

Does it Make Sense to Speak about Type Today? On Typology, Climate and The Work of Lacaton & Vassal

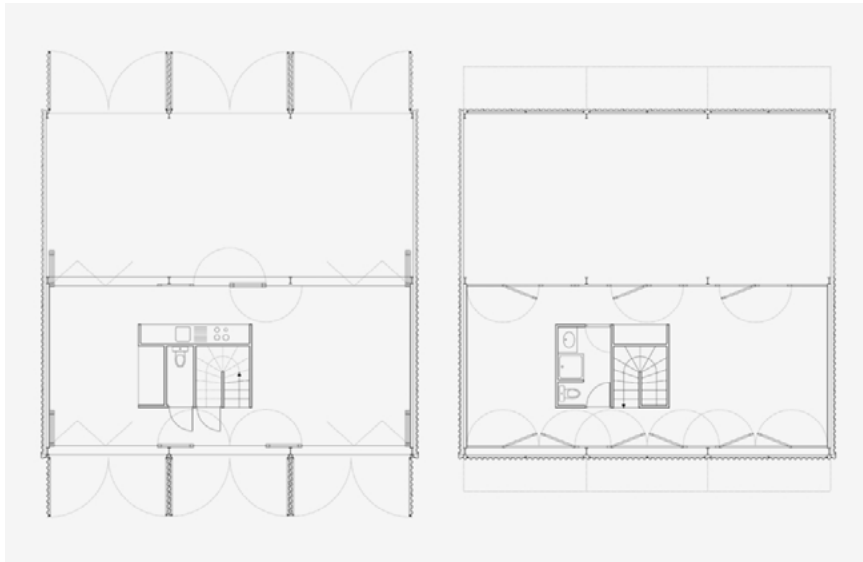
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Philippe Weisbecker, *Greenhouse Studies*, 2012. Nieves.

It is a generally accepted idea that typology is an essential element in the theoretical construction of architecture. The concept of typology is often used to cover a wide range of situations, yet when used loosely, the term can lack precision and lead to misconceptions. On the one hand, typology is a way to organize knowledge and create processes of classification in the form of “types,” promoting a sense of unity across histories and geographies. On the other hand, typology can also be used to define, implicitly or explicitly, the processes of reasoning involved in the conception and design of those same artefacts. The following notes examine the work of the French duo Lacaton & Vassal in relation to this second dimension. This essay looks at three early projects where greenhouse-based designs change the nature of the domestic environment of each house. In 1993, the house Latapie offers a complementary space to the home using a greenhouse as a technical solution; in 2000, the project for a house in Coutras imports the greenhouse as a building type directly from an industrial catalog; and, five years later, in 2005, the strategy is applied to collective dwellings in Mulhouse. The following paper analyzes the significance of these three projects and demonstrates their reliance on identical spatial and climate arrangements. The essay argues that there is a common pattern of typological transfer between horticultural devices and habitation that has profoundly influenced the way the French studio conceives and produces architecture. Additionally, the paper provides historical evidence dating back to the nineteenth century, to suggest the long-standing nature of this process. Finally, it aims to contribute to the ongoing discourse on typology, to the role of precedents in architectural design and to explore Lacaton & Vassal’s typological transfer. Through the notion of climate affinities, this work tests the limits of an architectural type as something beyond a spatial structure, functional labeling or typical image. If typology is an essential element of architectural theory, it seems necessary to re-examine the notion of a type itself in order to understand its usefulness in the face of contemporary challenges and, lastly, to take a position on Rafael Moneo’s indisputable question: “Does it make sense to speak about type today?”⁰¹

01 Rafael Moneo, “On Typology,” in *Oppositions*, no. 13 (Cambridge, Massachusetts: MIT Press, 1978): 23–45.



Plans of house Latapie. Ground floor and second floor. © Lacaton & Vassal Architectes

THINK TYPOLOGICALLY. BORGES, PEREC, “SO WHAT?”

Given its multiple uses, typology can be portrayed as a convenient exercise, easily confused with actions of organization and classification. In “The Order of Things,” Michel Foucault transcribes a passage by Jorge Luís Borges, in which the Argentinean author refers to a Chinese encyclopedia, in which:

animals are divided into: (a) belonging to the Emperor, (b) embalmed, (c) tame, (d) sucking pigs, (e) sirens, (f) fabulous, (g) stray dogs, (h) included in the present classification, (i) frenzied, (j) innumerable, (k) drawn with a very fine camelhair brush, (l) et cetera, (m) having just broken the water pitcher, (n) that from a long way off look like flies.⁰²

The list is both rich and contradictory, a tension which makes it a beautiful piece to read. On one hand, it is not a random list. It enumerates elements according to identifiable criteria. It is a list with a common denominator: animals, or species of animals, to which Borges adds a second set of criteria, ranging from biological precision (e.g. sucking pigs) to a generality that seems to override all previous organizational efforts (e.g. those that “frenzied,” the “innumerable” or the “that from a long way off look like flies”). From a long way off, don’t we all look like flies?

George Perec is another writer who dealt with the subject of describing, enumerating and organizing household objects. In, “Brief Notes on the Art and Manner of Arranging One’s Books,” Perec delves into the idea of libraries as places of preservation and order.⁰³ The preservation of objects, as well as their ordering and arranging according to a common criterion, serves a very precise future objective: to locate a precise book. The idea of ordering plays a double role. In the same way, the Parisian author concludes the introduction to his text by asserting: “Thus the problem of a library is shown to be twofold: a problem of space first of all, then a problem of order.”⁰⁴ What could easily be said about architecture

02 Michel Foucault, *The Order of Things: An Archeology of the Human Sciences* (London: Routledge, 2005), XVI.

03 See both: “Brief Notes on the Art and Manner of Arranging One’s Books | Georges Perec,” Atlas of Transformation, accessed September 25, 2023, <http://monumenttotransformation.org/atlas-of-transformation/html/c/classification/brief-notes-on-the-art-and-manner-of-arranging-ones-books-georges-perec.html> and Georges Perec, “Brief Notes on The Art and Manner of Arranging One’s Books” in *Species of Spaces and Other Pieces* (London: Penguin Books, 199), 148-155.

04 Ibid.

is, for now, about libraries. In the brief introduction, Perec addresses the problem of space by providing a list of domestic locations where books are commonly arranged. Perec's reflections on order become more structured as the text goes on. In the subchapter, "Ways of Arranging Books," the text presents multiple options to organize books: "alphabetically, by continent or country, by color, by date of acquisition, by date of publication, by format, by genre, by major periods of literary history, by language, by priority for future reading, by binding, by series."⁰⁵ It is important to emphasize that the word "classement" (to classify) in the original text lacks any hierarchical connotation. "Classement" suggests a principle of organization by classes, to which common sense often associates an ordinal character. However, in this context and similar studies, such assumptions are unreasonable and can lead to potentially harmful interpretations.

From George Perec's text, three key ideas emerge that are useful to the study of types and typology in architecture. 1) Perec shows that no single criterion is self-sufficient in classification. It is instead mostly a work of "combining modes of classification."⁰⁶ 2) Perec introduces two concepts: "stable classification" and "provisional classification." Stable classification refers to classes with more robust criteria: "which, in principle, you continue to respect," therefore generally respected over the long durée. Provisional classification, on the other hand, is associated with a short temporal line, "supposed to last only a few days."⁰⁷ 3) Lastly, Perec references Jorge Luis Borges's, "Library of Babel," to remind us that classifying is a way of accessing knowledge. In Borges's text, librarians believed in the existence of a book "that is the cipher and perfect compendium of all other books."⁰⁸ A book that makes it possible to understand other books and that reveals a unifying matrix of different examples; an idea that resonates with a typological exercise. In order to find this key, Borges' librarians embark on diverse excursions. Within this narrative, Jorge Luis Borges, probably without intending to do so, summarizes the conceptual foundations of a theory of typological precedence: ". . . to find book A, first consult book B, which tells you where to find book A; to find book B, first consult book C, and so on, to infinity . . ."⁰⁹ In the field of architecture, the analogy goes hand in hand with the studies of types: to understand building A, first look at building B, which will tell you how to understand building A, to understand building B, first look at building C, and so on. However, replicating this exercise in the architectural field comes with additional difficulties; it may happen that to understand building A, one not only needs to look at building B but also to know book X.

From the oneiric dynamism of Borges' encyclopedia to Perec's more rational reflection, typological thinking emerges as an exercise in convenience. This fact seems to be confirmed by the Italian art historian Giulio Carlo Argan, for whom one can define as many typological classes as one likes.¹⁰ However, Argan reduces the typological act to three primary criteria:¹¹ the configuration of the building, the dominant structural elements or its predominant decorative elements.¹² In the field of archaeology, Alex D. Krieger also questions the convenience-driven nature of typology: "In speaking of types, did the author follow any philosophy of typology, or—as is so often the case—did he simply invent yet

05 Ibid. Original version: «classement alphabétique, classement par continents ou par pays, classement par couleurs, classement par date d'acquisition, classement par date de parution, classement par formats, classement par genres, classement par grandes périodes littéraires, classement par langues, classement par priorités de lecture, classement par reliures, classement par série,» in Georges Perec, *Penser/Classer* (Paris: Hachette, 1985), 31.

06 Ibid.

07 Ibid. Although not the aim of this essay, I note that the notion of stable classification and provisional classification deserves to be tested in the field of type and typology in architecture.

08 Jorge Luis Borges, *Collected Fictions*, trans. Andrew Hurley (New York: Penguin Books, 1998), 116.

09 Ibid., 117.

10 Giulio Carlo Argan, "Tipologia, Simbolismo, Allegorismo Delle Forme Architettoniche," *Bollettino Del Centro Internazionale Di Studi Architettura Andrea Palladio*, no. 1 (1959): 21.

11 Archeologist Clark Wissler used the term, "unit of observation." Cf. Alex D. Krieger, "The Typological Concept," in *American Antiquity* 9, no. 3 (1944): 272.

12 "Normalmente se ne distinguono tre, la prima delle quali comprende intere configurazioni di edifici, la seconda i grandi elementi costruttivi, la terza gli elementi minori e gli elementi decorativi," in Argan, "Tipologia, Simbolismo, Allegorismo Delle Forme Architettoniche."

another ‘typology’ for his own convenience?”¹³ Likewise, in, “A Study of Archeology,” Walter W. Taylor asked to overcome the argument of convenience, concluding:

It is possible to type automobiles on the basis of the length of the scratches in their paint, to classify sand tempered potsherds on the number of sand grains in each, or to group together all chipped stone points which have side notches. It would be possible, but the pertinent question is “So what?”¹⁴

Returning to the field of architecture, in the same decade, Jean Marc Lamunière acknowledged that typological work is essential to the concepts authors wished to develop or design. During the process, he states that typological research “deciphers architectural objects, by codifying and grouping them into hypothetical classes.”¹⁵ While objects themselves are not conclusive, they can be an element of proof—“evidence”¹⁶ within the author’s framework. Typological work tends to be a comparative working process or, if we are lucky, an explanatory essay.¹⁷ Although both processes start from the same field of analysis, demonstrating the existence or predominance of a type differs from tracing its origins, genealogy and evolution.

More recently, the architectural historian Andrew Leach, in his attempt to clarify “What Is Architectural History?” maintains the idea of convenience, emphasizing its instrumental role—typology as a discipline is a tool in the hands of historians. For Leach: “type serves as a useful means of defining a historical study rather than as a stable and tenable entity.”¹⁸ Leach’s conclusion is not reassuring. If typology (at least in the Arganian conception) is the essence of architecture, how can we deal with a rich array of varieties and variants that conveniently align with an author’s agenda? Said otherwise, can the center of a system or a process (or a whole discipline), hold if its structural features or characteristics are understood differently? Or, how to manage a field of knowledge if an artefact can be part of several types by simply changing an author’s terms?

TYPE AND ITS UNITS OF OBSERVATION

Recognizing convenience as an inherent part of typological work does not imply randomness. The method follows certain criteria that must be visible, identifiable and describable. Coherence between the criteria and the organization of architectural artefacts lends credibility to a type and the typological work. While a given type can serve as a deductive endpoint, it also becomes exemplary, and thus a starting point for the inclusion of other examples in accordance with the selection criteria. Typological work is both demonstrable and open to demonstration. When examining a type, it should be possible to identify its attributes—or “units of observation”¹⁹—but also the elements that might belong to the group. These artefacts are

13 In his text, “The Typological Concept,” Krieger identifies the idea of convenience by analyzing the arguments of two authors—Deuel and Nelson. Alex D. Krieger, “The Typological Concept,” in *American Antiquity*, volume 9, no. 3 (1944): 271–88. This line of Krieger also appears under the entry, “Typology,” in *Gaither’s Dictionary of Scientific Quotations*, eds. Carl C. Gaither and Alma E. Cavazos-Gaither (New York: Springer, 2012), 2578.

14 Walter W. Taylor, *A Study of Archeology* (Carbondale: Southern Illinois University Center for Archaeological Investigations, 1983), 129.

15 My translation; original: «La recherche typologique décode, en les codifiant, les objets architecturaux pour les regrouper selon des classes hypothétiques.» In Jean-Marc Lamunière, “Le classement typologique en architecture,” in *Habitation: logement, architecture, urbanisme, aménagement du territoire*, no. 61 (April 1, 1988), 7, <https://doi.org/10.5169/SEALS-128866>.

16 Giulio Carlo Argan, “On the Typology of Architecture,” in *Architectural Design*, volume 33, no. 12 (1963): 564–65.

17 It is interesting to note Krieger’s partial synthesis, in which the author attempts to systematize four operative attitudes of the act of typification: “1. Full description, in which specimens are individually described in detail . . . 2. Visually determined typologies, in which grouping serves primarily to reduce repetitive description . . . 3. Classification systems, which aim at standardizing description and comparison over wide areas . . . 4. The true typological method, in which types are understood as specific groupings of structural features,” Alex D. Krieger, “The Typological Concept,” in *American Antiquity*, volume 9, no. 3 (Cambridge, UK: Cambridge University Press, 1944): 273.

18 Again the idea of convenience: “Type is a category of convenience that combines well with other framing devices . . . genre offers useful divisions to an otherwise unwieldy subject.” Andrew Leach, *What Is Architectural History?* (Cambridge, UK: Polity Press, 2010), 65.

19 Alex Krieger borrows the expression explored by the anthropologist Clark Wissler. Krieger, “The Typological Concept,” 272.

composed of “one-sided, star-like, accentuated, or blurred relationships that typologically structure the work and reveals its belonging to a typological ‘class,’ of which the ‘type’ is the paradigm.”²⁰ According to Argan, the birth of a type is rooted in “the existence of a series of buildings with an obvious formal and functional analogy between them,”²¹ but perhaps one should consider that typology entails more than. The notion that typology is unifying in its diversity becomes apparent as it emphasizes the sense that an artefact belongs to a group of artefacts. To typify is not merely to classify, it is about establishing a sense of belonging.

TYPE BETWEEN ORDER AND OPERATION

Several authors who have contributed to the theoretical construction of type seem to agree on its dual nature: discourse and method.²² On one hand, typology is an exercise in acquiring some kind of knowledge; it is applied to existing artefacts through comparison and superimposition, functioning as a deductive process.²³ This process is retrospective. It works with what exists and relates what exists through an operation of reduction—a necessary logical activity.²⁴ On the other hand, typology can be a creative endeavor with implications for the working process. One or more types may influence the gestational phase of an artifact—one could mention Hilberseimer’s, “Vertical City,” (1924) where the German architect assembles existing types, the block and the slab, to generate new solutions.²⁵ It is crucial to distinguish typological work from mere referencing. While the former involves a collective dimension, the latter implies an individual dimension (or multiple individual actions). The typological work implies a process of sedimentation—a retrospective act—and a prospective action that leads to the design of a new artefact, which is born already belonging to a group of variations of the same type. In the double nature of the typological work resides the Arganian notion of the common root, which necessitates the development of what—in archeology—Sheryl Miller and François Bordes refer to as the, “typological eye.”²⁶

DIFFERENT ROOTS, SIDE BY SIDE

I have carefully explored some peculiarities of the work on type: necessary convenience and purposeful relevance, potential for constructing discourse but also capacity to constitute method. If typology helps us to identify sets of artefacts that share a common root, what happens when artefacts with distinct roots are juxtaposed? What transfers might occur? And how, from there, can we develop a definition of typological transfer?²⁷ Specifically, what modalities can typological transfers assume at the scale of a building, in a container-content duality that encompasses not only form but also use? That is to say, exchanges that take place

20 My translation; original: “relations, unilatérales, étoilées, accentuées ou floues qui structurent typologiquement l’oeuvre et dégagent son appartenance à une ‘classe’ typologique dont le ‘type’ est le paradigme.” In Lamunière, “Le classement typologique en architecture,” 7.

21 Argan, “On the Typology of Architecture,” 565.

22 “La typologie doit être entendue à la fois comme méthode et comme discours.” Lamunière, “Le classement typologique en architecture,” 6.

23 Argan, “On the Typology of Architecture.”

24 For Argan there is an implicit act of reduction: “come riduzione di una serie di varianti formali a una supposta struttura comune,” in Argan, “Tipologia, Simbolismo, Allegorismo Delle Forme Architettoniche,” 20; and well as Aldo Rossi: “even if all architectural forms are reducible to types. The process of reduction is a necessary, logical operation,” in Aldo Rossi, *The Architecture of the City* (Cambridge, Massachusetts: MIT Press, 2007), 41.

25 Cf. Pier Vitorio Aureli, “Architecture for Barbarians,” in *AA Files no. 63* (London: Bedford Press, 2011), 3/18.

26 “One has to see a great number of implements, classify them, see them again several times, before one acquires a ‘typological eye’—that is, before one’s organic computer, the brain, has stored the attributes which define each ‘type,’” in Sheryl F. Miller and F. Bordes, “On Old and New Concepts of Typology,” *Current Anthropology*, volume 13, no. 1 (February 1972): 139–41, <https://doi.org/10.1086/201259>.

27 A note on the work of Emanuel Christ and Christoph Gantenbein in an academic context who have also explored the notion of transfer typology through project analysis, family formation, type formulation and the application of these types in different geographical contexts. Cf. Emanuel Christ and Christoph Gantenbein, *Typology—Hong Kong, Rome, New York, Buenos Aires* (Zurich: Park Books and ETH Zurich, 2012).

between one or more types, each of a different nature, that, once subjected to transfer forces, substantially modify their existing dominant structures, whether formally or at the level of the type's utilitarian purpose.²⁸ Methodologically this study looks at the work of the architects Anne Lacaton and Jean-Philippe Vassal and argues that their work embodies a comprehensive form of typological transference—an evidence à part entière. To contextualize this, the following notes identify a number of precedents where identical principles of typological transference are also present. I will conclude by suggesting that, in a given cultural context, a type, in architecture, may embody inherent meanings or ideological values.

HOUSE LATAPIE AND THE ORIGINS OF THE *GREENHOUSE EFFECT*

The argument begins with one of the most significant works of Lacaton & Vassal: the Maison Latapie.²⁹ Situated on the outskirts of Bordeaux, the project was designed by Anne Lacaton and Jean Philippe Vassal for a family—a couple with two children. The house, celebrating its 30th anniversary this year, takes the form of a parallelepiped volume with an almost square plan measuring 11 meters by 12 meters. The plan is divided into two equal-sized rectangular areas. One portion corresponds to a thermally insulated habitable volume, constructed with sandwich panels, while the other part of the volume corresponds to a complementary, open, double-height area with spatial and material characteristics identical to those of a horticultural greenhouse. The insulated volume encompasses the more conventional domestic spaces, organized around a closed volume that contains sanitary facilities, vertical circulation and the kitchen. From a more conventional reading, the spaces adhere to a day-night logic. The ground floor comprises a family room and a multi-purpose space that can be used as a garage. On the first floor, the same spaces correspond to two bedrooms, one large and the other smaller. Adjacent to this arrangement, at twice the height and neither artificially heated nor insulated, is the large greenhouse-like volume, enclosed by a skin of corrugated transparent polycarbonate panels. The openings are generous. On the urban façade, the opaque volume features two horizontal bands, vertically divided into identical surfaces, with large double doors on the ground floor and smaller windows on the first floor.

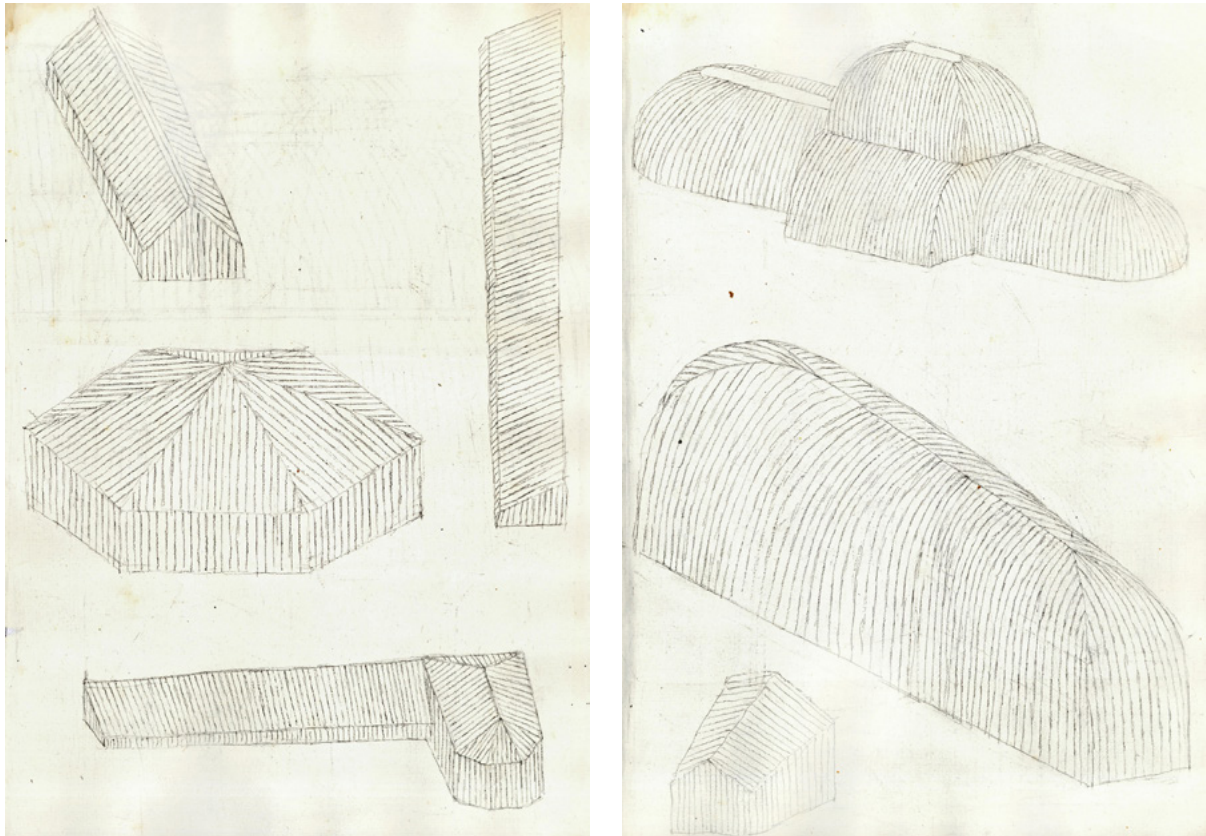
The greenhouse volume of the house follows an identical principle, with three double doors and a horizontal band of movable panels positioned on the upper part of the volume. Between the two parts of the house, the insulated section opens widely onto the translucent area. The peculiarity of this house lies in its ability to extend the living space horizontally and vertically into the greenhouse area. As soon as the temperature allows it, or more precisely, in accordance with the inhabitants' thermal comfort, the surface and volume of the house's living space can double. This is the result of a design process guided by a compromise between two seemingly antagonistic forces: the French duo's ambition to design a dwelling of great spatial generosity and the client's economic constraints.

In order to better understand the origins of this greenhouse-like complementary space, it is necessary to review the initial version of the project. Conceived in 1991, its first iteration³⁰ proposed a rectangular, 12 meters by 9 meter, volume with a mineral base, concrete structure and cement

28 Throughout this essay, I will try to explore design actions that, by manipulating types, result in the modification of the underlying principles associated to the genesis of that same type.

29 In addition to being one of their most published and well-known designs, the Latapie house helped Anne Lacaton and Jean-Philippe Vassal establish several core principles that would later become part of their design philosophy and vision as architects.

30 On the office's website, the first version of the Latapie House is called, "Maison d'Habitation Économique." The model of the project belongs to the collection of the Pompidou Centre in Paris and it is named, "Maison économique et bio-climatique, Première version du projet."



House Latapie, garden side. Hisao Suzuki, 2017. From *El Croquis Omnibus wVolume: Lacaton & Vassal 1993-2017, no. 177/178* (Madrid, Spain: El Croquis, 2017).

brick infill, in which the translucent volume of an agricultural greenhouse was placed. Inside, two square wooden volumes accommodated the conventional domestic spaces. The smaller volume housed a “garage” on the ground floor and two bedrooms on the upper floors. The second volume formed the living space on the ground floor with the kitchen, master bedroom and sanitary facilities above, culminating in a terrace. The vertical distribution was solved by a compact spiral staircase providing access to both the terrace and bedrooms. The remaining irregular space, between the home’s conventional programs and the outer limits of the house, was left unassigned, serving as an elastic zone for potential domestic uses. The conception of this first version’s thermal envelopes is very similar to the final version of the Latapie house. Only the “solid” volumes are thermally insulated, while the outer envelope functions as a simple skin with performance characteristics resembling those of a greenhouse. This upper part consisted of two faces composed of a double membrane of inflatable polyethylene, and the other two faces comprising of semi-rigid PVC panels. However, this particular solution was ultimately abandoned due to cost considerations. The overall cost exceeded the budget of 55,000 euros by 10 percent—which would be 84,700 euros for a 180 square meter house by today’s standards.



Maison d'habitation économique, Model-photograph © Lacaton & Vassal Architectes

Given the current lack of precise information, it is challenging to provide a definitive account of the origin of agricultural greenhouses as a design element. According to the available knowledge, it is understood that the greenhouse in the Latapie project emerged through extensive conversations with the clients, delving into their daily lives and habits. Revolving also around the client's leisure trips and their perceptions of climate. It is noteworthy to underline the preparatory aspect of the design process, where lengthy conversations were pivotal. Florence Latapie recalls: "They listened to us a lot about our life, our leisure time, our habits . . . they showed us materials, they asked if we usually closed the doors to the rooms in our house. We wondered what they were getting at!"³¹ This practice is very much in line with the working methods of Jacques Hondelatte (1942-2002), a French architect with whom Anne and Jean-Philippe collaborated for several years. The approach was mainly through words, driven by dialog, where long discussions shaped the project in their imagination before translating it into drawings.

In addition to the implications of the Latapie House, it is worth mentioning three other factors that likely influenced the integration of this solution in the architectural practice of Lacaton & Vassal. Firstly, Jean Philippe Vassal's diploma thesis, which dealt with the relationship between vegetation and the city, as well as the study of greenhouses and public spaces in Bordeaux.³² Secondly, during their studies, they got to know the solar architecture experiments, later criticizing the advocates of these solutions for adopting a highly dogmatic approach characterized by an all or nothing mentality.³³ Moreover, during their student years, the duo carried out a project for the conversion and extension of a house which was reduced to adding a greenhouse behind the existing structure: "After numerous refusals to grant planning permission, instead of building a new façade in sheet metal, as we had planned, we decided to keep the old façade and add a greenhouse behind it. All the rooms communicate through this green-

31 My translation; original: "Ils nous ont beaucoup écouté sur notre vie, nos loisirs, nos usages . . . ils nous ont montré des matériaux, ils nous demandaient si on fermait facilement les portes des pièces chez nous. On se demandait où ils voulaient en venir!" in Yannick Delneste, "En Gironde, Les Époux Latapie Vont Quitter Leur Maison d'architecte Mythique," Newspaper, Sud Ouest, February 3, 2022, <https://tinyurl.com/4d2zbbv9>.

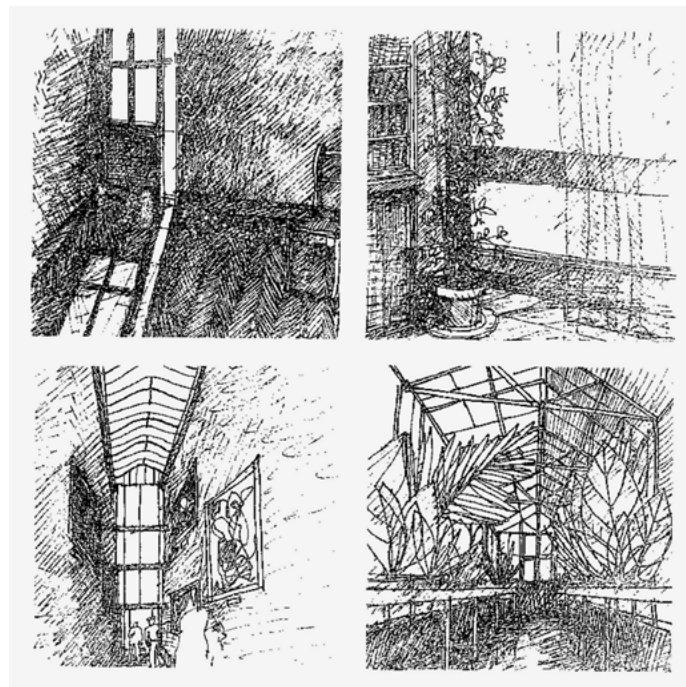
32 Cf. Jean-Philippe Vassal. "Le Vegetal et La Ville" (Travail personnel de 3e cycle, Bordeaux, Unité Pédagogique d'Architecture de Bordeaux, 1979) and also mentioned in Cristina Díaz Moreno and Efrén García Grinda, "A Conversation with Anne Lacaton and Jean Philippe Vassal," in *Anne Lacaton, Jean-Philippe Vassal, Fernando Márquez Cecilia, and Richard Levene. Lacaton & Vassal: 1993-2015, horizonte post-mediático post-media horizon* (Madrid: Editorial El Croquis, 2015).

33 Cf. Patrice Goulet, "A conversation with Patrick Goulet," in *2G International Architecture Review – Lacaton & Vassal*, eds. Moses Puente and Anna Puyuelo (Barcelona: Editorial Gustavo Gili, 2001), 121–43.

house.”³⁴ This project seems to be the first horticultural gesture. Lastly, the Niamey period should not be overlooked. It is often referred to in multiple published interviews and developed in several themes—climate, flexibility and scarcity, just to name a few. During the seven years that separated the Latapie house from the second case-study, Lacaton & Vassal conceived and realized several housing and public projects. The palette of materials has remained faithful to metal structures, light aluminum structures and glass envelopes or corrugated polycarbonate panels.



Cover of the dissertation, “LE VEGETAL ET LA VILLE,” by Jean-Philippe Vassal.
© Lacaton & Vassal Architectes



Hand-drawings investigating the relationships between inside-outside, transparency and green-houses. From Jean-Philippe Vassal, “LE VEGETAL ET LA VILLE” (Travail personnel de 3e cycle, Bordeaux, Unité Pédagogique d’Architecture de Bordeaux, 1979).
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HOUSE IN COUTRAS AND TYPOLOGICAL TRANSFER

In 2000, Anne Lacaton and Jean-Philippe Vassal carried out a project that stands out as the most representative, radical and relevant to the central argument of this essay—the notion of typological transfer. Situated in an agricultural area, on a narrow plot of land, the house in Coutras is set back from its neighbors. Described as the second lowest-budget project following Latapie, the house consists of a juxtaposition of two professional horticultural greenhouses, constructed with a metal structure and rigid translucent panels. Both have a natural ventilation system with motorized flaps on the roof and sliding side panels, regulated by rain and weather sensors. The arrangement and modularity of the panels allow the sides to open up to 50 percent. The two greenhouses form a rectangular plan with two identical areas of 150 square meters. A volume with a wooden structure and insulated sandwich panels completely occupies the interior of one of the greenhouses and provides the necessary spaces for conventional residential use: living room, kitchen, bedrooms and sanitary facilities. The sliding windows are made of aluminum, the finishes are relatively simple and straightforward, the concrete flooring and the wooden panels have been left in their natural state. The second greenhouse remains unaltered. Featuring the existing earth floor, it provides a sheltered, temperate space and acts as a direct extension of the adjacent living areas. The overall cost was 68,000 euros, equivalent to approximately 95,500 euros today. The uniqueness of this project lies in the direct use, without intervention or modification, of a pair of professional horticultural greenhouses to install a domestic program. Side by side, the ideas and ideals from Latapie remain constant: doubling the potency of the living space. During the cold months, the complementary greenhouse goes into hibernation, a period of dormancy in which it passively contributes to the thermal performance of the house.



House in Coutras, 2000. Hisao Suzuki, 2017. From *El Croquis Omnibus Volume: Lacaton & Vassal 1993-2017*, no. 177/178 (Madrid, Spain: El Croquis, 2017).

TWO HOUSES WALK INTO A BAR . . . HOUSING IN MULHOUSE

A focused reading of the collective housing project in Mulhouse, completed in 2003, concludes this presentation of Lacaton and Vassal's seminal houses. Mulhouse marks both a visible leap in scale as well as a shift from the individual unit to the collective. In many respects, Mulhouse is the product of a fruitful dialogue between the first version of the Latapie project and the house in Coutras. The design integrates the development of 61 Habitation à Loyer Modéré (HLM) dwellings as an extension of the Mulhouse Cité Ouvrière. Mirroring the initial concept for the Latapie house, the project occupies the entire plot and consists of a structural base of a reinforced concrete. On top of this structure, three rows of professional horticultural greenhouses, made of galvanized steel and rigid transparent polycarbonate panels, are installed. Similar to Coutras, inside the translucent volume one section is insulated and heated while the other functions as a winter garden. The envelope is punctuated by large openings that accentuate and enhance the transparency of the whole.



Collective housing during construction. Cité Manifeste, Mulhouse, 2005.
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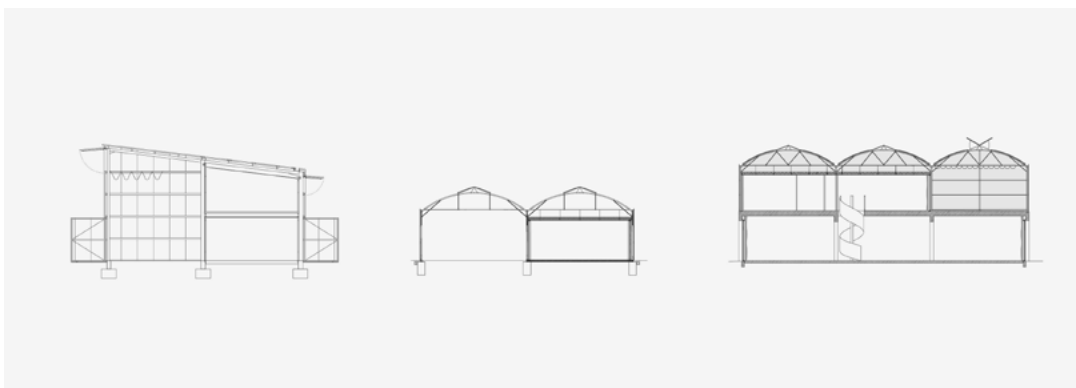
Although a detailed examination is beyond the scope of this essay, it is important to highlight some aspects in particular. The designers' intention was to treat the apartments equally. The vast majority are transversal, duplex regardless of their size, and all the appartements have winter gardens. This space has emerged as a defining and iconic element in Lacaton & Vassal's work; not so much as a sign—which it also undeniably is—but as a dispositive deprived of any specific function, omnipresent in their future designs. It's not the first-time architects design "extra space." Originating from different contexts, this indeterminate space recalls William J. Pulte's unfinished "Bonus Space." Under the difficult economic constraints of the 70s, tackling construction costs and the desires for big suburban houses, Pulte registered a patent concept for a house design that offered a generous unfinished space for future expansion.³⁵ At Mulhouse, the bonus space is already there. Built. Enclosed by a polycarbonate skin, the space corresponds to an expandable living zone whose character is subject to

35 Cf. Kevin Emerson Collins, "Architectural Patents Beyond Bucky Fuller's Quadrant," in *Terms of Appropriation: Modern Architecture and Global Exchange*, eds. Amanda Reeser Lawrence and Ana Miljački (New York: Routledge, 2018), 186–211.

the residents' wishes or needs. Working as a mediator between interior climate and exterior meteorologic conditions, freed from the architects' initial desire,³⁶ the greenhouse became the symbol of use indeterminacy and of domestic expansion thanks to the family Latapie. A “natural” condition linked to the essence of these type of buildings as we shall see in the second part of this essay. It is also in Mulhouse that the greenhouse space tries to emancipate itself from the living room. In half of the appartements, specifically those where the living room is situated on the ground floor, the green-room appears adjacent to smaller rooms on the upper floor. While this configuration tests new limits of the greenhouse solution and frees the space from the influence of the common areas, it also seems to impose certain limitations to the use and dimensions of the unassigned area. The modular design dictated by the standard greenhouse model resulted in very deep dwellings, but all adhere to the idea of “more space equals more quality.” For instance, a three-bedroom apartment, which in the Cité Manifeste is typically 75 square meters, is 145 square meters in the Mulhouse project with a 40 square meter habitable greenhouse. Probably in line with this principle, and considering the great depth of the plan, the ceiling height was set to three meters. This choice offers an elegance and sense of harmony across both floors.

TYPE AS STRUCTURE OF RELATIONS

What do these three projects have in common? The first answer is obvious: they are all housing projects. They start from a set of clearly stated postulates and seem to have a common ideological position. They all explore a type that is “alien” to the conventional universe of dwelling. The house is juxtaposed with a complementary space—the greenhouse—that touches on the essence of the domestic space. Thanks to this point of contact, a process of typological transference begins between two artefacts with different roots and cultural contexts. On one hand, two phenomena occur: the greenhouse transcends itself from its original technical purpose of creating a favorable climate for plant growth and detaches from its agricultural context in order to accommodate various uses linked to the human habitat. On the other hand, the domestic universe finds in the greenhouse a realm for expanding and reformulating domestic activities—akin to a second nature.



Cross sections. From left to right: House Latapie in Bordeaux, house in Coutras, Cité Manifeste in Mulhouse (drawings not to scale). © Lacaton & Vassal Architectes.

³⁶ About the greenhouse space at the Latapie's, Jean-Philippe Vassal explains: “When we built the greenhouse for the Latapie house, we thought it would be like a botanical garden, with palm trees and bougainvillea bushes ; in reality what they've done is ten times better.” My translation ; original: “Quand t'on a fait la serre pour la maison Latapie, on pensait que cela allait être un jardin botanique, et qu'il aurait des palmiers et des bougainvilliers ; en réalité ce qu'ils ont fait est dix fois mieux.” Cf. “Une Architecture Durable Lacaton & Vassal, Ne Jamais Démolir,” (Germany: ARTE, 2023), <https://www.arte.tv/fr/videos/106172-002-A/une-architecture-durable/>. Accessed on 27.07.2023.

Considering Lacaton & Vassal's work from this perspective suggests a new notion of type based on the structure of relationships between spaces and their climate affinities. Here spaces are defined not by their form or use, but by their climatic qualities and the relation between them. In this regard, it's possible to rewrite Argan's assertion: typological theories do not arise only in relation to the physical functions of the building, but its configuration can also be linked to its climatic nature.³⁷

In Lacaton & Vassal's work, the greenhouse has become a typological element that, accordingly to Argan's description of type, proposes a "scheme of spatial articulation that is a response to the totality of the practical and ideological demands,"³⁸ of the architects. It is, by its very nature, a robust solution capable of responding to many prejudices or preconceptions about housing. It would not be an overstatement to say that the greenhouse is not only a solution but also an artefact that symbolically and materially embodies Anne Lacaton and Jean Philippe Vassal's idea of architecture.



Top: Interior photograph of the house in Coutras, 2000. Hisao Suzuki, 2017.

From *El Croquis Omnibus Volume: Lacaton & Vassal 1993-2017*, no. 177/178 (Madrid: El Croquis, 2017).

Bottom: Interior photo of a four-bedroom appartement, Cité Manifeste, Mulhouse, 2005,
© Lacaton & Vassal Architectes.

- 37 The original sentence: "Typological theories do not arise only in relation to the physical functions of the building but are tied to their configuration," in Argan, "On the Typology of Architecture," 564.
- 38 Argan refers to the work of Sergio Bottini and G. K. Koning and writes: "In these writings the opinion prevails that an architectural 'type' must be treated as a schema of spatial articulation which has been formed in response to a totality of practical and ideological demands," Argan, "On the Typology of Architecture," 564.

CONTRIBUTION TO A HISTORY OF
PRECEDENTS ON GREENHOUSE EFFECTS:
THE GERMAN PRACTICE LOG ID

The German architectural collective LOG ID (Logische Ideen)³⁹ was another practice interested in the possibilities that the greenhouse could offer the human habitat. Driven by concerns linked to the consumption of natural resources, the group investigated potential solutions for passive energy management within the architecture for plants. In 1965, Dieter Schempp, one of the founding members of LOG ID and part of an emerging generation interested in finding new solutions for building and living, sought to explore the potential of horticultural greenhouses for human habitation. Schempp was interested in the coexistence of plants and people. His main aim was to study the potential of this symbiotic relation in the spirit of co-habitation, and the impact in the built environment: “The floor plan of such an interior would have to remain largely flexible in order to offer the plants sufficient space for their development (and) it should be easy for the inhabitants to adapt to the changed spatial conditions.”

⁴⁰ The aim of his design-research, documented in the publication *Grüne Archen* (1983), was to examine habitable surface values for both people and plants, test principles of flexible use, analyze sunlight and humidity conditions and study passive heating solutions. In the autumn of 1976, the architect rented a greenhouse in the German city of Tübingen for this experiment, marking the inception of LOG ID.

The building consisted of two contiguous greenhouses, each with a surface area of 20 meters by 10 meters, for a total of 400 square meters and reaching a height of almost three meters at the highest point. The project incorporated a thermally insulated space inside the greenhouse conceived by the architects—very similar to the notion of the “hard” cores of the Latapie house project and the house in Coutras. Dieter Schempp moved his office inside the greenhouses where he also lives. With the exception of the electrical and sanitary installations, the members of the LOG ID group personally carried out the adaptation work themselves. Throughout this period, Schempp maintained a logbook in which he recorded notes of events, activities and observations:

- 2.10.76. The office is set up; it rains lightly but gets steadily inside the office.
- 11.10.76 Today is my first day of work at the office; everything works.
- 14.10.76 The moisture problem has not yet been solved, the drawing paper is curling; the flowers are growing.
- 14.4.77 The greenhouse is not ventilated, the sun is shining, the inside temperature is 48 degrees Celsius at 12 o'clock, opening the ventilation flaps immediately reduces it to 24 degrees.

³⁹ The LOG ID group, based in Tübingen, was a multi-disciplinary group dedicated to the built and non-built environment. Members included Dieter Schempp (architect), Jürgen Frantz (horticulturist and botanist), Martin Krempen (scholar), Dietmar Wolter (physician) and Thomas Seidel (architect).

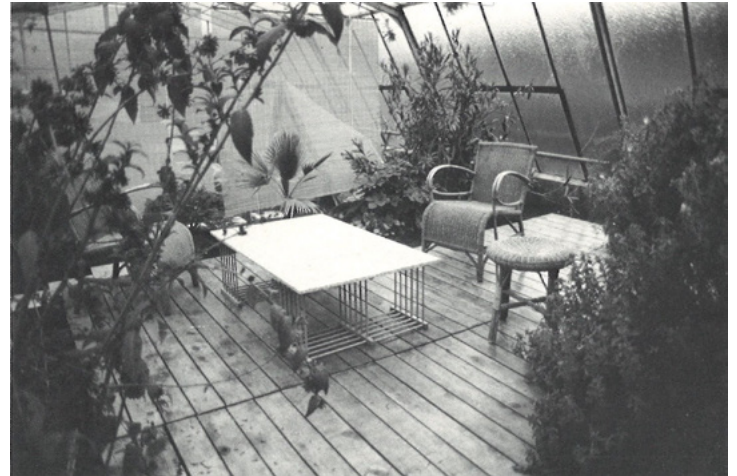
⁴⁰ LOG ID, “Grüne Archen,” in *Harmonie mit Pflanzen leben das Modell der Gruppe LOG ID* (Frankfurt am Main: Fricke Verlag, 1983), 8. Note on translation: except when noted, all the translations from the original German publication to English were generated by DeepL and edited by Prof. Anja Fröhlich together with the author.



Outside view of the greenhouse in Tübingen, ca. 1976.
From LOG ID, *Grüne Archen: in Harmonie mit Pflanzen leben das Modell der Gruppe LOG ID* (Frankfurt am Main: Fricke Verlag, 1983).



Left: Entrance zone of the greenhouse in Tübingen, ca. 1976. From LOG ID, *Grüne Archen: in Harmonie mit Pflanzen leben das Modell der Gruppe LOG ID* (Frankfurt am Main: Fricke Verlag, 1983).



Right: Living zone, greenhouse in Tübingen, ca. 1976. From LOG ID, *Grüne Archen: in Harmonie mit Pflanzen leben das Modell der Gruppe LOG ID* (Frankfurt am Main: Fricke Verlag, 1983).

The interior layout of the greenhouse changed according to the uses and the sort of vegetations studied by LOG ID. Although we are dealing with a transfer of a different nature—the transfer of uses associated with human habitation to the interior of an existing structure designed for plants—Dieter Schempp drew some conclusions very close to the examples of typological transfer discussed earlier:

With the arrival of spring, you can live anywhere in the green zone. Depending on your needs and preferences, you can sit in the sun or in the shade. You can even hang a hammock in a nice spot when it is still cold outside. The scent of the flowers alone will entice you to move your activities to the vegetation area.

...

In winter, the living area becomes smaller, because only on really sunny days is it possible to spend afternoon tea in the green area.

...

Living in a greenhouse is not about rigid routines. Just as everyone's living needs change all the time anyway, be it through leisure activities, work or simply the addition of a new member to the family, one also lives in the greenhouse under constant change with a minimum of routine.⁴¹

And finally:

The luxury of unused space! This was also an attempt to test an idea. The space changes independently. Rooms change in space through the growing and dying of plants. It should be attractive for the interior designer to experience such autonomous spatial changes.⁴²In the Tübingen experiment it was possible to look at the latent potential of the greenhouse as a living space and how this solution—either as an object or as a building system—could change existing or future living conditions. From the “green arc,” Schempp and the LOG ID group formulate a set of prescriptions—like a manual—for the design of new architectural projects, but also for renovation and transformation projects of existing buildings. They stated: “The living concept opens up new perspectives for outdoor architecture. The greenhouse idea can be combined with the renovation of existing buildings as well as with new construction.”⁴³ The principles could be applied to the single-family house, but also to make the “concrete silos”⁴⁴ more “human”—referring to the large post-war collective housing blocks, for which LOG ID proposed greenhouse-like extensions: “One could, however, glaze the balconies from top to bottom and then plant them. It is also conceivable that an entire side of the concrete buildings could be largely replaced by glass to allow the people living in the high-rises to cultivate plants.” . . . “A garden on the 10th floor?”⁴⁵ And finally, the whole operation had a very important economic advantage: “The greenhouse idea makes it possible to reduce the overall construction costs.”⁴⁶

41 Ibid., 21.

42 Ibid., 24.

43 Ibid., 73.

44 Ibid., 74.

45 Ibid., 74.

46 Ibid., 80.

The idea of using the structural and climatic system of greenhouses in the renovation of social housing was successfully applied by Lacaton & Vassal. One notable, and probably the first example, is the transformation of the Bois-le-Prêtre tower in Paris in 2011.



Left: LOG ID's architecture office space inside the greenhouse in Tübingen, ca. 1976.

From LOG ID, *Grüne Archen: in Harmonie mit Pflanzen leben das Modell der Gruppe LOG ID* (Frankfurt am Main: Fricke Verlag, 1983).

Right: LOG ID office in 2010 © Peter Balogh

AND THE VICTORIAN STARTS

Finally, I must mention very briefly⁴⁷, the first significant movement in the relationship between greenhouses and domestic and social space, which took place at the beginning of the nineteenth century alongside the revolution of glass and steel architecture. From covered passageways to conservatories with colonial roots, thanks to industrialization, the greenhouse went from being a technical solution to a symbol of opulence associated with the upper classes. Conservatories, initially conceived as “free-standing” objects, began to be incorporated into the design of the house. In a paper⁴⁸ devoted to a particular type of conservatory—the attached quadrant conservatory—Rebecca Tropp synthesizes the proliferation of conservatories as a new form of social space—“the most original and interesting part of the design”⁴⁹ of houses—and shows how these spaces became popular with the wealthy despite heavy taxes on glass. Humphry Repton (1752-1818), quoted by Tropp, asserts that conservatories were “considered essential to comfort and magnificence.”⁵⁰ John Claudius Loudon (1783-1843), landscape gardener and author of, *The Greenhouse Companion* (1832), emphasized the need for the adjoining greenhouse as essential:

A Green-house which fifty years ago, was a luxury not often to be met with is now become an appendage to every villa, and to many town residences—not indeed one of the first necessity, but one which is felt to be appropriated and highly desirable.⁵¹

47 While briefly mentioned in this essay, the relation between conservatories and domestic space—arguably a form of typological transfer—is being studied within the context of my ongoing doctoral research.

48 Rebecca Tropp, “The Most Original and Interesting Part of the Design’: The Attached Quadrant Conservatory at the Dawn of the Nineteenth Century,” in *Studies in the History of Gardens & Designed Landscapes* 41, no. 3 (July 3, 2021): 234–56, <https://doi.org/10.1080/14601176.2021.1945223>.

49 Rebecca Tropp quotes John Martin Robinson referring to James Wyatt’s work in Dodington Park, Gloucestershire. Tropp, “The Most Original and Interesting Part of the Design,” 234.

50 Tropp, “The Most Original and Interesting Part of the Design,” 236.

51 John Claudius Loudon, *The Green-House Companion* (London: Whittaker, Treacher and Co., 1832), v.

Highlighting the possible articulation with the domestic space and the scenic qualities it could provide to the rooms:

According to our ideas of the enjoyments of the green-house, it is essential that it be situated close to the house; not merely near, but immediately adjoining it; and attached to it either by being placed against it, forming a part of the edifice; or by means of a corridor [sic], viranda [sic], or some other description of covered passage. The most desirable situation is unquestionably that in which the green-house [. . .] shall communicate with, and form as it were an additional apartment to the library, or breakfast-parlor. If it communicates by spacious glass doors, and the parlor is judiciously furnished with mirrors, and bulbous flowers in water-glasses, the effect will be greatly heightened, and growth, verdure, gay colors, and fragrance, blended with books, sofas, and all the accompaniments of social and polished life.⁵²

Far from LOG ID's desire for a symbiosis between plants and humans, the greenhouse of the eighteenth century emerges as a complement or almost necessary extension of the living space. It re-formulates the transition between inside and outside, while also providing additional floor space that accommodates the more social activities within the house.



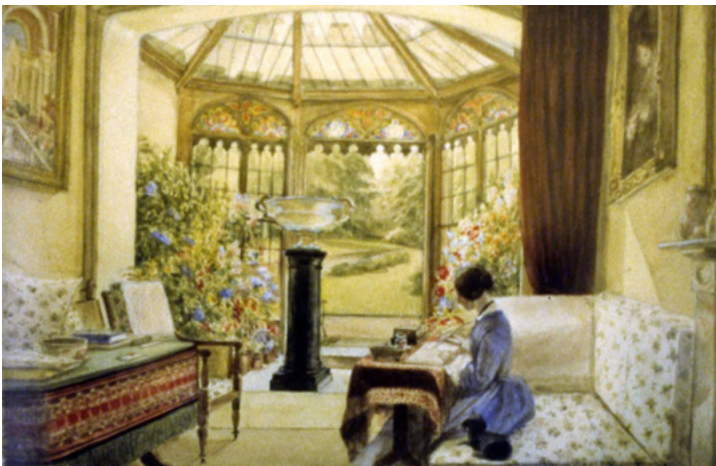
Left: From the ancient cedar parlor to the modern living room, “nothing is more delightful than the connection of living-rooms with a green-house or conservatory,” says Repton. Illustration from Humphry Repton and John Adey Repton, *Fragments on the Theory and Practice of Landscape Gardening* (London: T. Bensley and Son, 1816).

Right: Two views from the same living room before and after their extension using a greenhouse-like principle. Transformation of 530 appartements, Grand Parc, Bordeaux. © Lacaton & Vassal – Druot – Hutin, 2017.

BUDDING CONCLUSIONS

Finally, reflecting on Lacaton and Vassal in particular, and typological reasoning⁵³ in general. The three projects presented—the first and second iterations of the Latapie house, the house in Coutras and the dwellings of the Cité Manifeste in Mulhouse—provide a basis to observe the genesis of typological transfer in the work of the Paris-based practice and how it has become an operative principle of their design. Through the agency of climate affinities between architectural artefacts, the notion of typological transfer is not limited to the transfer of spatial characteristics or formal outlines—houses with greenhouse dimensions—it is not limited to the transfer of attributes between types—houses with greenhouse qualities—nor to the transfer of image types—copycat houses. Instead, this paper suggests that typological transference can be seen as a constant and active state, a relational condition between artefacts of different natures, serving as a powerful design driver in architecture. Lacaton & Vassal’s proposals go beyond the reductive dimension of the greenhouse as a ready-made.⁵⁴ The horticultural artefact helps to cement a structure of relationships that remains present in any project, regardless of its use or program—i.e., the school of architecture in Nantes—are based on the recurring tripartite concept of space defined by climatic attributes: insulated climate, temperate climate and exterior climate.

After analyzing these cases, unlike the ultimate post-modern typological idea that, “We’ll Have One of Each,”⁵⁵ one can argue that the type—the greenhouse—in its structural and programmatic dimension, can be interpreted in two ways: through its denotative meaning, that is, its objective and straightforward meaning; but also, its connotative meaning, encompassing multiple interpretations and values associated with the type. In the case of the greenhouse, these connotative meanings that evolved over time, responding to various technical, social, economic and spatial needs, converged towards the same ideals. From this point, it is also possible to speculate: is it possible to assess the value of an architectural type? Can it have intrinsic and extrinsic values? The intrinsic value of the greenhouse as the value associated with its essence, and the extrinsic value as what it can acquire through contact with foreign elements.



Left: An early Victorian watercolor of the interior of the conservatory in Blithfield Hall. John Buckler, ca. 1820s. Image: Nicholas Kingsley (BY-NC-LA).

Right: View of the interior of a living room in Bois-le-Prêtre tower. Hisao Suzuki, 2017. From *El Croquis Omnibus Volume: Lacaton & Vassal 1993-2017*, no. 177/178 (Madrid: El Croquis, 2017).

53 The expression typological reasoning is not a direct allusion to Sam Jacoby’s essay, “Typal and typological reasoning: a diagrammatic practice of architecture,” Cf. Sam Jacoby, “Typal and Typological Reasoning: A Diagrammatic Practice of Architecture,” in *The Journal of Architecture*, no. 6 (November 2, 2015): 938–61.

54 Cf. Ilka Ruby and Andreas Ruby, “Naive Architecture: Notes on the Work of Lacaton & Vassal,” in *2G International Architecture Review - Lacaton & Vassal*, eds. Moses Puente and Anna Puyuelo, 2G 21 (Barcelona: Editorial Gustavo Gili, 2001): 4–19.

55 Amanda Reeser Lawrence, “We’ll Have One of Each,” CCA, accessed June 16, 2023, <https://www.cca.qc.ca/en/articles/issues/25/a-history-of-references/56241/well-have-one-of-each>.

To conclude, this study suggests that typological transfer should not be considered only as the transfer of typal solutions between different or distant temporal and geographical contexts⁵⁶—type as a commodity. If together, these analyses provide important insights into the non-linear process of typological transfer, the essay also stresses the need of further research to explore the modalities in which transfers of types or between types can occur. In this context, and especially in the work of the Lacaton & Vassal, typological transfer is a process of typological innovation and, in a broader sense, an evolution of a shared idea of architecture.

Note from the Author

A part of this essay was presented during the seminar, “The Fifth Typology—A symposium on Type and Architecture,” (04-05.04.2023) organized by the laboratory TPOD-IA at EPFL. This text is a part of an ongoing PhD research on type, typology and typological transfer, under the supervision of Prof. Anja Fröhlich, at the Laboratory of Elementary Architecture and Studies of Types at EPFL. The arguments and findings presented may offer a partial view on the subject matter and it is recommended to refer to the complete body of work once it becomes accessible. I express my gratitude to Lacaton & Vassal Architectes, Nicholas Kingsley, Peter Balog, Nieves and El Croquis Editorial who generously granted permission for the reproduction of their images.

⁵⁶ Cf. Emanuel Christ and Christoph Gartenbein, *Typology - Hong Kong, Rome, New York, Buenos Aires*, ed. Victoria Easton, Review, II (Zurich: Park Books and ETH Zurich, 2012).

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