

# Architecture *in extenso*

## Destinies of the codex

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How could a universal memory be organized, a memory that would keep a trace of everything that can be created and acknowledged as information, of what could in the most primitive or most sophisticated way, be composed of a set of raw data? Data have become the primordial challenge because of new technologies for recording and processing information that can order, prioritize and qualify this information and therefore develop them to such an extent that they can become an economic and political as well as social and cultural issue. Not that long ago, data were part of an underlying substratum; they were kept in addition to oral transmission on diverse media—stone, clay tablets, papyrus scrolls and books—which are, through their accumulation, a collection of memories. Through their sedimentation, these physical media defined the organization of a space for their storage and consultation, the one which, across the ages, became a necessity, the one of a place, then a project, a program and finally a specific type of architecture—the library.

This is how the history of libraries can still be summarized today. Alain Renais's mythical film, *Toute la mémoire du monde* (1956), dedicated to the Bibliothèque Nationale in Paris, endeavored to describe, through long traveling shots, the description of this world of paper accounting for the collective memory, always responding to the

fascinating necessity of this accumulation, measurable in kilometers, in millions of books with nations rivaling each other, each by the strength of this incommensurable symbolic capital. But the written word in all its forms has followed the rhythm of the ages of industrialization and mechanization. Thus, the acceleration of transportation and the optimization of costs has within the space of a few decades changed the status of the printed book. The recurring illusion of a total memory, of the memory of the world, was imperiled by the economy of written production and of reading, up to the appearance of new, more versatile audiovisual and digital media. The crisis of the great international libraries is one of growth, which came to a head at the very moment when editorial production exploded, and the book had finally lost its auratic value. The written word has become transferable onto multiple media, first with the photocopy, then through a succession of steps in digital form onto the floppy disk, the CD-ROM, the USB stick and the electronic file.

This crisis of the libraries took place in tandem with the one of postmodernism, the one of a radical secularization of the written word, a crisis of the sign and of meaning that been unceasingly pointed out in field of French philosophy. The creation of the Bibliothèque publique d'information (Bpi) in 1977 at the Centre Georges Pompidou was

in a way the endorsement of a certain approach to changing the status of the book, through freely accessible books, considered as consumables, opening of large audiovisual sections and new services for readers. The request for a report from the Bibliothèque Nationale made to Michel Melot, then director of the Bpi, marked the beginning of the political awareness of the mutation required in the management of heritage and the public use of the written word. This report,<sup>1</sup> an assessment of the a Bibliothèque Nationale that was smothering within its walls, only offering 600 places to readers and endangering the collections, underscored the urgent need of an extension outside the walls, called for the creation of a computerized catalog

(BN-Opale) which could also aggregate those of associated libraries. Although it did not formally define the framework for a new project, it gave rise to political concern and the conditions for its implementation. In the end it was the urgency placed by François Mitterrand, as president of the Republic, who placed architecture at the forefront by launching a competition in 1989—a competition which lacked a genuine program—articulating two constraints: first, inventing ex-nihilo a new epistemological form of the national heritage library but also to make it an engine of a large-scale urban restructuring and renewal opening toward a rebalancing toward the east side of Paris. “France must be provided with this library covering all fields of knowledge, available to all, using all the techniques for the transmission of data, conservation, dissemination of knowledge, remote consultation... A new complementarity, at the service of a wide public, must be invented between traditional media of the written word and the techniques that are currently being developed.”<sup>2</sup>

Thus, it was the architecture competition that revealed a vast ensemble of contradictions requiring the unavoidable paradigm shift being structurally imposed on the world's great libraries. The imbroglio caused by the building of the new British Library, initiated in 1962, to in the end only to be delivered by its architect Colin St John Wilson

in 1997, had demonstrated the extent of the political and cultural tensions aroused by a state project touching on the national memory. In retrospect, Dominique Perrault's project, chosen almost immediately and unanimously by jury had, beyond the controversies, an essential cathartic function by anticipating by a few years the necessary cultural mutation imposed by the expansion of the digital world and the new knowledge-based digital economy. This transformation would later be given its most universal expression when in 2003, UNESCO defined, under the framework of its “Memory of the world” program, a global charter so that member states and their institutions of memory would establish a policy for protecting their digital heritage. “The resources of knowledge or of human expression, whether they be cultural, educational, scientific or administrative, or encompass technical, legal, medical and other kinds of information, are increasingly created digitally, or are converted into digital form from existing analogical resources”.<sup>3</sup>

### Descriptions of an inscription

The relation with the ground, earth is determinant in Dominique Perrault's work. It presides over a paradoxical notion of inscription, of foundation, that refuses any abstraction of space, and the plan, to focus on the materiality of terrains, the physical nature of the territory. Although the emergence of the library's towers of glass, rising in the midst of the industrial brownfields of the Tolbiac-Chevaleret district, immediately appeared as a modernist gesture, an urban strategy whose inception would be in the abstract organization of the plan and the map. To the contrary, Dominique Perrault unceasingly underscored the fact that modern architecture never really integrated the ground; it is always held at a distance from this naturel order to only focus on the infinity of the

1 Patrice Cahart, Michel Melot, *Propositions pour une grande bibliothèque. Rapport au Premier ministre*, La Documentation française, 1989.

2 *Allocution prononcée par François Mitterrand, Président de la République, devant le XI<sup>e</sup> Congrès international des archives au Palais des Congrès*, supplément à la Lettre d'information no. 244 of August 29, 1988.

3 *Guidelines for the preservation of digital heritage*, United Nations Educational, Scientific and Cultural Organization, March 2003, p. 10.

plan, on the smooth surface of the map. The architect advocates a principle, almost an axiom, that he had to create a place and not a building and the towers upon which so much scorn was heaped are in the end merely beacons that frame a free and open domain, the mark of an absent volume, a void fully claimed as the first instrument of an urban strategy. "I prefer a building that is more anchored in the soil than one thrusting into the air. Besides, people always talk about the towers, but for me it is about a volume."<sup>4</sup>

The challenge is not specifically to install an architectural objet, but rather to anchor the site and, paradoxically, around a void. Dominique Perrault's entire project hangs on this negation of inscription, not only in the radical refusal to make an object, but also to not contain the entire program in an envelope or in a combination of elements. This space without qualities had to be tackled, but by refusing to accept it as an obvious stretch of land, a blank page on which one could place forms of a library. "Everything that revolves around voids is fascinating because that poses the problem of art or architecture in a different way. It is not the things in themselves that become interesting but rather the relations between them. This aesthetic and intellectual attitude allows us to work with the environment by considering that urban chaos can become positive."<sup>5</sup>

In the midst of a 90-hectare brownfield, established on an available site of 13 hectares made available by the city of Paris, the project that will be built with a footprint as large as if the Place de la Concorde were to receive a garden the size of the one of the Palais Royal. In the total absence of an urban grid, it plays with the interrelation and refraction of these dimensions to board and polarize the entire territory around the void, an absent point that seems to erase any value of foundation. Dominique Perrault places in tension the structuralist forms an understanding of urban morphologies inherited from neo-rationalist analyses of the

city, the city as text, as récit having stratified the normative typological constants, to turn this historicism in on itself. Thus, he claims an ability of writing to erase its own traces, to shift the ontologies of inscription, and of foundation. The architect's open references to Maurice Blanchot are known, to this proximity with the neutral, to the *L'Écriture du désastre*, a game played on the limits of architectural language or of architecture as language, an ungrounded way of writing that is only established through a set of arrangements, of indexed elements placed in relation to each other. Of the project, the volume that would have taken up the space all that remains are the four corners, four markers that encircle a void, a "step beyond."<sup>6</sup> Although attentive to the precision of such a form of "white writing", "zero degree of writing", which organizes the erasure of its own traces, the architect seeks to establish, based on this absolute reduction of language, the principles of a constructive logic. Already, his thesis dedicated to the analysis of the creation of a network of the city halls of the arrondissements of Haussmann's Paris showed these municipal administrations had established scales of proximity that contributed to singularizing neighborhoods to, in the end, enhance the unity of the city as a whole. This sort of analysis of territories privileged this dynamic fabric of interrelations in its ability to structure the city, a reading that differed from the dominant discourse of a postmodernism on a quest to restore typological continuities and the morphological histories of cities. Here one could see similarities with the polycentric vision of cities initiated by Oswald Mathias Ungers according to his definition of the fragmentary city as an archipelago,<sup>7</sup> which Rem Koolhaas seized upon to redefine his own urban strategy. But this approach to the fragmented city, of a hypothetical relocation critical of islands of urbanity, of archipelagos, remains prisoner to a unitary and identity-based understanding of the territory, of a spatiality still established in abstracto, in resonance with an ultimate modernism, a rationalism forming its laws and prescriptions of urban chaos. "The notion of morphology as defined by Ungers in his text *Entwerfen und Denken in Vorstellungen, Metaphern und Analogien*, pursues the Kantian logic of a constitutive link between thought and imagination. For Ungers, morphological transformations underpin his understanding of architectural conception as the recomposition of fragmentary thematic elements of architecture."<sup>8</sup>

4 Dominique Perrault, "Entretien", *Ça m'intéresse*, March 1995, p. 33.

5 Dominique Perrault, "Le plein et le vide. Entretien avec Philip Jodidio.", *Connaissance des Arts*, no. 515, March 1995, p. 135.

6 Maurice Blanchot, *L'Écriture du désastre*, Paris, Gallimard, 1980. *Le pas au-delà*, Paris, Gallimard, 1973.

7 Oswald Mathias Ungers, Rem Koolhaas, Hans Kollhoff, Arthur Ovaska, Peter Riemann,

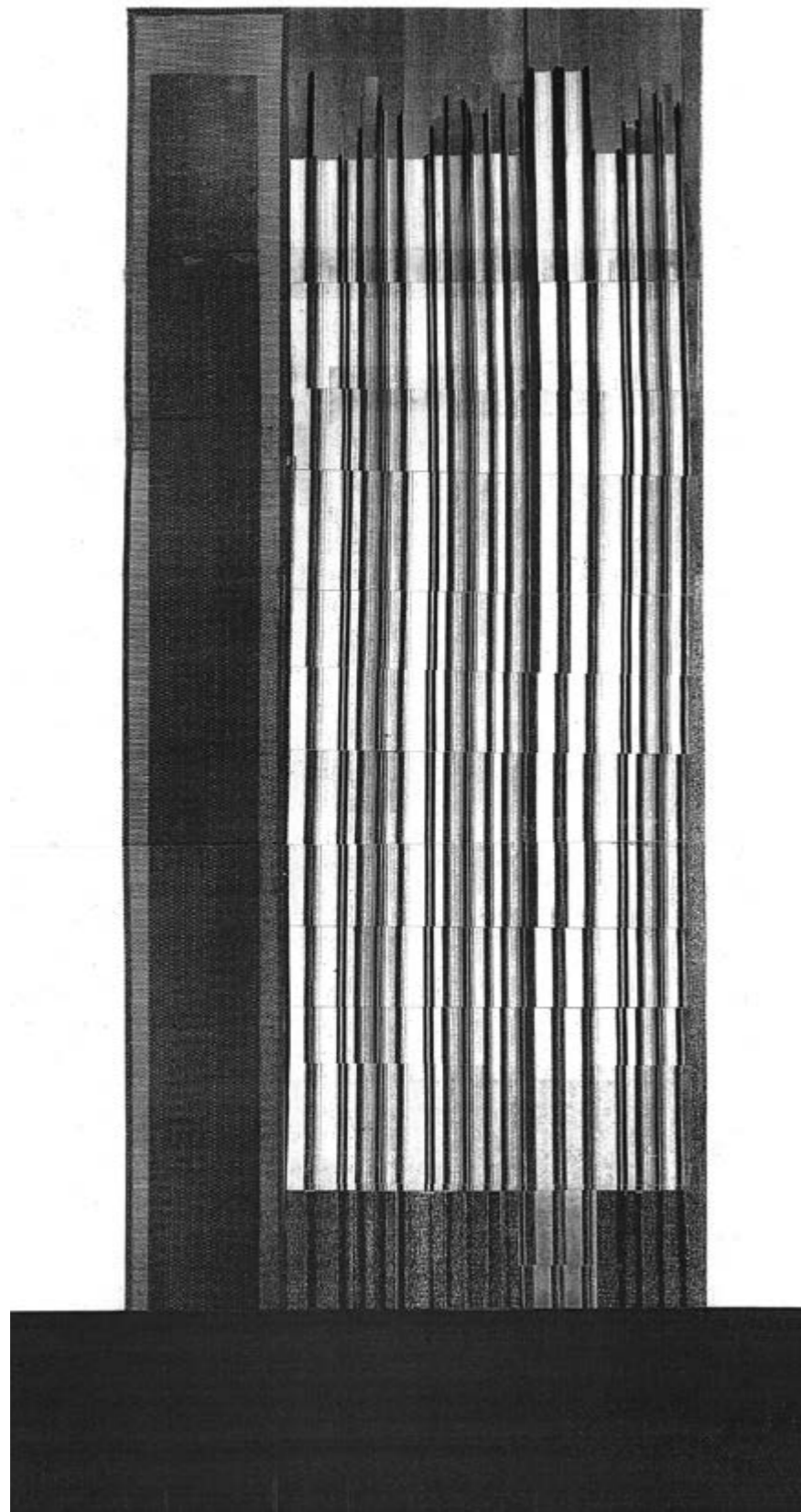
*Die Stadt in der Stadt: Berlin, das Grüne Stadtarchipel: Ein stadträumliches Planungskonzept für die zukünftige Entwicklung Berlins*, Berlin, Studioverlag für Architektur, 1977.

8 Lidia Gasperoni, "Möglichkeitsräume entwerfen. Eine Reaktualisierung der Kantischen Philosophie für die heutige Architektur", *Con-Textos Kantianos, International Journal of Philosophy*, no. 4, November 2016, p. 258.



Rem Koolhaas, Madelon Vriesendorp, *City of the Captive Globe*, project, New York City, 1972 Collection Museum of Modern Art (MoMA), New York Gouache and graphite on paper, 31.8 x 44.1 cm

Concept installation, 1991 Wood



Tower of books,  
April 1990  
Collage on paper,  
29.5 × 72 cm

To the notion of archipelago, and to the static grammars of a recomposition of urban morphologies, Dominique Perrault preferred to privilege the complexity of qualitative links that organize locations, which will be defined as tensions, polarities, constellations, organizing different scales of coherence.<sup>9</sup> To the indeterminate space of the plan he substitutes the highlighting of a network of connections, a weaving together of the urban fabric, a close analysis of Christopher Alexander, who opposed the exposure of a grid to traditional urban models, whether centralized or decentralized. Which were, according to the intensity of exchanges and interactions, anchor zones, of densities, the one of villages, neighborhoods, cities, organically adapting to economic and social mutations.<sup>10</sup>

Thus, Dominique Perrault was confronted with a history of urban modeling based on a recurring reference to monumentality. Archetype of urban structures, of a staging of the powers that be, for modernity the monument still defines the identity of a symbolic form that exceeds the image, the representation. The Kunstwollen<sup>11</sup> by Alois Riegl guaranteed the framework of a shared cultural unity, an aesthetic principle eventually rejected in the manifestos of Siegfried Giedion and of the neo-rationalist Aldo Rossi, the erected monument is the guarantor of a trans-historic permanence of the group, the image of the community.<sup>12</sup> To define the unity of an area of Paris based on the great open spaces, of the vacant areas preserved in the strict urban organization, reveals another arrangement of the public space. The absences inscribed in the plot plan appear as tensors, anchor points articulating a dynamic vision of the city, tensors the architect would symbolize with tighteners in the study model for his *Étude sur l'Île de Nantes* (1992). "Thus, the enormous building foreseen with supporting exaggeration and architectural contortions is transformed into a working with the void... a place that is inserted into the continuity of the succession of great voids attached to the Seine, such as the Place de la Concorde, the Champ de Mars and les Invalides."<sup>13</sup>

Therefore, it is indeed this negation of monumentality, this generic definition of the void opposing all the historicist understanding of the city, which would paradoxically provoke an avalanche of discourses seeking to materialize the architectural object, to justify its identity, its form, in the illusory quest of a vanished monument, of a negation of inscription and a loss of its symbolic image.

## Geometries of a collective memory

The ensemble of the urban master plan defined by Dominique Perrault is constructed through the interaction between the zones that constitute hierarchical limits, domains and territories of differing scales; spatialities that punctuate a diversity of experiences, individual or collective, life sequences that ensure continuity between infinite territory and the finitude of the intimate physical space. Here, the architecture no longer refers to an abstract space that simply needs to be occupied and organized according to certain functions, but rather responds to these mutations of scales to enable them to coexist. "What I tried to propose was the representation of the monument, the institution which are not linked to a brutal physical limit. Hence the idea of associating extraversion and introversion, of associating an open place with an enclosed cloister... How can one build the city to gather and links things that are not always made to go together or that seem to contradict each other?"<sup>14</sup>

By shifting the rapport with spatial insertion—thereby redefining the conditions for ordering space—from the rapport with the plan to the foundation of the architectural object, Dominique Perrault was seeking to achieve a different economy of composition, thus not only overturning the hierarchical principle of layout and distribution, but also the very status of the architectural object. More than mere recourse to simple forms, to a

9 "Le Jardin des mille et un livres. Entretien avec Dominique Perrault.", *Le Nouvel Observateur*, August 24, 1989.

10 This structuralist conception of Christopher Alexander's drew direct inspiration from Noam Chomsky's models of transformational grammar, distinguishing beyond the surface structures, a deeper structure based on the "elementary units of content". Noam Chomsky, "Trois modèles de description du langage", *Langages, Les modèles en linguistique*, no. 9, March 1968, p. 74.

11 Alois Riegl, *Der moderne Denkmalkultus*, Vienna, W. Braumüller, 1903. Alois Riegl, *Le Culte moderne des monuments*, Paris, Éditions du Seuil, 1984.

12 Siegfried Giedion, "The Need for a new Monumentality", in Paul Zucker, *New Architecture and City Planning, A Symposium*, New York, Philosophical Library, 1944, p. 549–568. Aldo Rossi,

*L'architettura della Città*, Padua, Marsilio, 1966. Aldo Rossi, *L'Architecture de la ville*, trans. Françoise Brun, Paris, L'Équerre, 1981.

13 Dominique Perrault, "Un lieu et non un bâtiment", in *Bibliothèque de France, Premiers volumes*, Institut Français d'Architecture / Éditions Carta Segrete, 1989, p. 105–106.

14 "La place et le cloître. Entretien avec Dominique Perrault.", *Le Débat*, no. 62, November–December 1990, p. 36.

reduction of the language, of recurring references to artists such as Richard Serra and Donald Judd, architecture can no longer be defined as a closed entity. The library established itself as “a monument without walls” through the interplay of relations between the whole and its elements, between the parts and the whole, in an open reference to the logics of minimalism and Land art, “the movements capable of declaring the death of architecture so it could be reborn.”<sup>15</sup> Thus, a generic dimension is instituted, conceived in the layout of elementary forms in which the architecture is revealed through the interaction among the elements that compose it. In *Specific Objects*, Donald Judd’s manifesto text, he was describing a sculpture by Lee Bontecou (Untitled, 1961), with an important relief pierced at the center: “...all the parts and the overall form are coextensive. The parts are as much the elements constructing the hole as those of the relief... they are collectively subordinate to the unique form. Most of these new works have no structure in the traditional meaning of the term.”<sup>16</sup>

One could see in this text a perfect description of the spatial organization of the library around the forest-garden, the first function of the towers consists of a demarcation, the delimitation of an open site which is thus spatialized, an anchor point which by extension will gather around it the area as a whole. The project responds to these metonymic tensions between the aerial and the subterranean, the public space, the reading rooms and the “onion-like morphology,” a composition in a succession of envelopes, which organize the succession of spaces and their functions. The final geometry of the construction is only determined in the balancing of these tensions created between disparate dimensions, which in the end come together to form an open and flexible unity, adaptable to morphological and structural

evolutions. Based on the permanent relation between the parts and the whole, Dominique Perrault developed a methodology, a language, a field of application close to the research on mereotopology, a mereography.<sup>17</sup> “Mereotopology is built up out of mereology together with a topological component, thereby allowing the formulation of ontological laws pertaining to the boundaries and interiors of wholes, to relations of contact and connectedness, to the concepts of surface, point, neighborhood, and so on.”<sup>18</sup>

Although these relations are defined as spatial entities, they are not materialized; they qualify and localize domains and regions. “It was absolutely necessary to be free of scale, such that it be only linked to perception in situation. The building has no scale in itself, only in its relation to the site... Everything was imagined so that these relations, in tension, create the reality of the architecture.”<sup>19</sup>

If Dominique Perrault focuses on the links, connections, and the definition of the qualitative fields that overdetermine any spatial formalization, it is because they assimilate a phenomenality which the architect then uses as a material. The ensemble of the project of the library is founded upon these phenomenal aspects freed through the interplay of relations, work with light, transparencies, materials, colors, the mineral or the vegetal which are not only principles underpinning his research but also keys for rereading on the same bases the multiple historical and critical sources that nourish his symbolic and cultural forms. Space is no longer simply a domain of extension but rather as Ernst Cassirer described, a modality specific to representation in which diverse spatialities are a part of the symbolic systems that configure historical forms of culture. “Cassirer orders the diversity of human spatial comprehensions and describes each perspective as an integral part of a specific symbolic system, myth, religion or science. The significations of spatial concepts are only fully comprehensible according to their respective symbolic system and not their metaphors linked to a supposed real space or to abstractions of a primordial space.”<sup>20</sup>

Thus, the library could no longer be only a place for a collection, a simple chest enclosing the materiality of the collective memory, of a memory only translated into kilometers of bookshelves, simply distributing the multiple functions of a supposed program in the conformation of spaces, which, if not neutral, would simply be fed by prescriptions put forward by a parade of specialists.

15 Dominique Perrault, “Le plein et le vide. Entretien avec Philip Jodidio”, *Connaissance des Arts*, no. 515, March 1995, p. 135.

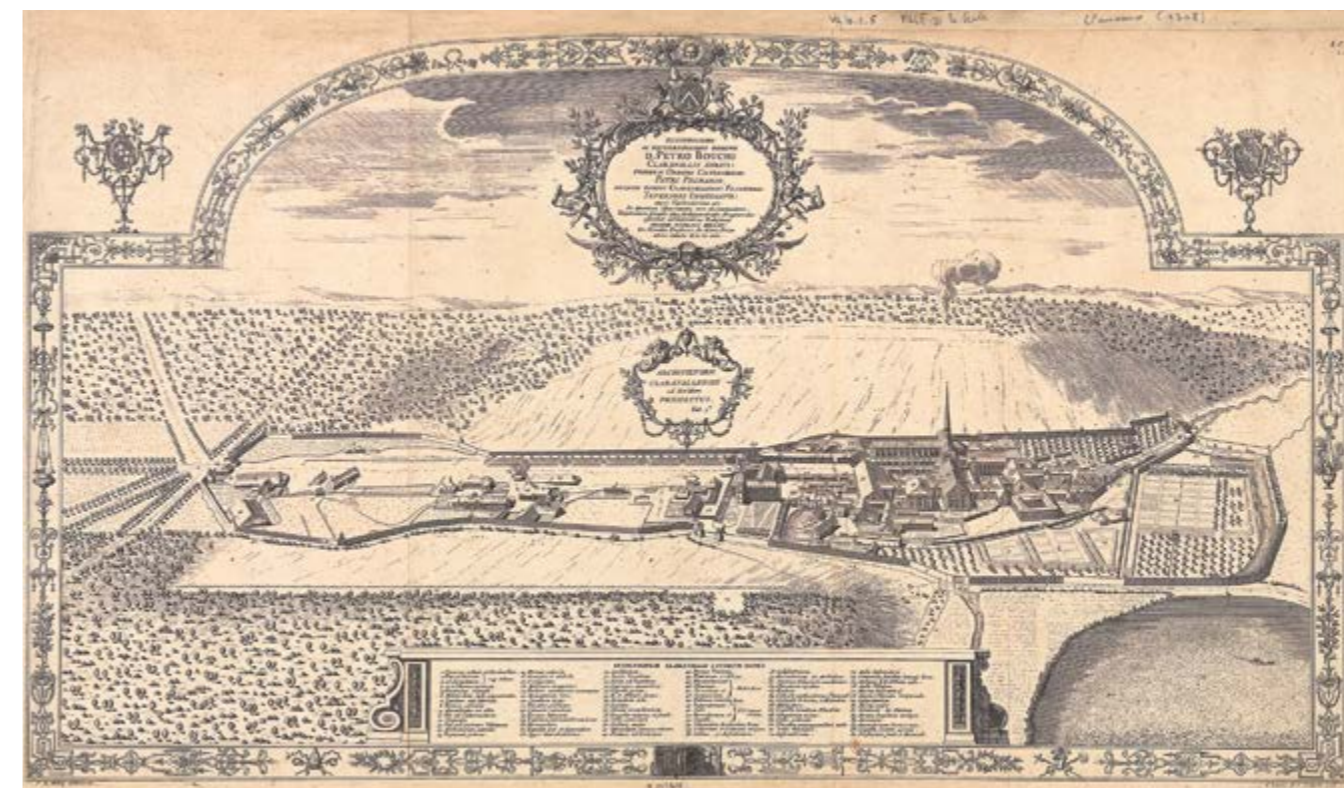
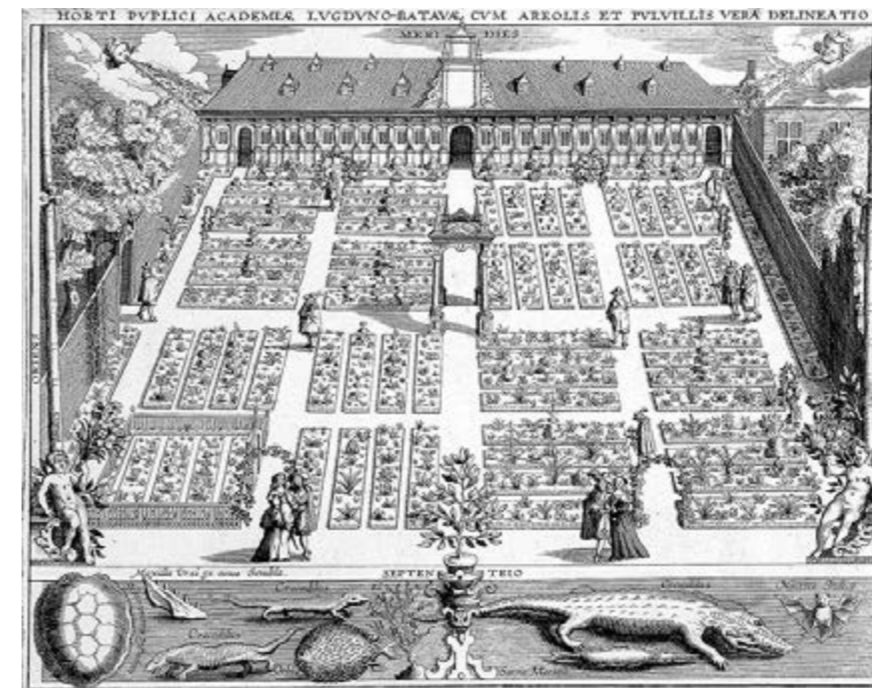
16 Donald Judd, “Specific objects”, *Art Yearbook 8*, 1968, republished in *Donald Judd, Complete writings 1959-1975*, The Press of the Nova Scotia College of Art and Design, New York University Press, 1975, p. 188.

17 Frédéric Migayrou, *Édificiations d'une méréographie*, Dominique Perrault Architecture, Paris, Éditions du Centre Pompidou et Éditions HYX, 2008.

18 Barry Smith, “Mereotopology: A Theory of Parts and Boundaries”, *Data and Knowledge Engineering*, no. 20, 1996, p. 287-288.

19 “Le principe de réalité. Entretien avec Dominique Perrault.”, *L'Architecture d'aujourd'hui*, no. 300, September 1995.

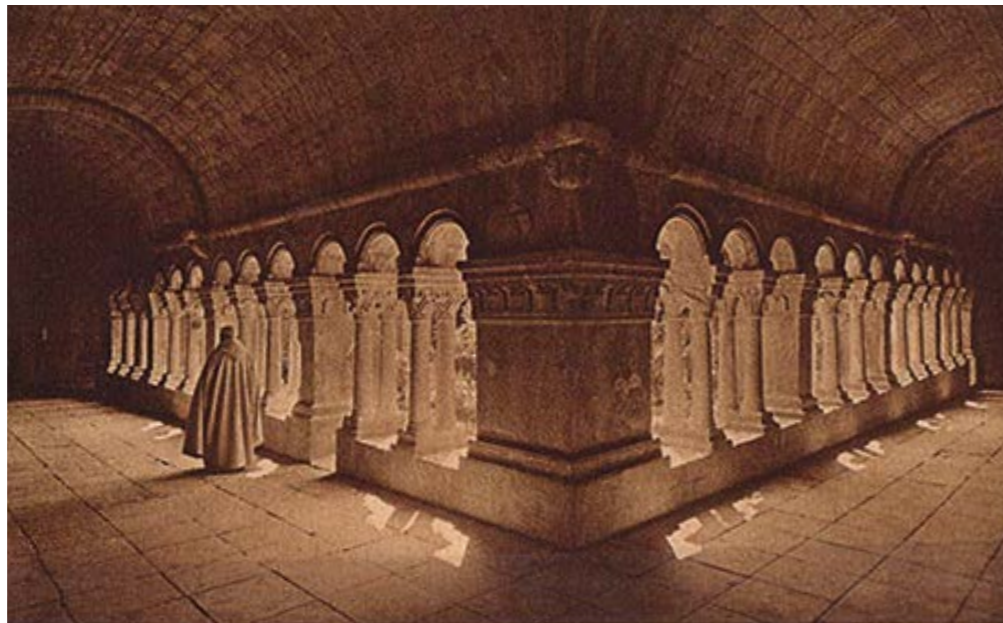
20 Nicholas Entrikin, “Geography’s spatial perspective and the philosophy of Ernst Cassirer”, in *Canadian Geographer*, Vol. XXI, no. 3, 1977, p. 219.



*Hortus Botanicus*, Leyden University, Jan Cornelisz Vermeyen (drawing) and Willem Isaacsz van Swanenburg (engraving), 1610

Bernard de Clairvaux, Saint Bernard, *Hours for the use of Rome codex*, 16th century, Bibliothèque Gaspard Monge, city of Beaune

Clairvaux abbey, 1708 Engraving



Cloister of the Notre-Dame de Senanque abbey, 1148



Reading room of the Malatestiana library, 15th century monastery Cesena, Italy



Baroque library of the Clementinum, 1727, National Library of the Czech Republic, Prague

The library would have to carry within it, if not history, the memory of libraries, architectural memory of an architectural history linked to the creation of the physical aspects of the codex, initially a manuscript book later printed, determining the appearance of the figure of the reader. Dominique Perrault employs the book as a unit of measure, an abstract entity which is expressed at different scales. The book defines the position of the reader, seated at the table, as much as the image of all the collections sedimented in the towers, with on each floor, the wood shutters symbolizing the books stored on shelves,<sup>21</sup> up to the allegory, so often repeated, of the four towers forming so many “open books”. The architect will often evoke the furniture of the library, this earliest architecture in which, during the Middle Ages, books were enclosed, thereafter evoking the earliest modern forms of the library, the one of the Abbey of Clairvaux, models with Cîteaux and Le Thoronet of Cistercian monastic architecture. Thus, the one of a “Bernardine plan,” which spread throughout Europe,<sup>22</sup> and which is organized around the cloister as the point of convergence of the functions of the monastic life: the spaces of the chapter house but also the library and the scriptorium. By establishing the symbolic form of the book as the source of a spatial intelligence of the library, Dominique Perrault was responding to an intuition of Michel Melot, the author of the famous report having presided at the decision of François Mitterrand, and who further explained in a later text, referring to Ernst Cassirer and Erwin Panofsky, this definition of the book as a symbolic form. “Thus, it is not the content that is indicated in the book, with the meaning of Panofsky when he speaks of the symbolic form, that is to say, finally, of a way of thinking... The homogeneous and structured form of the codex serves to gather heterogeneous elements and to give them a unity and a stability or even a transcendence.”<sup>23</sup>

By linking cognitive space defined by the symbolic form of the book with architectural space, Dominique Perrault was able to reconstruct a critical history of libraries, a history where architecture answered economic, social and political mutations of knowledge and do this up to and including the contemporary period, up to the advent of the digital dematerialization of the book. By insisting on the intrinsic relation of this symbolic form of the book with that of the library, Dominique Perrault turns the remark around by

highlighting the new economy of meaning, made possible by the digital dematerialization of the book, which is open to multiple principles of reading without in the end changing the nature of its symbolic identity. From the medieval library with its manuscripts stored lying flat in armoires, to the appearance of reading desks on either side of a central aisle imposing the appearance of long galleries with light entering from the sides (La Malatestiana in Cesena in 1450, the Laurentian Library in 1524), it was only with the advent of the printing press, that the increasing numbers of books required the use of shelves along the walls, with the book entering the realm of representation (The Escorial Library in 1563, The Vatican Library in 1588, the Biblioteca Ambrosiana in 1609). This reached the level of the total spectacularization of the book and of knowledge with the libraries of the baroque period (the library of the Abbey of St. Gall, the Klementinum in Prague, the Hofbibliothek in Vienna, the Biblioteca Geral da Coimbra). However, with the appearance of grand systems of knowledge, of declared rationalism of knowledge, the books seem to blend into the architecture, the *Projet pour une bibliothèque nationale* (1785) by Claude-Nicolas Ledoux overwhelming the shelves under the monumental vault of an absolute of knowledge that would eventually erase all materiality with the *Cénotaphe en l'honneur de Newton* (1784). The extreme industrialization of book production that developed over the course of the 19th century brought an end to the representation of books, the mechanization of printing echoed in the appearance of stacks and the disappearance of books, with Henri Labrousse as the architect of the construction of a metal

21 “At the scale we are working on, the shutters are books on shelves like the ‘bookcase’. There will be about 20,000 shutters for the four towers, which are the accumulation of books that we wish to express”. Dominique Perrault, “The place of the cloister. Interview with Dominique Perrault”, *Le Débat*, no. 62, November–December 1990, p. 32.

22 “In St Bernard’s time, Clairvaux possessed two famous architects: Achard, master of novitiates, who presided over the reconstruction of his abbey and directed numerous construction projects in France and abroad, and Geoffroy d’Ainay, one of the of the saintly abbot’s favorites, who also worked at Cîteaux and on several other abbeys in France, Germany and England”,

in Marcel Aubert, “Existe-t-il une architecture cistercienne?”, *Cahiers de civilisation médiévale*, 1st year (no. 2), April–June 1958, p. 158.  
23 Michel Melot, “Le livre comme forme symbolique”, lecture delivered in the context of the École de l’Institut d’histoire du livre, 2004. (<http://ihl.enssib.fr/siteihl.php?page=219>).

infrastructure capable of housing a million books (Bibliothèque Impériale, 1888).

That the new Bibliothèque de France allows all the architectural forms that have accompanied the history of the book to show through, to finally free itself from the grasp of an architectonics of knowledge inherited from the 19th century. This was indeed the challenge of such an archeology, which is manifested in the palimpsest of Dominique Perrault's project, with the cloister of Clairvaux, the morphologies of old libraries, and up to the cenotaph of Newton, transfigured by the hollowing out of the volume of the supposed library. "The idea of creating a place of all times which is itself at the same time outside of time and inaccessible to its ravages, the project of organizing a sort of perpetual and indefinite accumulation of time in a place that would not move, well, all of that is part of our modernity. The museum and the library are heterotopias specific to 19th-century Western culture."<sup>24</sup>

The architecture had to be free of the knowledge of architecture, the only function of this archeology, where, as Michel Foucault asserted, "archeological comparison has not a unifying but rather a multiplying effect."<sup>25</sup> On this basis, one can reread the entire architecture competition as one of multiple projects seeking to insert an object, to create a mass in a more or less affirmed stylistic demonstration or to scatter the elements of the program to reconstitute for all purposes the unitary image of the library. However, though the architecture had to play with time, "the aim had to be for a certain timelessness"<sup>26</sup> and therefore a formal neutralization. The architecture in the end had to be resolved to be merely a system of arrangements, the geometry gathering in a blueprint the architectural models of spaces of knowledge in order to reorganize a relationship with history free of sets of references, of narrative models specific to the postmodern era, in order to reactivate the interplay of collective memory in a palimpsest.

24 Michel Foucault, "Des Espaces Autres. Hétérotopies", lecture delivered at the Cercle d'études architecturales, 14 mars 1967, *Architectures, Mouvement, Continuités*, no. 5, October 1984, p. 48.

25 Michel Foucault, *L'Archéologie du savoir*, Paris, Gallimard, 1969, p. 209.

26 "...Where the void is as important as the solids. Interview with Dominique Perrault.", *Télérama*, no. 2359, March 29, 1995, p. 49.

27 Edmund Husserl, *L'Arche-originaire Terre ne se meut pas. Recherches fondamentales sur l'origine phénoménologiques de la spatialité de la nature*, in *La Terre ne se meut pas*, Paris, Éditions de Minuit, 1989, p. 27-28.

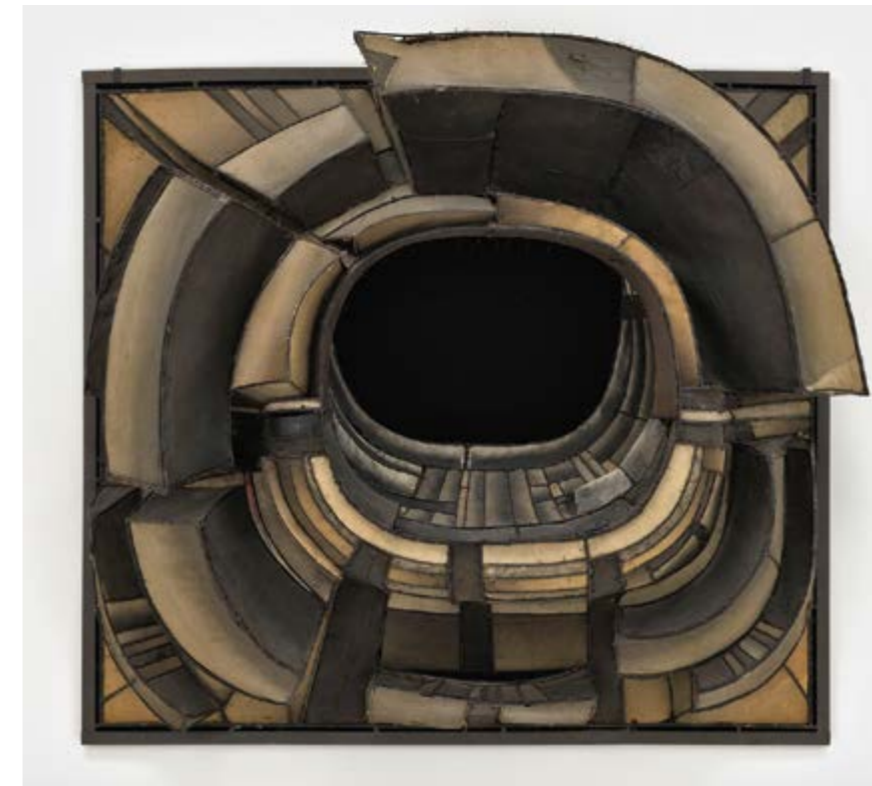
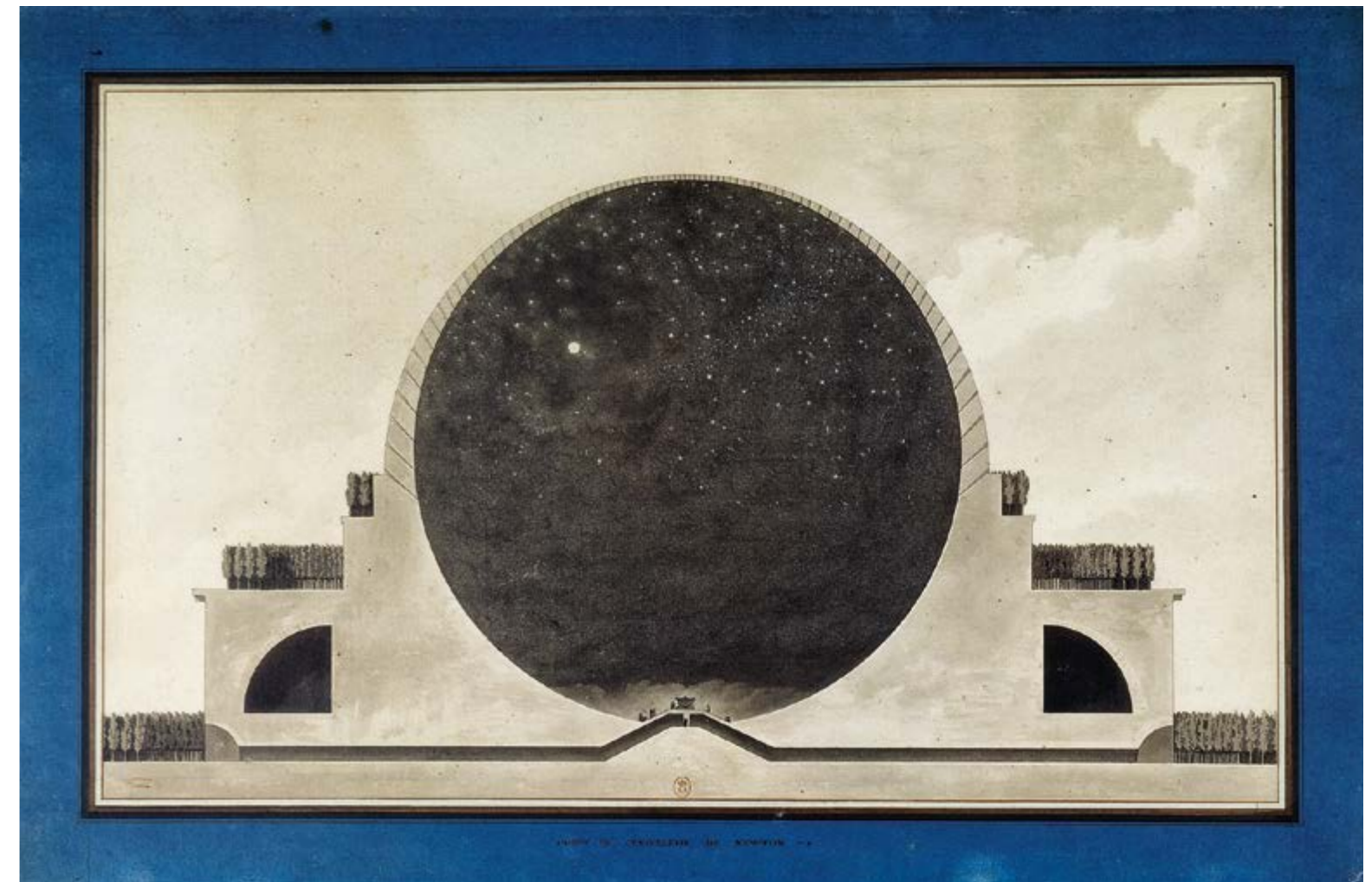
28 Victoria Larson, "A rose blooms in the winter: the tradition of the hortus conclusus and its significance as a devotional emblem", *Dialog: a journal of theology*, vol. 52, no. 4, winter 2013, p. 309.

Engrams. Imprints  
of the text, architectonics  
of knowledge

The forest garden planted *ex abrupto* the heart of the library is certainly the most affirmed element of Dominique Perrault's conceptual method, the collage of a bit of nature creating an indetermination in the midst of technical plans defined down to the last detail, he powerfully emphasizes both the image of a naturel order and a disorder, of non-architecture in full opposition to the claimed orthogonality of the construction as a whole. To the urban void of the public space on the surface, in addition to the tension between mineral and vegetal, he opposes the idea of depth, the one of a subterranean world which roots the project in the ground, an organic presence that defines a genuine ontology of the ground for the architect which is manifested in a number of his buildings, a specifically human dimension of the earth as expressed by Edmund Husserl. "It is the arch that first makes the direction of all movement possible and all rest like a method of movement. Thus, its rest is not a method of movement."<sup>27</sup>

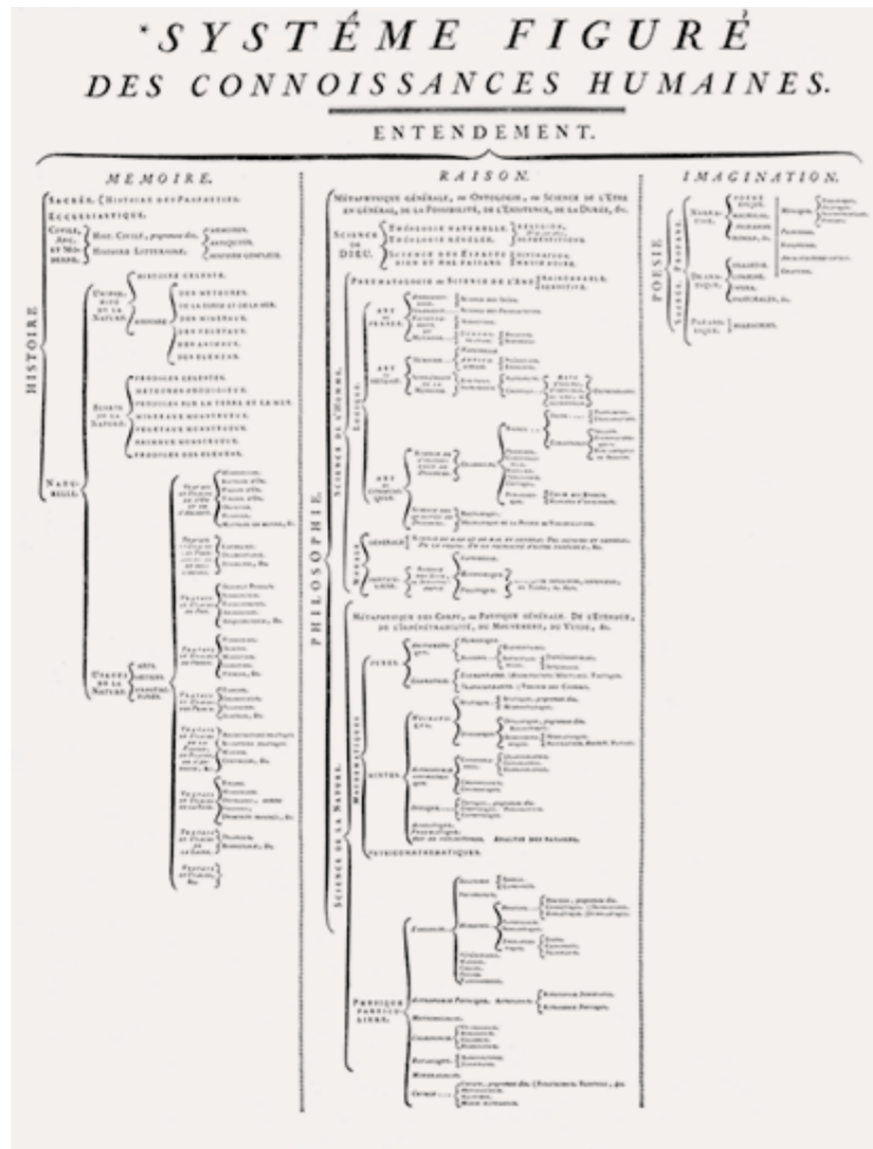
The earth, which functions here as matrix, conveying the absolute meaning of foundation, endows the garden with metaphorical value, of archaic garden, of garden of Eden and of *hortus conclusus*, the enclosed garden, a biblical motif depicting the Virgin in this symbolic space, as represented by Martin Schongauer (*Madonna in the Rose Garden*, 1473). A space of devotion that would come to define the layout of the garden as a component of the architecture of monasteries, the hortus conclusus was also secularized, first as the location of courtly love in many illuminated manuscripts, but also as the domain of knowledge, the hortus academicus. "Evolving in the medieval monastery alongside the philosophy of garden design, which emphasized the contemplation of paradise restored, the hortus conclusus presented a sufficiently flexible allegory of contemplation to accommodate scriptural relevance, ascetic contemplation and the growing influence of ornamental gardens."<sup>28</sup>

In addition to the model of the botanical garden as it appears at the Leiden University in 1590 with its thousand different species forming a sort of green library, beginning with the Renaissance the garden became necessary both as a domain of knowledge, a place of pleasure, as well as a stage, an instrument of representation and power



Étienne-Louis Boullée (1728-1799), *Newton's Cenotaph*, 1784 Colored wash drawing

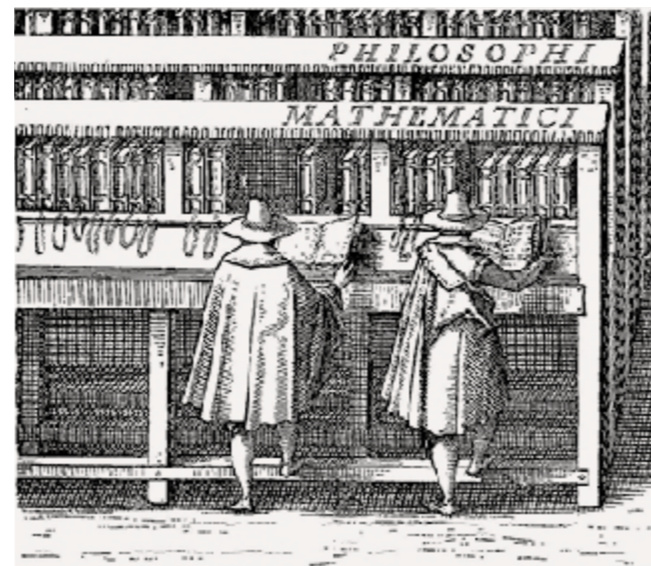
Lee Bontecou, *Untitled*, New York, 1961 Collection Museum of Modern Art (MoMA), New York 3D construction, welded steel, wire and canvas, 147.5 x 226 x 88 cm



Discours préliminaire de l'Encyclopédie, *Système figuré des connaissances humaines*, 1751, Paris, Jean d'Alembert

*The Ars Magna*, Raymond Lulle (1232–1315)

Reading at the University of Leyden, Jan Cornelisz Vermeyen (drawing) and Willem Isaacs van Swanenburg (engraving), 1610



as affirmed at Versailles. Moreover, Michel Foucault had defined it as one of the great models for heterotopia. “The garden is the smallest plot of land in the world and then it is the totality of the world. The garden is, since early antiquity, a sort of happy and universalizing heterotopia.”<sup>29</sup>

Obviously Dominique Perrault, by taking hold of the garden as a form of global symbolic form, transgresses simple opposition with the imagery of a nature magnified by Alexandre Desgoffe’s frescoes of canopies echoing the confines of knowledge of the Salle Labrouste. He emphasizes all the dimensions of this cultural history, the strata of an archeology to discover beyond the manifest image, the transplanting of a bit of nature into the center of an urban monument. “It is the central garden that has remained the founding element of the project. The presence of nature, these trees and this bit of forest makes the library an atemporal place with universal references.”<sup>30</sup>

However, the images are scrambled. The garden itself has to be a-temporal and appear as a natural and primitive element, but the installation of this mature forest is the result of high technology managed by an agronomy engineer, Erik Jacobsen, who followed the transfer of 250 trees, not only the 120 pine trees transplanted from Normandy, but also the oaks, birches, hornbeams, ferns and humus, the whole operation controlled by a computerized hygrometric system. Like a graft, the replanting of this primitive forest seems to negate the history of the garden, of an artificial nature, but which in the end transcends it in a manifesto ideal of landscape engineering, an ability to produce nature, a perfectly balanced biotope, a message for the future invites us to venture beyond passive ecology to rebuild our natural areas. “Very different from an artificial French-style garden, from a wild English style garden, but also from an even-age managed afforestation of barren land, the cloistered forest of the BnF could become the beautiful image of an uneven-aged stand, a masterpiece of forestry know-how that consists of imitating nature while accelerating its work.”<sup>31</sup>

Here again, if the architecture of this forest is offered first to the senses in all its phenomenality, green swath on the level of the square, foliage on the public level, light filtered by the undergrowth for the research library, is revealed as the countertype of a field of knowledge, a metaphor of fields of knowledge, the one of the infinite complexity of nature, of which the knowledge enclosed in the kilometers of stacks seeks to exhaustively

describe. “I explained this notion of a bit of wild, almost inaccessible nature, as a rare book of whose existence one is aware but which cannot be touched for fear of deteriorating it.”<sup>32</sup>

Here again, Dominique Perrault shifted the supposed opposition between nature and artifice, between chaos and rationality, toward a confrontation of two orders of complexity, which finally merge in the library through the opposition of two symbols, the tree and the book, both of which belong to representations of knowledge. Deciphering the alphabet of the world, the great book of nature according to the techniques of artificial memory and combinational logic was the challenge tackled by Ramon Llull in his machine, the *Ars Magna*, which involved both the spatialization of memory and the definition of a topography of fields of knowledge. *Arbor memoriae*, it defined the model for the classification of knowledge for Ramus, Agrippa and Francis Bacon, its influence still evident with Descartes and Leibniz, and classification developing into vast unfolding tables with the Encyclopedia. “The trees whose model is the *Arbor Scientiae* are in no way an example of the formal classification of knowledge; rather, through complicated symbolism they refer to the deeper reality of things, to this reality which is precisely for the philosopher to discover by detecting the significations of the different parts of the trees.”<sup>33</sup>

Axiomatic wisdom and the organization of knowledge has always echoed this *lingua universalis*, a universal language deeply anchored in in the physics of the world which would go on to define the form of encyclopedic models and haunt the structure and architecture of every library.

There are two ways of understanding the library as it is now made available, daily welcoming thousands of readers open to multiple practices of consultation of texts and images, to economies

29 Michel Foucault, “Des Espaces Autres. Hétérotopies”, lecture delivered at the Cercle d’études architecturales, March 14, 1967, *Architectures, Mouvement, Continuités*, no. 5, October 1984, p. 48.

30 Dominique Perrault, “Interview avec Odile Fillon”, in *Bibliothèque nationale de France 1989–1995*, Arc en rêve—Centre d’Architecture, 1995, p. 47.

31 Olivier Nougarede, Pierre Alphandéry, “Le cloître forestier de la Bibliothèque Nationale de France” (the forested cloister of the Bibliothèque Nationale de France, *Arbre actuel*, no. 18, April–May 1995, p. 19.

32 Dominique Perrault, “Le Président, la bibliothèque, l’architecte, BNF: Chroniques 1989–1995”. <http://www.dpa-bnf.com/#/jardin/>

and logics of digital appropriation which have long since gone well beyond the simple principle of academic reading. It can obviously be understood as a classic library wholly dedicated to the economy of the book. But also, from an entirely different perspective, it can also be understood as a place where knowledge is concentrated, a hub gathering an infinite quantity of information, the central node of a network offering multiple forms of privileged access to an immense store of information, made available for processing and analysis across a range of media. A situation that Jean Favier, the illustrious director of the Archives Nationales, and later President of the Bibliothèque Nationale, had perfectly anticipated. “Computer aided reading is introduced into the arsenal of research, not as an auxiliary that might dissuade one from reading, but rather as the means for extracting from the text what it could not have divulged in the space of a human lifetime.”<sup>34</sup>

Dominique Perrault conceived the library with logic of the humanist tradition as a site able to house a universal memory, as a prism for at the same time concentrating and disseminating the knowledge and the memory of the world, a place where the architecture would fade away to be replaced by architectonics. The architecture had to be an open system composed of rules defining the organization of the building’s structure as well as the broader urban system, which would gradually build up around it; an architecture *in extenso* assimilating the complexity of networks both physical and virtual; the architecture as architectonics, as it is understood in philosophy, i.e., a system ensuring the coordination of all knowledge. Dominique Perrault answered the doubts of those who incrimi-

nated “a structure so little influenced by the nature of the book,” alarmed that “the great treasure of the nation was to be stored in the air”.<sup>35</sup> “This library is an intelligent building that little by little will be equipped with a growing number of networks, more and more computerized systems... This attention to the foreseeable evolution of technology explains a certain number of architectural layouts.”<sup>36</sup>

But more effectively, Dominique Perrault’s project clashed with orthodox criticism already entrenched in the architectural field for several decades, which since the publication of Aldo Rossi’s *L’architettura della città* (*The Architecture of the City*, 1966), had assimilated the idea of the city as the indicator of the historical sedimentation determining its specific rationality. The city is born out of an effective social construction organizing an internal logic, which, across the ages defines the persistent morphologies and typologies regulating the urban economy. Without rehashing the political context of the critique of modernism, of the rationalism inherited from Enlightenment thinkers initiated by the *Dialektik der Aufklärung* (1947) by Theodor W. Adorno and Marx Horkheimer and which marked the whole movement of La Tendenza, one can still question the sources and the foundations of a post-structuralist, American-style critique feigning ignorance of the still structuralist sources of Aldo Rossi. Well-versed reader of the works of Roland Barthes and Michel Foucault, he endeavored to view the city as a text, as the construction of meaning and of the meaning of urban unity. Whereas Dominique Perrault’s entire approach is in the spirit of a radicalization of this structuralist model, to extricate it from postmodern dabbling with historical references and to hew to the intelligence of symbolic forms, it was paradoxical to witness the resurgence of a moralizing discourse denouncing its supposed modernism. “...Perrault’s four glass towers, widely spaced on a concrete podium, directly contradicts the typological care and contextual premises taught by respected architectural ideologues like Bernard Huet and Aldo Rossi over the last twenty years...”<sup>37</sup>

Dominique Perrault’s supposed modernism was deemed an “uncompromising return to a neo-twenties modernism pur et dur, not only in the impulse toward a mythical ‘transparency’ (a constant running through all the grands projets) but also to an urbanism a la Le Corbusier”.<sup>38</sup> The transparency of the towers, i.e. the use of glass, would be an indirect reference to Colin Rowe,<sup>39</sup> the symptom

33 Paolo Rossi, *Clavis universalis*, Grenoble, Éditions Jérôme Millon, 1993, p. 53.

34 Jean Favier, dans *Bibliothèque nationale de France 1989–1995*, Arc en rêve—Centre d’Architecture, 1995, p. 15.

35 Philippe D. Leighton, “Sur la Bibliothèque de France”, *Le Débat*, no. 65, March–August 1991, p. 234–252.

36 Dominique Perrault, “Réponse à Ph. D. Leighton”, *Le Débat*, no. 65, March–August 1991, p. 254.

37 Anthony Vidler, “Books in Space: Tradition and transparency in the Bibliothèque de France”, *Representations*, no. 42, Special Issue: Future Libraries, spring 1993, p. 115–134, reprinted in Anthony Vidler, *The Scenes of the street and other Essays*, The Monacelli Press, 2011, p. 347.

38 Anthony Vidler, *op. cit.*, p. 347.

39 Colin Rowe and Robert Slutzky, “Transparency: literal and phenomenal”, in Colin Rowe, *The Mathematics of the ideal Villa and other essays*, London and Cambridge, MIT Press, 1976



Beinecke Library, library of rare books and manuscripts of Yale University, Connecticut, 2013



of the dematerialization of architecture specific to modernism, a fascination with the void and with open plans, whereas in a mannerist reading of modernism, Colin Rowe assimilates transparency with a generic interface of perception.<sup>40</sup> The challenge of the critique undertaken by Anthony Vidler was definitely to maintain the status of textuality, to oppose the reification of the book in the image of the open books of the towers, a classical form of the written word, of memory and history. Thus, he justified the traditional form of the library as a place of memory, as embodied in James Stirling's project (*Project for the Bibliothèque nationale de France*, 1989), citing a patchwork of his historicist references. "Stirling is making direct reference to the notion, advanced by the architect Aldo Rossi and other theoreticians of architectural typology... the projects of Boullée, Ledoux, Schinkel, and Smirke with proto-modern authority; endows them with a signifying power that might be mobilized for the present."<sup>41</sup>

When Dominique Perrault evokes the contemporary libraries of the Beinecke Rare Book & Manuscript Library (1963) at Yale University in New Haven, the Phillips Exeter Academy Library (1965–1972) by Louis Kahn in Exeter, The Martin Luther King Jr. Memorial Library (1972) by Mies van der Rohe in Washington, it is to emphasize the spatial scheme organizing all of these projects around the reader, with the time of reading and writing defining the symbolic form of the distribution of space. The reference is not a reference of authority to architecture but to the way each project was designed to establish a form of relationship to knowledge. Thus, the BnF sought to restore diversity to spaces for reading, from the study echoing the architecture of the renowned Study of St. Jerome, author of the Vulgate, the first modern book, as depicted by Antonello da Messina (1474–1475), to the reading rooms with their long tables recreating a phenomenality in which, through the choice of materials, colors and the treatment of light, the ineffable history of the interiors of all libraries is acknowledged. In the twenty years following its inauguration, the BnF has accompanied one of the most radical paradigm changes in history, i.e., the mutation of the book, which, in the words of the poet Miha Kovac, has left the book in a state of turmoil. As the digital phenomenon continues to expand, so many texts foresee the end of the book, and the dematerialization of the codex,<sup>42</sup> which through computer modeling has compelled open access to the text, gradually evol-

ing into assisted intelligence and changing the cognitive ways of reading the written word. The extended function of new libraries, as Dominique Perrault's project exemplifies, is not merely to create sanctuaries for books, but also sanctuaries for ways of reading, to preserve the full range of ways to approach books, of codes assimilating both images as well as sound, an architecture *in extenso* for a universal memory of the essence of the written word, of all the traces, (gram), engrams of our globalized cultures.

"Which shows that transparency  
is solid."<sup>43</sup>

40 Reference to the article by Christoph Schnoor, "Colin Rowe: Space as well-composed illusion", *Journal of Art Historiography*, no. 5, 2011, p. 1–22.

41 Anthony Vidler, op. cit., p. 353.

42 Miha Kovac, "The End of Codex and the Disintegration of the Communication circuit of the Book", in *Logos*, vol. 20, no. 1, p. 12–24.

43 Dominique Perrault, "Interview avec Odile Fillon", in *Bibliothèque nationale de France 1989–1995*, Arc en rêve – Centre d'Architecture, 1995, p. 53.