



Syllabus

**Fragments of a Theoretical
Discourse in
Architectural Design Research**

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Fragments of a Theoretical Discourse in Architectural Design Research

**The Architecture's Environmental Performance
between Criticism and Speculation, Theory and
Practice**

This issue is curated by Stamatina Kousidi and presents the contributions elaborated by the Candidates of the Ph.D. Program of Architectural Urban Interior Design, Department of Architecture and Urban Studies, Politecnico di Milano, after the seminars "Forms of Theoretical Discourse in Architectural Design Research", held by professor Kousidi in the spring semesters of the years 2023 and 2024.

Architectural Raiders Alessandro Rocca	9
Discourse/Design Production in Architectural Research: Addressing the Issue of Environmental Performance Stamatina Kousidi	13
Section A - Environments From Discourse to Project	
Re-Establishing Epistemes of Performance: Cultural Shifts in Architectural Media Discourse in the Work of Philippe Rahm Thomas Cabai	33
In-Between the Environment and the Existing in the Work of Lacaton & Vassal Silvia Di Mauro	55
Re-Envisioning Adaptive Reuse Through Building Envelopes: An Exploration of OMA's Approach Xiao Hu	81
A Reading of Lacaton & Vassal's projects Housing Design as a Response to Environmental Issues Nisa Nur Ozkan	99
Breaking Boundaries: Design Strategies for Building. Nature Integration in Herzog & de Meuron's Hospital Projects Liheng Zhu	113
Greenhouse Space: Gentle Repair in Lacaton & Vassal's Residential Projects Likun Shen	133

- Rethinking Architectural Thresholds:
The 'Utopian Present' of Theory and Practice
in Alison and Peter Smithson's "Streets-in-the-Sky"** 153
Nicolò Chierichetti

- New Brutalism in Alison and Peter
Smithson's Design Research: The Robin Hood
Gardens as a Case Study** 181
Yuhan Zhou

Section B - Envelopes | From Project to Discourse

- Jean Prouvé and Architectural Environmental
Performance: The Iconic *Maison Tropicale*** 213
Maddalena Laddaga

- Polychromy and Sustainability: Building
Envelope as Symbolism in the Work
of Sauerbruch Hutton** 241
Zhihang Lin

- Natural Structures: Tracing Form-Finding
Experimentation in the Architectural Practice of
Frei Otto** 259
Junliang Zhou

- The Architectural Paradigm and Discourse
of Solar-Control Design: A Case Study of
Victor Olgyay's Shading Devices** 283
Rui Ren

- Building Utopia: Richard Buckminster
Fuller's Total Envelope** 307
Margherita Marri

- The "Unspeakable Beauty" of Herbal Candy
Boxes: through the Dialogue Between
Herzog & De Meuron and Ricola** 327
Raffaella Cavallaro

- Cunning Make-up: the Environmental
Performance of Herzog and de Meuron's Projects** 347
Yang Qianqian

Section C - Events | Project/Discourse

- Spatial Discontinuity: Theory of Cinematic
Montage in the Work of Bernard Tschumi** 367
Đorđe Bulejčić

- A Choreographic Perimeter: The Rentsch
House in the Swiss Alps by Richard Neutra** 391
Duccio Fantoni

- Synchronized Patterns in Eileen Gray's
Tempe à pailla** 407
Hao Wang

- A Theory of (Unspoken) Beauty: Lacaton
& Vassal. Practising Architecture with the Existing** 427
Andrea Fopplani

- The Blur Building: Examining Diller+Scofidio's
Critical Spatial Practice** 443
Yiling Fu

- Bodies, Space, Project: A Long (Hi)story** 463
Davide Montanari

- Body Eraser: Rebellious and Broken Edges** 479
Yuwei Ren

**The "Unspeakable Beauty" of Herbal Candy Boxes.
The Hidden Geometry in Building Envelopes through
the Dialogue Between Herzog & De Meuron and Ricola**

Raffaella Cavallaro

"Architecture is very archaic; you can see it, smell it, touch it, hear it – like nature. It has a sensual side, and it also encourages you to think. We see art, but also architecture, as tools of perception and reflection."
((Herzog and Rose 2018))

The building's envelope is like a textile: it wraps around the space and rests on the supporting structure. The 'tailor-made' clothes sewn by the master craftsmen, Jacques Herzog and Pierre de Meuron, are designed to emphasize simple bodies, exploring unconventional 'tissue', sometimes with an archaic flavor, other times with an ephemeral appearance, changing under the effect of light, resisting the weather and time.

The work of the two Swiss architects is a true celebration of matter, and skin becomes the device that makes it possible. In "The Hidden Geometry of Nature" (Herzog & de Meuron 1997), Herzog and de Meuron outline their research path, focusing on the meaning of the skin of buildings and the relationship between surface materials and interior and exterior spaces: a theory based on the relationship between architecture and nature demonstrated through the praxis of the architectural project. Nature is a model for analyzing and researching the relationship between 'visible' and 'invisible' images of something hidden behind natural forms. In the text, the two architects state "our interest in the in-

visible world is in finding a form for it in the visible world" (Herzog & de Meuron 1997).

Materiality

Architecture, be it a virtual or concrete image, implies matter: this is why the investigation of materials, the core of the theoretical discourse of Herzog and de Meuron, aims to search for and valorise intrinsic qualities, which usually are not detected. Quoting Rem Koolhaas: "Without any superficiality, nobody conceives more desirable facades than Herzog & de Meuron. They ooze smoothness, a kind of otherworldly perfection; they are hardly of this world" (1994). Their design, this 'otherworldly perfection', emerges through intense involvement not only with the given but also the imaginary context or sensitivity to materials and surfaces. Their methodological approach involves tangible and intangible issues that stem from their ability to cross different fields of design by activating interdisciplinary synergies and networks. The undeniable influence provided by their interest in different and multiple art forms and their passion for biology and chemistry makes their envelopes sensual and alive.

Their research into materials and ability to manipulate matter makes the 'minimalist' boxes, designed to produce and contain the herbal candies of the well-known Ricola brand, resemble pieces of art. Through constructing elementary

volumes, simple parallelepipeds, the architects investigate the nature and expressive and formal potential of the materials used, which are often unconventional and highly communicative. Extremely evident and understandable is the parallelism between the repertoire of materials used by Herzog & de Meuron and the work of Joseph Beuys: the power of matter lies in its ability to suggest meaning without pinning it down.

Translating the conceptual idea into a 'material construct' results from a threefold discourse relating to architecture's technical, practical and symbolic aspects. "For Herzog and de Meuron, the processes and procedures of production become the key components of a work's imageability" (Leatherbarrow and Mostafavi 2022, 211). Construction and intentionality become one in their work thanks to the deep research, conducted project after project, using one factual rather than another. How materials are assembled is inseparable from the purpose and context for which they were carefully chosen. The buildings selected for this paper speak of materiality and how Herzog & de Meuron understand it: surface and space become the same entity, and the material is the project. Interested in revealing the latent life in the material (Caruso 2008), they dissect all its qualities and meanings, dealing with the pure existential nature of the material itself (Caruso 2008).

The Ricola Warehouse sites reflect the evolution of Herzog

& de Meuron's design language as it grows over time and the controlled way in which technologies are incorporated into tradition. Looking at their projects, all so different from each other, it is in the emotional content that we find the *fil rouge* of their work.

The metaphorical figuration of the image of boards stacked up in the sun automatically gives rise to the idea that the building is designed to contain stacks of boxes: an image further fixed in the gaze of those who look at the Ricola Storage in Laufen and perceive that 'dress' made of reinforced fiber cement sheets as an elegant shelving unit within which "each architectural element has a kind of individuality, a recognisable role within the whole" (Kuo 2018). The construction technique takes shape from the description of a process of visual composition, from the suggestion of a simple image: an archaic hut containing a fully automated warehouse.

The 'herbal candy box' envelope forcefully declares its autonomy but also participates in its surroundings, which always plays a key role in the choice of material. The opaque and heavy cladding of the Laufen storage building dialogues closely with the rock next to it, contrasting its artificial layering with the natural one of the sites. Similarly, but with light and transparent elements, the theoretical discourse is consistently reiterated and enriched with new meanings in the Ricola Europe project in Mulhouse.

Screens of repeated leaves envelop the space, filtering sunlight and shimmering at night like a curtain, blending with the idyllic birch wood: exterior and interior permeate each other. The lining of a special box opens to the landscape, that of the Ricola Europe factory, drawing the threshold between inside and outside. The approach to the material is meaningful and introduces Herzog & de Meuron's critical stance towards the discourse of minimalism and ornamentation: the yarrow leaf of the artist Karl Blossfeldt, screen-printed countless times on the polycarbonate panels 'stacked' to compose the façade, becomes a manifesto, a medium of architectural expression, a new 'unconventional' building material.

In the exhibition "Architektur Denkform" (Architecture a Way of Thinking), held in 1988 at the Architekturmuseum in Basel, they were already experimenting with the application of silkscreens to facades: the title of the exhibition contained the intention to make thinking physically tangible. They succeed in making tangible the images they construct in their thinking – visual rhetoric – giving them a new concreteness, transforming them into substance through carefully selected materials. "The ornament is constitutive; it determines the shape of the building. Ideally, in our best buildings, construction, space and ornament can no longer be distinguished; they merge into one" (Canonica and Ziauddin 2015).



Fig. 1 - Retouch on Blossfeldt prints in the Walther Collection: *Acanthus mollis* (MoMA 1625.2001), additive retouch using pencil to emphasize, Hanako Murata.

The metamorphosis of the image in the factual matter is part of a reformulation of the ornament discourse, firmly rejected in favor of a 'minimalist' architecture. The aim was to demonstrate that ornament is not merely decoration: instead, a fundamental element in the understanding of architecture, connected to the precise idea of a specific space. Indeed, the photograph of the yarrow leaf is undoubtedly a medium of expression. In the interview by Theodora Vischer, Jacques Herzog said it is also 'used as building materials like we would use bricks, concrete or glass': an essential, indispensable, architectural element. It is responsible for controlling the brightness, both natural and artificial, of the space: the screen-printed polycarbonate panels effectively filter daylight, giving the proper comfort to the workspace, while in the evening, the image achieves its full effect when artificial lighting is turned on. On the other hand, the deliberate act of abandoning concrete surfaces to the action of the weather makes the matter alive, crossed by rainwater and inhabited by nature.

The translation from emotional to architectural image takes place through the investigative and experimental creation of a new material that absorbs thoughts and shapes a set of physical and emotional relationships. In continuity with this theoretical discourse, for the latest project for the Rico-la company in 2014, the material changes, but the principles remain. A monolith among flowering meadows: a single



Fig. 2 - *Lehm Ton Erde Products*. Pictures by Markus Buehler-Rasom, Derek Li Wan Po.

clay block that springs from the local soil. It is a return to a more 'primitive' construction in which there is something strongly anthropological and haptic: the façade is built by hand, extracting earth from the local quarry, mixing it with volcanic tuff and lime, compacted and assembled into blocks just as in a rural but extremely avant-garde building technique. "It is like a geometrical landscape segment" (Herzog & de Meuron 2014).

It is clear that Herzog and de Meuron speak the language of their time: as Jacques Herzog says in conversation with Jeffrey Kipnis, they take care not just to express the taste of a moment but to capture its eternal aspects. Likewise, their designs express their time: the 'zeitgeist' reflected in the choice and use of material. The growing environmental crisis demands architects to reevaluate their approach to the building envelope, its materiality, properties and performance. The specific architectures illustrated, built up over three decades of work during which time the world has radically changed, are three 'manifestos' that show how the choice of particular material results from a reflection deeply rooted in the temporal and spatial location in which the architect designs.

In 1987, the practice was not yet well known, and the budget was not significant: the choice of material, probably due to this last detail, fell on Eternit panels, then a cutting-edge technology known for its 'eternal' resistance and cheapness.

An intuition, not accidental, that of fiber cement in its raw state, from which Herzog and de Meuron pulled off a masterpiece. The same criteria of economy and strength also guide the choice of material used for packaging and sales building – described by Jacques Herzog as a milestone in the practice's work: polycarbonate. Polycarbonate is a material with the particularity of being transparent, allowing light to filter through, keeping the indoor climate stable and saving energy and money. In the case of the Krauterzentrum, the latest in the series of projects planned for Ricola, the experimental building material is rammed earth, whose ability to regulate humidity naturally is ideal for processing and storing herbs.

The density of these natural and recyclable elements regulates the temperature, safeguarding the indoor climate and reducing the energy consumed. It is evident that, in this last case, the criteria of environmental sustainability and energy saving played an important role.

The discourse on sustainability and the influence of the choice of a specific construction technique on the whole performance of the building has accompanied the methodological evolution in the works of Herzog & de Meuron. The building is both a technical and aesthetic work: the technical-functional aspects of the material merge with its aesthetic value in favor of an approach that maximizes the exploitation of passive and active solutions. This approach

is translated into the known office sensibility to the specific conditions that arise in each building and its commitment to investigating materials so that they reach their maximum expression through experimentation with new solutions and new ways of using them. Each project stems from the desire and needs to simultaneously solve all problems by manipulating traditional and new materials.

Conclusion

"Dear David,

You ask me what we architects should do about the unmistakably impending environmental catastrophe. [...]

Dear David, the answer is: nothing" (Herzog 2020).

The work conducted over the years has led the practice to reflect on the climate emergency, energy crisis, waste of resources and the need to design the building's environmental performance properly. In the letter he writes for David Chipperfield, Jacques Herzog is not at all optimistic about the role of architects concerning the imminent environmental catastrophe. The text is an open-hearted reflection, addressed not only to his friend but to the entire community of professionals, in which he states very coherently that although architects have never played a decisive role in important choices for society, "we can make a difference by working on projects that respond to the needs of users", by making intelligent use of space and building materials and



Fig. 3 - *La Casa del Frutteto*, also known as *Casa dei Cubicoli Floreali* o *Casa di Euplia*, detail, Pompeii.



Fig. 4 - *Composition*: Ricola Storage Building - Laufen, Switzerland, 1987 | Ricola Europe - Production and Storage Building Mulhouse-Brunstatt, France, 1993 | Ricola Kräuterzentrum - Laufen, Switzerland, 2014.

by radically rethinking the architecture we produce. Architecture and society need new balances.

"And in all of that we must not forget the immeasurable side of our craft: space and light, use and materiality, even beauty. Because we only care for what we love" (Herzog & de Meuron, n.d.).

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