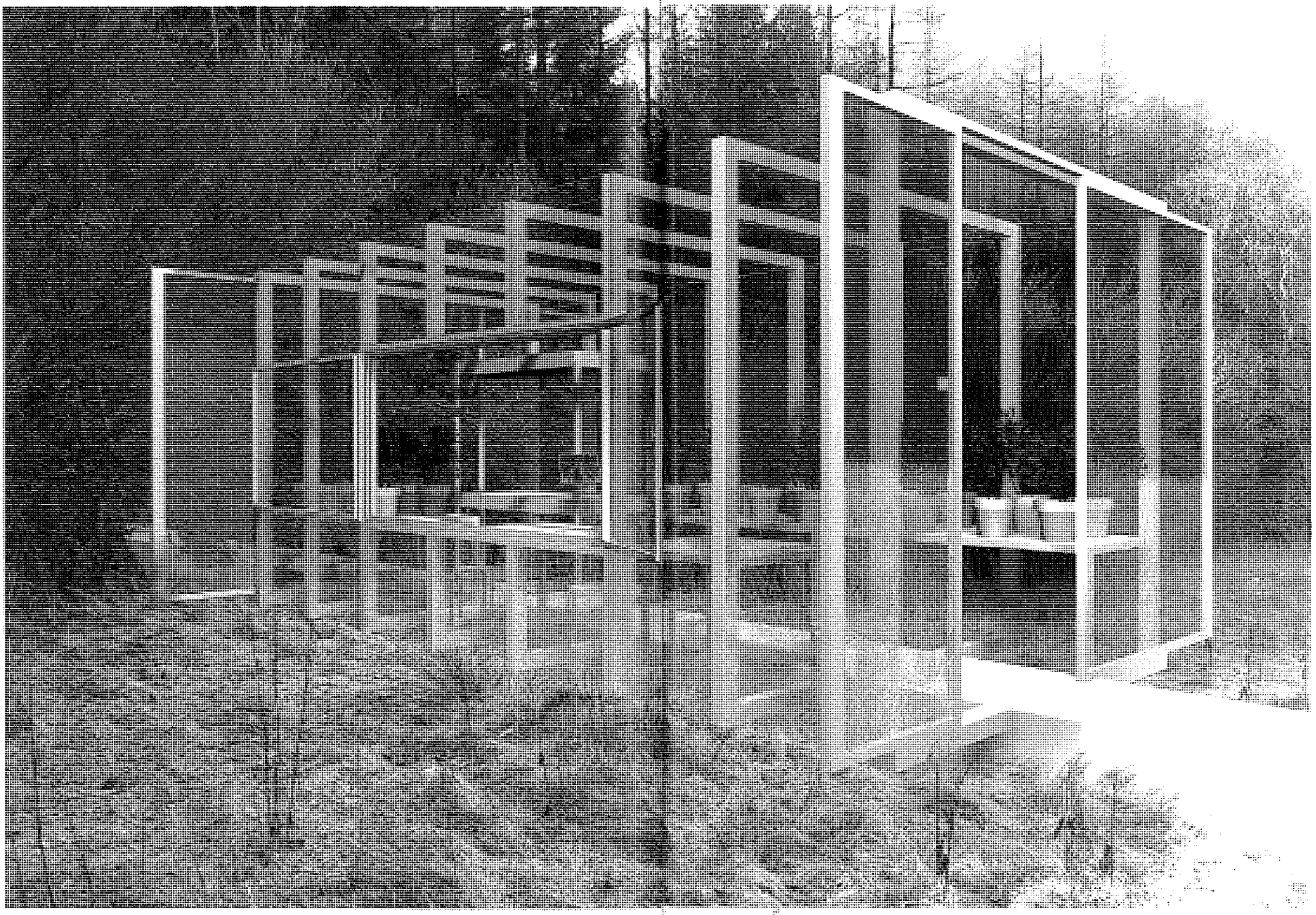


The project dilates the functions in different places, different climates, and different calibres of light, temperature, and humidity defined according to the time of day or the season. Three sites were chosen – a meadow, its edge, and a forest – the choice of each determined by specific climatic characteristics relating to the shadow and humidity created by the trees. In accordance with specific activities, a certain type of climate is simulated for each of the rooms: the mildness of the forest at night, the warmth of the meadow during daylight in winter, and the coolness of the meadow-edge in spring.







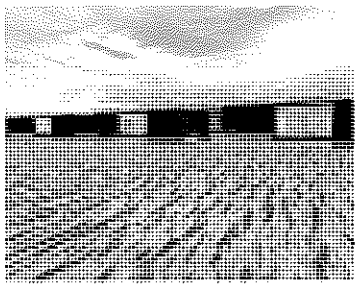


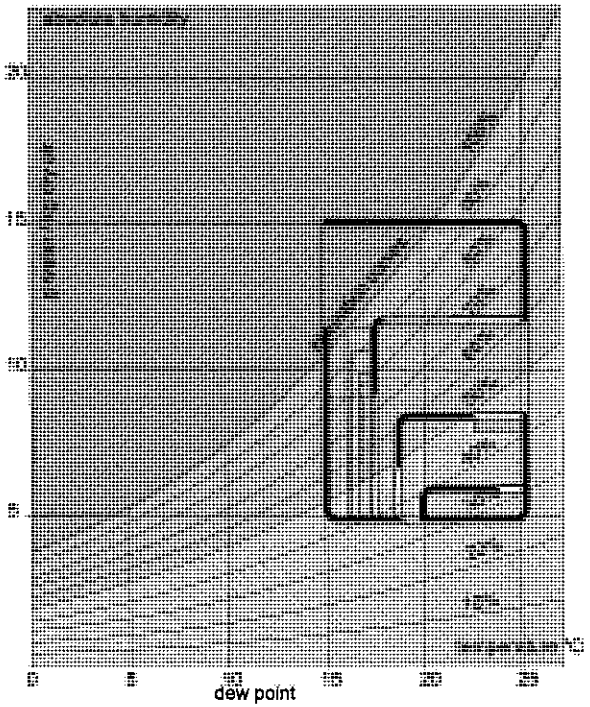
Maisons Mollier | Mollier Houses, 2005

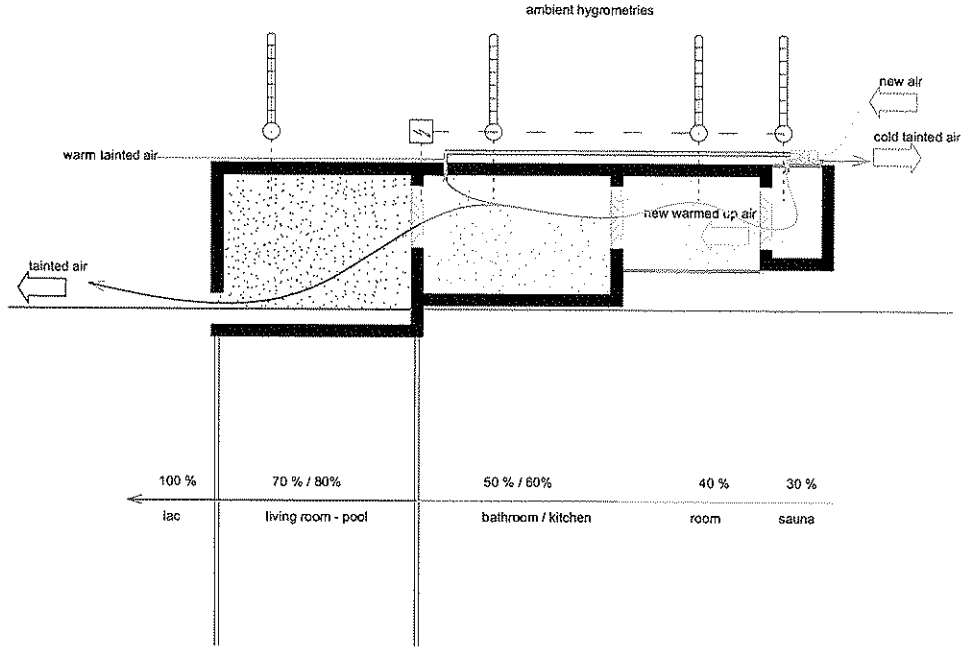
Projet de maisons de vacances / Project for vacation houses, Vassivière, Limousin, France
Philippe Rahm, Jérôme Jacqmin
Philippe Rahm architectes
Collaborateurs / Associates : Irene D'Agostino, Cyrille Berger, Alexandra Cammas
Consultant : Weinmann-Energies
Maître d'ouvrage / Client : Symiva (Syndicat mixte interdépartemental de Vassivière)

Le projet des maisons Mollier révèle et qualifie une relation invisible mais néanmoins obligée entre l'espace intérieur et l'humidité. Il cherche à transformer un problème de physique du bâtiment en question d'architecture, jusqu'à devenir la cause efficiente de la forme. Il établit, dans les contraintes mêmes des équipements techniques du bâtiment, des relations nouvelles, sensuelles et physiologiques, entre l'habitant et l'espace.

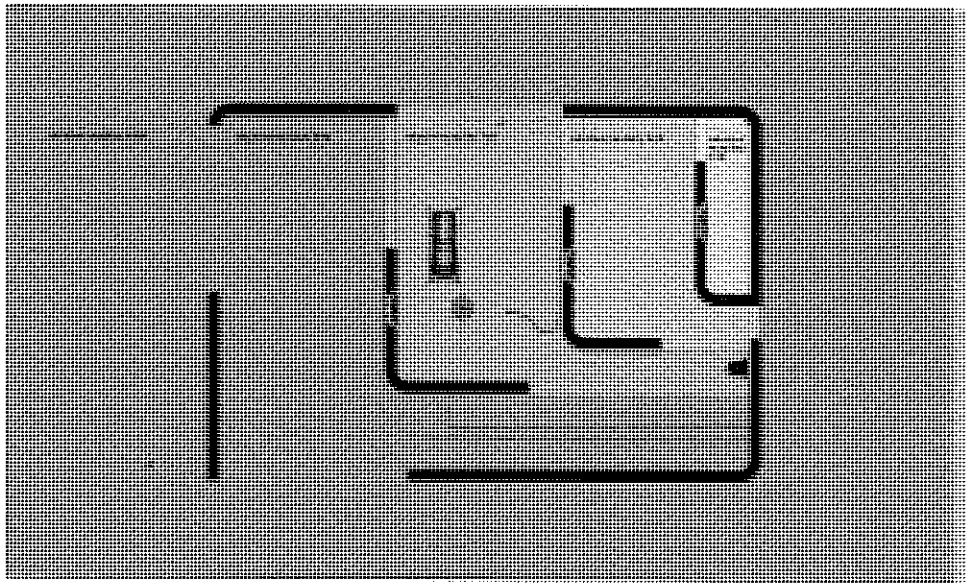
The project for the Mollier Houses project points up and outlines an invisible, but nonetheless ineluctable, relationship between interior space and humidity. It seeks to transform a problem of construction physics into an architectural question, to the point of making it the prime mover of form. It generates new sensual and physiological relationships between occupants and space out of the building's technical constraints.

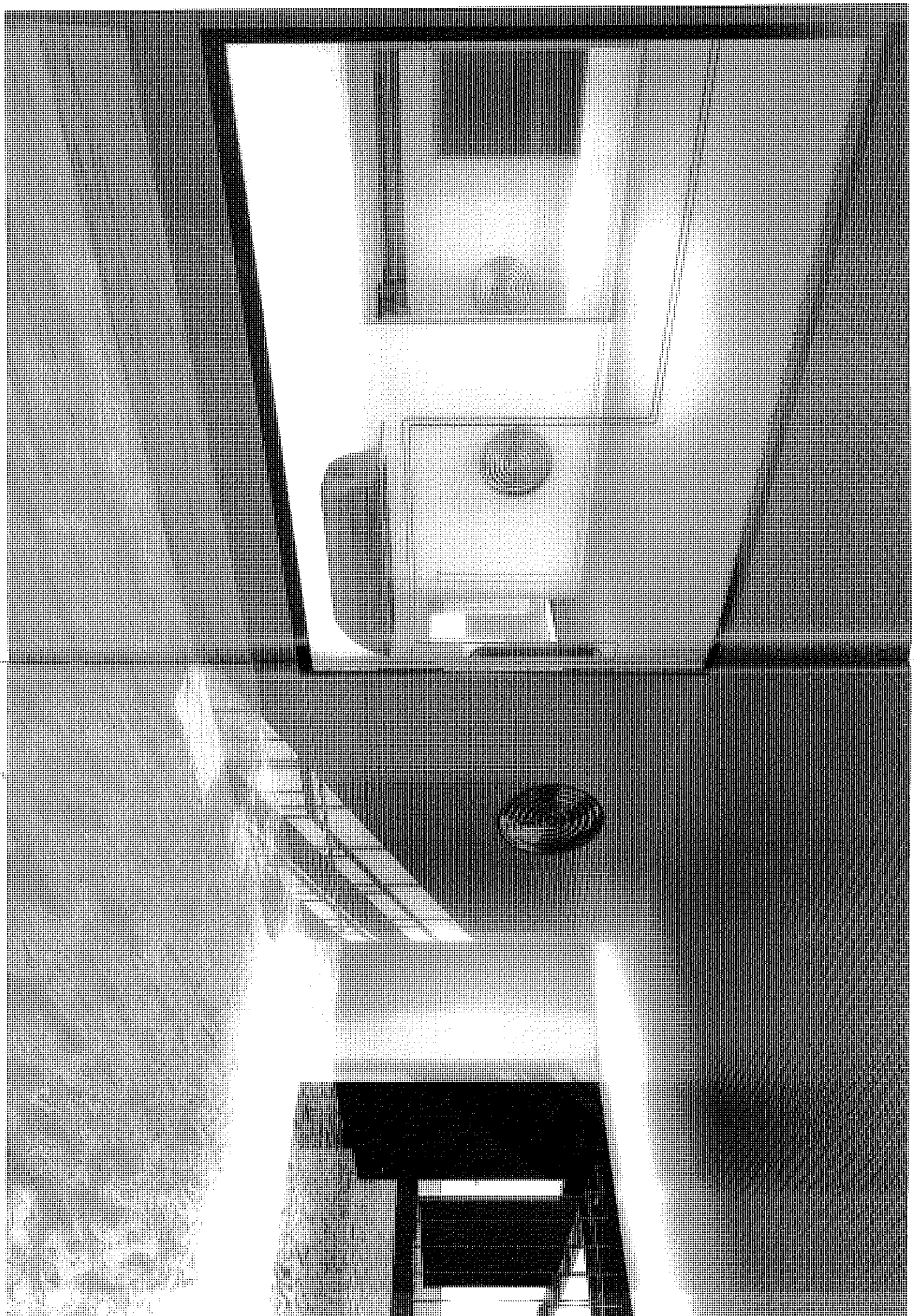






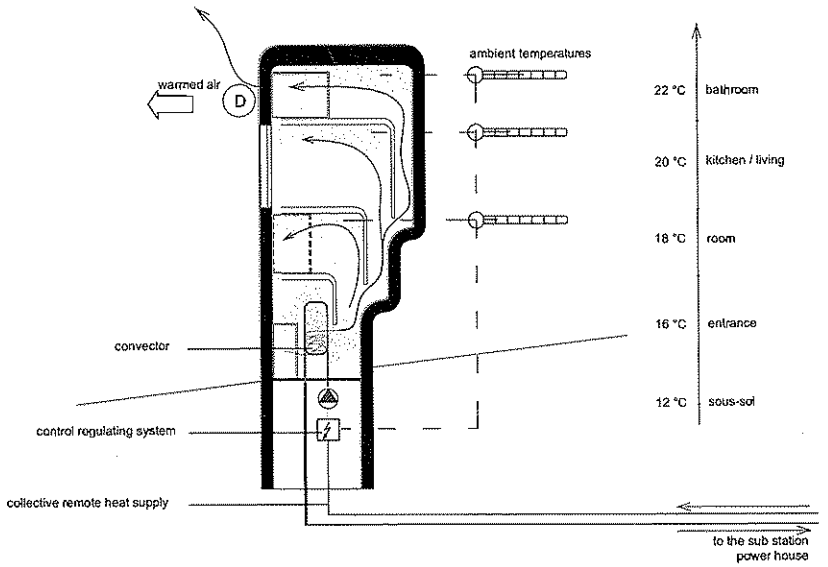
ventilation system



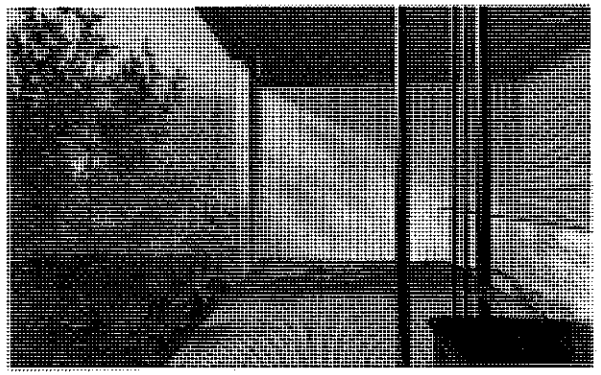


Maisons Archimède | Archimedes Houses, 2005

Projet de maisons de vacances /
Project for vacation houses,
Vassivière, Limousin, France
Philippe Rahm, Jérôme Jacqmin
Philippe Rahm architectes
Collaborateurs / Associates :
Irene D'Agostino, Cyrille Berger,
Alexandra Cammas
Consultant : Weinmann-Energies
Maître d'ouvrage / Client :
Symiva (Syndicat mixte
interdépart



thermal draught heating system



Les maisons Archimède cherchent à établir une relation intrinsèque entre la maison et l'air, en spatialisant les fonctions de l'habitation dans la forme thermique de l'air. Il s'agit d'organiser la maison, comme réponse à une économie d'énergie, en fonction des besoins physiologiques de l'habitant, en relation avec son activité corporelle et sa nudité. L'ambition est ici de redonner une diversité dans le rapport que le corps entretient avec l'espace, de permettre des transhumances au sein même de la maison, des migrations entre le bas et le haut, le froid et le chaud, l'hiver et l'été, l'habillé et le déshabillé. Le plan et la coupe de la maison se dessinent alors verticalement, selon la forme que prend l'air dans toute la maison.

The project for the Archimedes Houses set out to create an intrinsic relationship between the house and the air by spatialising the building's functions in the air itself.
This involves organising the house in energy conservation terms – adapting it to the occupant's physiological needs, as determined by his or her physical activity and clothing. The aim is to restore diversity to the body/space relationship, to allow for migrations within the house itself: between upper and lower, hot and cold, winter and summer, dress and undress. The plan and section are then drawn vertically, following the shape taken on by the air through the entire house.

The goal is to come up with an architecture free of formal and functional predeterminations, a de-programmed architecture that is open to variations of season and weather conditions, day/night transitions, the passage of time, and the appearance of novel functions and unexpected forms. What we are working toward is a reversal of the traditional approach to design.

Form and Function Follow Climate

Philippe Rahm

Sustainable development policies are a major factor driving the formal upheaval we are witnessing in architecture today. This upheaval may be less "visible" than the arrival of reinforced concrete at the beginning of the 20th century, or the transformation of design by digital technologies at the end of the 20th century, mainly because it affects not the physical structure or appearance of the building, but rather *what we don't see*, what is typically designated "space and energy management" – ventilation, heating, and lighting. Here, in the realm of climate control of building interiors, many of the problems, but also solutions associated with greenhouse gases, holes in the ozone layer, and climatic disasters are concentrated, because the building industries are among the worst offenders when it comes to greenhouse gases produced by the burning of fossil fuels. Statistics show that the building sector could be one of the primary actors in the energy management field,[1] and leave no doubt as to why a cut in consumption is both a political and technical challenge for architecture in the 21st century.

The term "sustainability" was defined in 1987 by the World Commission on the Environment and Development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[2] For architecture, this translates into a goal of substantial reduction of a building's energy consumption. The means for achieving this have been understood for some years now. Some recent proposals point to the profound modification of architectural form and function, which is where we are most engaged. This means pinning down architecture's plastic, critical, and future-friendly potential. In Switzerland, environmental solutions are geared to the Minergie® standard, whose goal is increased comfort accompanied by a reduction of non-renewable energy consumption to a level compatible with sustainable development. Its three underlying principles are: an airtight shell, excellent heat insulation, and mechanical airflow. The concept is to seal off buildings by preventing all outward heat transfer except that controlled by double-flow mechanical ventilation with heating coils. Paradoxically, then, the most ecological type of building is one that is totally isolated from, and autonomous within, its context and regulates all exchanges with the natural environment. This paradox indicates the need to break with habits and preconceptions about dwelling if we are to create new and sustainable approaches to the architectural form of the house. One of the things we need to understand is how recommendations that are still at the "technical" stage can affect the form and function of buildings and cities, and this suggests looking beyond typical responses to emergent innovations, which usually amount to grafting new techniques

1 In France in 2000, energy consumption in the building sector, that is, the energy used to heat or cool interiors, to heat water, and to generate electricity, represented over 46% of the national total, or 25% of the country's greenhouse gas emissions. In Switzerland, the energy consumed by buildings now represents more than 50% of the national figure.

2 In essence, statistical projections for a sustainable society for 2050 would allow 3–4% economic growth, multiplication of production by 4, and division of CO_2 emissions by 2; in other words, our performance must improve by a factor of 8.

onto old forms. We advocate the *early* recognition and utilisation of new forms and techniques, right from the moment of their inception and design, so that new forms and uses not yet identified can materialise.

Form/Function

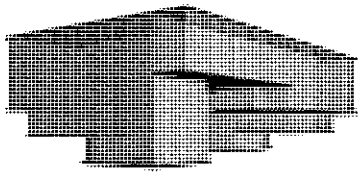
Up to the present time, two major (if conflicting) theories regarding the relationship between programme and architectural form have been advanced. The notion of heroic modernity, founded on Louis Sullivan's late 19th-century dictum, "form follows function," challenged the purely symbolic and decorative status of architecture. Rationalist, functionalist, and universalist, the new architecture existed to give "appropriate form" to functions predetermined at the social, technical, and ergonomic levels. Architecture was simply the spatial expression of programme, with no allowance for subsidiary semantic or affective input. In the 1960s, that credo was challenged by Louis Kahn and others, who asserted that "function follows form." The notion of the brief was criticised as too univocal an approach to needs and activities and it was argued that needs can change. The history of architecture bears witness to the fact that architectural form persists, unlike programme and function, which are continually in flux. With this as his starting point, Kahn developed a new method of composition in which architecture was no longer the embodiment of a programme, but responded to a system of hierarchies. In a more abstract way, and without really establishing functions, these hierarchies determined an ensemble of spaces in which each one was defined in relation to the others, giving rise to a system that was rigid in terms of structure, but flexible in terms of programme.

The aim of our work is to consider the form/function relationship from the point of view of architecture's contingent relationship with climate. The goal is to come up with an architecture free of formal and functional predeterminations, a de-programmed architecture that is open to variations of season and weather conditions, day/night transitions, the passage of time, and the appearance of novel functions and unexpected forms. What we are working toward is a reversal of the traditional approach to design in order to achieve a new spatial organisation in which function and form can emerge spontaneously in response to climate. We propose to work with the very matter of space, the density of air, and the intensity of light, and to offer architecture as a geography, an open-ended, shifting weather system embracing different climates and atmospheric qualities to be occupied and used according to our needs and desires, the time of day, and the season. We would like to replace functional and symbolic constraints with a freedom of use and interpretation opening onto unexplored dimensions in which architecture generates an emergence of times, spaces, and practices within the very matter of which it is made.

Form

The history of architecture and the city is rich in examples of how an initially physical cause has been the trigger for social, cultural, and political forms and interpretations. Venice owes its urban shape and the charm of its little squares or *campi* solely to the lack of a potable water source. When we enjoy the pleasures of these spaces and admire the way they function as focal points for social interaction, it is important to remember that the *campo* was conceived as an ingenious catchment system for rainwater, which was then channelled to a central well. Its shape and size was determined by the amount of water to be collected and the number of people living in the surrounding houses.[3] From the architectural point of view, the form of dwellings typically responds to climatic conditions. The courtyard that is central to the layout of houses in desert regions, for example, merely expresses the need for an outdoor space protected from sandstorms, and its relatively small size stems from the need to avoid low-pressure areas. It had no fixed use at the beginning,

3 Water is, of course, always a decisive factor in the organisation of human settlements. In Limousin, in central France, to give just one example, the number of villages, the size of each village, and the number of houses were determined by the capacity of springs to meet the needs of a specific number of people and domestic animals, and no more. Once the upper limit was reached, expansion of the village halted, often at five or six houses, and a new village was built around another spring somewhere else.



which is why its function varies from one culture and period to another. Whether it became a water collection point, service area, garden, or foyer, its use might also change over the course of the day with temperature variations. The vertical stratification of dwellings was another widely used gambit, producing interior spaces that varied in temperature, humidity, and luminosity. In section, houses of the old neighbourhoods of Baghdad, for example, comprised a series of spaces rising from cellar to roof, with temperatures of 30°C in the cellar, 35°C on the ground floor, 42°C on the first floor, and 50°C on the roof. In terms of humidity this series was reversed as one climbed, going from 70% in the cellar to 15% on the roof terrace. According to the season and time of day, occupants moved between the *sirdab*, or cellar, and the *talar*, a gallery bordering the patio, in search of warmth or coolness.[4] Interestingly, rooms of a house have often been named not after a function, but rather a climatic quality. The *rafraîchoir* or cool room in a country house in France exemplifies a kind of climatic/spatial organisation that generates form, in layout and in section, between the cooler north wall and the warmer south wall, and between the humid cellar where wine is stored and the loft where crops are dried.

These disparate examples illustrate how, in effect, *form and function follow climate*. Our intent is to actualize this relationship between architecture and climate – natural or artificial – in the era of sustainable development. We envision an architecture that is neither functional nor analogical, but capable of being deployed freely in space and time and engendering new modes of behaviour and new practices. Writing about Robbe-Grillet's "objective literature" in 1954, Roland Barthes pointed to his determination to strip objects of all their metaphoric and analogic associations, and thus to destroy "the singular, the – one might say – *gestaltist* adjective that ties up all its metaphysical threads in a single subsuming knot. What Robbe-Grillet is trying to destroy is, in the widest sense of the word, the adjective itself."[5] Robbe-Grillet indeed denounced the "tyranny of significations,"[6] and in his essay "Nature, Humanism, Tragedy," used as examples adjectives modifying nouns like "*capricious* weather," and "*huddled* village," which impose a psychological reading of space.[7]

This is precisely what we denounce in architecture. Any meaning that looks beyond architecture denies it the freedom of leaving space and time open to interpretation in order to accommodate as yet unknown modes of behaviour and dwelling. Writing about the "gestures and objects" of the novel of the future, Robbe-Grillet anticipated our interest in realizing an architecture that is "*there* before being *something*."[8] What is perhaps most fascinating in Robbe-Grillet's *oeuvre* is his formidable capacity to make spaces and times exist in the present tense, to draw with the movement of the sentence these extraordinary labyrinths in which the real is reinvented with each word, where, as Gérard Genette put it, "the thematic elements... combine and transform before our very eyes," and where "places, objects, and situations" fuse, reverse, and multiply, as in the continuous present tense of *Last Year at Marienbad*.[9] We relate his radical receptiveness to reality and the possibility of discovering in it, here and now, the unexplored terrain in which architecture in and of itself generates an emergence of times, spaces, and practices. We foresee an architecture that precedes significations, which is to say that it produces meaning, but in its own material language. It does not represent, but rather presents physical, climatic, geographic, and physiological spaces and times. This architecture replaces functional and symbolic constraints with freedom of use and interpretation.

Function

There exists an entire archaeology of building typologies. It consists of a field littered with old programmes, rooms whose functions are obsolete, the ruins of activities that have ceased, vanished lifestyles, antiquated

4 Plemenka Supic, "L'aspect bioclimatique de l'architecture vernaculaire," *Architecture et Comportement* 10/1 (1994): 27–47.
5 Roland Barthes, "Objective Literature: Alain Robbe-Grillet" (1954) in *Two Novels by Robbe-Grillet (Jealousy & In the Labyrinth)* (New York: Grove, 1965), p. 16; originally published in English in *Evergreen Review* 5 (Summer 1958): 113–126.
6 Robbe-Grillet, "A Future for the Novel" (1956), *For a New Novel: Essays on Fiction*, trans. Richard Howard (Evanston, Illinois: Northwestern University press, 1989; 1st ed: Grove press, 1965), p. 22.
7 Alain Robbe-Grillet, "Nature, Humanism, Tragedy" (1958), *For a New Novel*, trans. Richard Howard (Evanston, Illinois: Northwestern University Press, 1989; 1st ed., New York: Grove Press, 1965), p. 53; originally published in English in *Evergreen Review*, Number? (1965).
8 Robbe-Grillet, "A Future for the Novel," p. 21.
9 Gérard Genette, "Vertiges fixés," *Figures* 1 (1966): 88.

Open Climates, 2006
Pavillon programmatique pour l'école des Beaux-Arts de Nantes, France / Research pavilion for the School of Art in Nantes, France.
Philippe Rahm, Jérôme Jacqmin
Philippe Rahm architects
Consultant: RFR–Ingénieurs

Le projet travaille sur la lumière et la température, selon deux dimensions, horizontale et verticale. Horizontalement, le plan s'organise de la périphérie vers le centre, du plus lumineux vers le plus sombre. Verticalement, l'espace se dessine du bas vers le haut, du plus froid au plus chaud, selon le principe d'ascendance naturelle des masses d'air en fonction de leur densité et de leur température. L'architecture se dessine ici finalement comme une combinaison de quatre luminosités par quatre températures, donnant seize climats variant selon l'heure de la journée, et que chacun peut s'approprier en fonction de son désir. | The project works with light and temperature in two dimensions, horizontal and vertical. Horizontally, it takes shape from the periphery toward the center, from lightest to darkest. Vertically, the space takes shape from bottom to top, coldest to hottest, following the principle of the ascent of air masses according to density and temperature. This architecture results from a multiplication of four light levels by four temperatures, resulting in 16 climates that vary according to time of day, and which each individual can appropriate according to personal preference.

arrangements, and decadent habits. In France, certain names have survived – *bourne, chauffoir, buron, vivoir, caouhade, zadrouga, rafraîchoir, ramonétage, curral* – but they tell us almost nothing, since they name spaces that today we can barely describe or classify, places in which we have lost the ability to live, and thus cannot imagine, much less design. There are countless examples of hybrid, socially strange, and now totally unimaginable uses of space – productive as well as dwelling functions.[10] Private homes in many villages in France, for example, had a room called the *voûte* or vault, which served as stable, dunghill, and also the family living room. Sitting together on winter nights, inhabitants took advantage of the warmth given off by the animals and the fermentation process, at once solving a heating problem and engendering a social practice. Likewise, the *veillée* or evening gathering dates back to a time when families spent winter evenings together in the same room in order to take advantage of their collective body heat. In the Aleutian Islands, such winter assemblies could involve up to three hundred people gathered around the same hearth in an enormous communal shelter, who in summertime would return to their individual family dwellings.[11]

What interests us is how an architectural problem or solution has the potential to give rise to new and unforeseeable ways of living, in the way, say, that the Islamic *moucharaby*, a latticed balcony whose origin is traceable to the practical need to filter the harsh sunlight of the region and to cool interiors by air filtration, inspired an ambiguous rapport between interior and exterior spaces that conditioned the rise of an elaborate social interplay. Obviously, history is not so simple, and the rise of this social interplay certainly came close on the heels of (if not simultaneously with) the practical solution. Whatever the case, the reversal of the roles of function and climate has become for us the basis of a hypothetical new architecture whose functionality emerges "by chance," from environmental problems or our responses to them. What interests us is the capacity of architecture not to be tied to function, but to be open to interpretation, free, that is, not necessarily responding to a preconceived function, but suggesting or facilitating through its response to climatic problems or new technologies the rise of a new function. What interests us here is to liberate built space from exclusively functional determinations in order to render it interpretable.

The monofunctional programming of the rooms goes back to the early 19th century, with the introduction of the corridor into the middle-class home. Individual rooms took on specific functions, some becoming more technically and formally specialised, like the Frankfurt kitchen of 1927. In fact, we live in an interior landscape of relatively recent origin, some of whose functions are already losing ground. The dining room, for example, is disappearing as an independent space. The house as an architectural typology continues to evolve, and we are determined to bring forth new typologies for dwelling according to sustainability-driven changes in the climate control of building interiors. Our aim is not to invent new types of rooms to accommodate new functions, but rather to liberate space from function altogether, or, more to the point, to give free rein to the functional interpretation of space. We maintain that architecture must facilitate the evolution of dwelling, housing, and habitation, in the same sense that the American Scientist Jared Diamond reasoned that changes in the environmental context influence the course of a civilization's history, and for our purposes, the forms and functions of architecture.

10 A curious example of how certain practices could be unimaginable, even from one culture to another in the same era, is the fact that when Gianlorenzo Bernini presented his plans for the Louvre to Jean-Baptiste Colbert, the French minister asked where the king was to sleep – to which the Italian architect replied that this kind of question was of interest only to administrators: the use to which rooms might be put to was not the business of architects. This was at a time when a veritable crowd of people witnessed the king being dressed in the morning and undressed each evening.
11 Pierre Deffontaines, *L'homme et sa maison* (Paris: Gallimard, 1972).

Biographies

Giovanna Borasi est architecte diplômée de l'Ecole polytechnique de Milan en 1999. Elle a participé à de nombreux concours, ainsi qu'à de nombreux projets, recherches et publications. Giovanna Borasi a contribué à l'édition et à la rédaction de *Lotus International, Lotus Navigator et Quaderni di Lotus*. Elle a co-fondé les groupes milanais de recherche en architecture et en urbanisme Ventisette (1995) et Promads (2000). En 2003, elle a participé à l'exposition Asfalto de la Triennale de Milan. Elle est actuellement commissaire d'architecture contemporaine au CCA.

Giovanna Borasi studied at the Polytechnic University in Milan, earning her degree in architecture in 1999. She has participated in a number of competitions and also engaged a wide range of research, design, and publication projects. Borasi worked as an editor and writer for *Lotus International, Lotus Navigator,* and *Quaderni di Lotus*. She co-founded the Milan-based research teams Ventisette (1995) and Promads (2000), devoted to research in architecture and urban planning. She collaborated on the exhibition *Asfalto* at the Milan Triennale in 2003, and is presently curator of contemporary architecture at the CCA.

Gilles Clément est ingénieur horticole puis diplômé de l'École nationale supérieure du paysage (ENSP) de Versailles en 1969, où il enseigne depuis. Son œuvre, qui comprend de très nombreux projets pour des parcs et jardins privés ou publics, mais aussi ses scénarios pour des expositions et des installations, a nourri ses publications théoriques sur trois concepts novateurs : le Jardin en mouvement, le Jardin planétaire et le Tiers paysage. Il a reçu de nombreuse récompenses, notamment le Grand Prix du paysage en 1998.

Gilles Clément completed his studies in horticultural engineering at the École nationale supérieure du paysage (ENSP) in Versailles in 1969, and later earned a degree in landscape design from the same school. His work as a gardener, which has resulted in numerous designs for public and private parks and gardens, and his concepts for exhibitions and other installations, have strongly informed his theoretical writings on three innovative concepts, the *jardin en mouvement*, the *jardin planétaire*, and the *third landscape*. Among many honors, he was awarded the Grand Prix for landscape design by the French governement in 1998. Clément teaches at the ENSP in Versailles.

Philippe Rahm est architecte, diplômé en 1993 de l'École polytechnique fédérale de Lausanne et de celle de Zurich. Il a créé en 1995 l'agence Décosterd & Rahm avec Jean-Gilles Décosterd. Il a été pensionnaire de la Villa Médicis à Rome en 2000, et a représenté la Suisse à la 8e Biennale d'architecture de Venise en 2002. Il exerce à titre indépendant depuis 2004 à Lausanne et Paris, et travaille actuellement sur des projets privés et publics en France, en Pologne, en Grande-Bretagne et en Autriche. Il enseigne à l'AA School de Londres et à l'École cantonale d'art de Lausanne.

Philippe Rahm studied at the École polytechnique fédérale (EPFL), Lausanne and the Federal Polytechnic Institute (ETH), Zürich, earning his diploma in architecture in 1993. Together with Jean-Gilles Décosterd, Rahm created the firm Décosterd & Rahm, Associés, in 1995. In 2000, Rahm was a fellow at the Villa Medici in Rome, and in 2002, he represented Switzerland at the 8th Architecture Biennale in Venice. Since 2004, Rahm has practiced independently in Lausanne and Paris, and is currently at work on several private and public projects in France, Poland, England, and Austria. Rahm teaches at the Architectural Association in London and the École cantonale d'art, Lausanne (ECAL).