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## FOUNDED ON KNOWLEDGE

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### OPARTE NA WIEDZY

#### Abstract

In the 18th century Boullée provided a new foundation for architecture: he began at the root of the matter, aiming to hold everything together, as a true man of reason, to unite the necessity of reason with the power of emotion. Enlightenment is not Positivism, after all. In enlightened thought reason “illuminates” things in the world, allowing us to deeply understand and produce all that concern humanity: emotions and feelings primarily. For Boullée, too, as for Le Corbusier, architecture was emotion, astonishment, surprise, recognition: phenomena that did not occur rationally, but instinctively and emotionally. They did not take place through deductive, logical or “positive” thinking, but were based rather on analogical thought; whereby reason was the tool that induced emotions evoked by architectural phenomena.

*Keywords: knowledge, reason, emotion, Enlightenment, Boullée*

#### Streszczenie

W XVIII wieku Boullée stworzył nową podstawę architektury: jako prawdziwy człowiek rozsądku, zaczął od sedna sprawy, starając się wszystko spoić, tak by zjednoczyć konieczność rozumu z siłą emocji. Oświecenie nie jest jednakże pozytywizmem. W oświeconej myśli, rozum „rozświeśla” rzeczy na świecie, pozwalając nam wnikliwie zrozumieć i wywoływać wszystko, co dotyczy ludzkości: zwłaszcza emocje i uczucia. Podobnie jak w przypadku Le Corbusiera, dla Boullée architektura była emocją, zdziwieniem, zaskoczeniem, poznaniem: zjawiskami, które nie pojawiły się racjonalnie, ale instynktownie i emocjonalnie. Nie odbywały się one przez dedukcyjne, logiczne lub „pozytywne” myślenie, ale opierały się raczej na analogicznej myśli; rozum był przy tym narzędziem wywołującym emocje przywołane zjawiskami architektonicznymi.

*Słowa kluczowe: wiedza, rozum, emocje, oświecenie, Boullée*

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Among the many dichotomies that have always swarmed around attempts to explain any artistic production, and first and foremost, architecture, arguably the most difficult for its condition and nature, rationality is frequently found in conflict with many other faculties: emotionality, instinct, intuition, imagination, irrationality, arbitrariness, fantasy, flair, and so forth. Apollo and Dionysus, Dr Jekyll and Mister Hyde<sup>1</sup>, contrasts at times heightened or artificially constructed, but forever co-existent in human nature, albeit with differing weights and roles.

To try to bring a little order, I would like to begin from a period and an essay that I consider decisive in clarifying the fictitious opposition between the vast world of rationality and the equally extensive one of instinct and sensibility in architectural design, in art in general, and feasibly in all human activities that lead to the advancement of knowledge.

The period I am referring to is the Age of Enlightenment, of whose thinking and values, I believe, we are still heirs and interpreters. The essay, which I consider one of the last treatises and at the same time the text that inaugurated the new season of modern architecture, is that famous but long neglected one written by Étienne Louis Boullée (1728–1799) between 1796 and 1797, *Treatise on Architecture*, printed for the first time in 1953 in London and which reached the libraries of Italian architects at the end of the Sixties in a translation introduced by Aldo Rossi<sup>2</sup>.

Against every commonplace that identifies the Enlightenment with the all-encompassing and oppressive supremacy of reason, the culture of the age and the writing agree in vigorously asserting the complementarity of *rationality* and *emotionality*, the inevitable and necessary coexistence of *sense and sensibility*, as Jane Austen reminds us in her splendid book of the same name<sup>3</sup>, this too a product of those years.

The idea sustained by the Enlightenment is one of a vast, total, and universal knowledge, an idea that tends to standardize all the activities surrounding it, which intends to study, sort, and classify them. A project that is humanistic and scientific at the same time, as evidenced by the monumental *Encyclopédie* of Diderot and D'Alembert<sup>4</sup>, which aimed to consider humankind and its world as a totality: variegated, multi-faceted, multiple, made up of different parts but unitary, to know and interpret, individually in its parts, and indispensably through its relationships. It would be precisely Diderot's definition of beauty as the *relationship between the parts*<sup>5</sup> that would enshrine, also in the arts, this principle of multiplicity and unity, of mutual need and variability due to the never-ending possible combinations, the connec-

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<sup>1</sup> L. Semerani *L'oscurità e la luce*, [in:] *La modernità del Classico*, edited by R. Neri – P. Viganò, Venice 2000. R. L. Stevenson, *The Strange Case of Dr. Jekyll and Mr. Hyde*, London, 1886.

<sup>2</sup> É. L. Boullée *Architecture. Essai sur l'Art, manuscript, 1796–1797* (uncertain date), First publication: Helen Rosenau (ed.), *É. L. Boullée's Treatise on Architecture*, London, 1953.

<sup>3</sup> Jane Austen *Sense and Sensibility*, written in 1798 and published in 1811 in London.

<sup>4</sup> D. Diderot – J-B. Le Rond D'Alembert (eds.), *Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers*, Paris 1751–1780.

<sup>5</sup> Under "Beau", volume 12, 1752, in D. Diderot – J-B. Le Rond D'Alembert, *op.cit.*

« Le plaisir, en général, consiste dans la perception des rapports. Ce principe a lieu en poésie, en peinture, en architecture, en morale, dans tous les arts et dans toutes les sciences. Une belle machine, un beau tableau, un beau portique ne nous plaisent que par les rapports que nous y remarquons. [...] La perception des rapports est l'unique fondement de notre admiration et de nos plaisirs. [...] Ce principe doit servir de base à un essai philosophique sur le goût s'il se trouve jamais quelqu'un assez instruit pour en faire une application générale à tout ce qu'il embrasse. [...] J'appelle donc beau hors

tions and relationships that arise. This concept of the relationship between the parts was to be equally fundamental for Boullée and for the architecture that would derive from it.

What Boullée was faced with was a total crisis, which concerned not only the way in which a work of architecture is produced, i.e. the mechanisms of the mind involved in defining a work, the procedures, methods and means, but that had to do with its statute, with its definition – what Architecture *is* – with the place it occupies in the world of knowledge and in human activities. Or at least, Boullée tackled the problem in this radical way: starting from the most extreme question, the only one that could probe from the roots a centuries-old cultural scaffold that was no longer satisfactory nor corresponding to its time, in order to rebuild it on new bases from which could derive – according to his thinking – all other considerations, a new vision and new architecture, more effective and genuine.

The answer, already explicit in the title of the book, is not so obvious even for us, and in any case leads to reflections pregnant with consequences: *architecture is an art*, stated Boullée, and this applies primarily to its *purpose*. Only by redefining with clarity its objective and statute is it possible to discuss methods, tools and techniques of production, in the new light of an abstract thinking, by then a conquest of the Enlightenment.

Without any more uncertainty about its position, suspended for centuries between art and crafts thanks to its utilitarian component and its not directly mimetic nature<sup>6</sup>, architecture, seen as a kind of art, could finally declare its expressive purposes, its being, like every other art, devoted to *representation*. Needless to say, it has specific themes, practical problems that demand answers, distinct means; first and foremost that of *building*, so important that it was seen by Vitruvius as the *cause*, as the primary reason of architecture rather than its *means*, as Boullée contended a little unreasonably in his famous incipit<sup>7</sup>. But it is the *representation* of the specific objective that qualifies architecture as a form of art, which struggles to transport this activity that is also practical, manual, and technical into the world of artistic expression.

It follows that the representative *intentionality* is a priority that must be clarified and made explicit to be clearly present for whoever is preparing to tackle a project; which must direct all the choices of whatever kind they are, which must be pursued with appropriate instruments. And *intentionality*, as such, is the informed manifestation of an act of the will, of a meditated act of thought, an act of reason, pursued and guided by a precise objective.

It only remains to clarify, for Boullée as for ourselves, what the *subject* of this representation is, now definitively disengaged from any naturalistic and mimetic idea of art: no longer an object of nature, but an intangible item, an abstract concept. What architecture has the task of representing, stated the author, is the *character* of buildings.

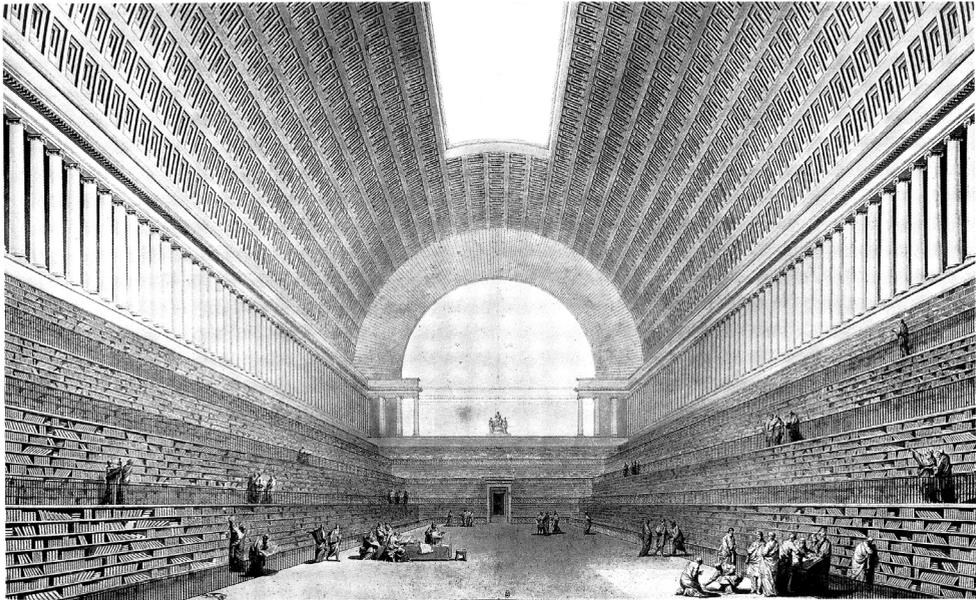
The concept of *character* is the core of his treatise. Character is what sums up a subject, is its fundamental trait, the *idea* that defines it: it is a matter of substance and sense, essence and meaning, which are decisive for architecture. This character must be defined and specified

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de moi, tout ce qui contient en soi de quoi réveiller dans mon entendement l'idée de rapports ; et beau par rapport à moi, tout ce qui réveille cette idée ».

<sup>6</sup> With regard to this long debate see, among others: F. Fichet, *La théorie architecturale à l'âge classique*, Mardaga, Brussels 1979, and E. Franzini *L'estetica del Settecento*, Bologna 1995.

<sup>7</sup> “What is architecture? Shall I join Vitruvius in defining it as the art of building? Indeed, no, for there is a flagrant error in this definition. Vitruvius mistakes the effect for the cause. In order to execute, it is first necessary to conceive it,” H. Rosenau (ed.), *É. L. Boullée's Treatise on Architecture*, London 1953.



Ill. 1. Étienne-Louis Boullée, Bibliothèque du roi, Paris, 1785

to then take shape through the act of the project; it must be represented to become the indissoluble property of the form; it must be expressed in the most immediate and evident way to become a recognizable and unmistakable trait of the work. The abstract idea must become concrete and present itself to the senses, assuming a semblance and matter. The character, the distinctive properties of the subject – the house, the theatre, the library – must transmigrate into the forms of the architecture to become manifest and recognizable, and to produce an *effect*. *To give a building character is to make judicious use of every means of producing no other sensations than those related to the subject.* According to Boullée, *Architectural imagery is created when a project has a specific character with generates the required impact. (...) We gauge the impressions that objects make on us by their clarity*<sup>8</sup>.

The first *creative act* of architecture consists in identifying its character, a “product of the mind”, followed inextricably by a decision on the way in which this idea is to be represented. With the result that, irrespective of the means put in place, for Boullée it was still governed classically by principles of consistency, correspondence, and *expediency* – another term dear to Enlightenment treatises, for fear of losing the effectiveness of the expression and scuppering the entire operation. The idea and the form, to achieve the desired *effect*, must conform.

As regards the mechanisms of artistic production, Boullée highlighted a double question: the identification of the *character*, of what we might call, along with Panofsky, the *idea*<sup>9</sup>, and

<sup>8</sup> *Ibidem*.

<sup>9</sup> E. Panofsky, *Idea. Ein Beitrag zur Begriffsgeschichte der älteren Kunsttheorie*, Leipzig–Berlin 1924.

the definition of the principles, methods and instruments on the basis of which to *represent* such character, two acts necessary for each creative activity.

Far from being the fruit of imagination and pure invention, the character of buildings is precise in their response to the question asked at the beginning of every project: *what is* the library, *what is* the theatre, *what is* the cenotaph, *what is* the courthouse, and so forth. They derive from the subject itself, from its essence, and its nature: *Every problem contains its own solution*, concurred Louis Sullivan a century later<sup>10</sup>.

Among the projects that Boullée developed to illustrate his treatise, in support and demonstration of his theory, I believe that the one for the Public Library – the adjective is crucial at this point – was one of the most beautiful and exemplary, sadly never built, the only one with a specific contract and location.

What is the Library? What is its particular character? wondered Boullée. The Public Library, a relatively new theme, was one of the greatest civil institutions, the place that gathered all the knowledge of humanity, the secular temple of knowledge. A unitary knowledge, immense, of the Enlightenment, which came from Boullée represented through the vastness and uniqueness of a hall, an “amphitheatre of books” that theatrically cover its large walls, spanned by a huge vault that perceptually dramatically amplified the space of the courtyard set aside for its construction. Vastness is the character that belongs to the library; the hall and the vault are its metaphor and representation. The barrel vault is the form of construction that interprets and manifests it: so indispensable that it accepts merely being placed “in representation”<sup>11</sup>, a pretence that does not correspond to its actual construction, I am referring to that painted one which embraces Plato and Aristotle, the world of ideas and the world of visible sensibility in Raphael’s grand fresco of the *School of Athens*.

For Boullée, construction was neither the goal nor the reason of architecture: it was only the means of its realization, and sometimes not even effective. The true instrument of this art would be the *composition*, the tool that allows the establishment of relationships between elements offered by nature – again the “teacher”, through simple solids and light effects.

With his treatise Boullée set out to indicate a rational road for architecture, a road *enlightened* by reason, but it is clear that in this way the presence of intuition and feeling were not excluded. Indeed, they were assumed as a necessary part of this process and as the overall aim of every artistic activity.

Not by chance, Boullée, the great interpreter of the century of Enlightenment, is considered a rationalist and revolutionary architect but also a *visionary*<sup>12</sup>, and in the penetrating definition

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<sup>10</sup> H. L. Sullivan, *The Autobiography of an Idea*, American Institute of Architects, AIA Press, New York 1924; New York, Dover, 1956.

<sup>11</sup> This is a reference to a phrase of Carlo Lodoli “Nothing should be proposed in representation that is not truly functional” described in A. Memmo, *Elementi di architettura lodoliana*, Zara 1833.

<sup>12</sup> Among the many writings on the architecture of Boullée and the Enlightenment period, see:

J. C. Lemagny (ed.), *Les Architectes visionnaires de la fin du 18<sup>e</sup> siècle*, Geneva, 1966.

E. Kaufmann, *Étienne Louis Boullée*”, in *The Art Bulletin*, Sept. 1939.

E. Kaufmann, *Three Revolutionary Architects: Boullée, Ledoux, Lequeu*, New York 1968.

E. Kaufmann, *Architecture in the Age of Reason*, Cambridge 1955.

J. M. Pérou de Montclos, *Étienne Louis Boullée. Architecte visionnaire*, Paris 1993.

of Aldo Rossi, one that would be used to describe his architecture as well<sup>13</sup>, an architect who paved the way to *exalted rationalism*. Because it is true that in his attempt at refoundation, Boullée laid the foundations for a *theory* of architecture, a corpus of principles and teachings relating to design, a *theory* that was *rational* by definition, and tried to place architecture and art inside the world of knowledge. But in this construction, the declaration of belonging to the world of art removes it definitively from any positivist determinism, any deductive certainty and any suspicion of functionalism. On the contrary, Boullée placed architecture in a world turning towards sensibility: as in antiquity, art aimed to arouse sentiments, it satisfied desires and aroused pleasure, produced *effects* that pointed to the senses and not solely to the intellect.

The rationality of the Enlightenment that cannot help being the *tool* to guide this production, to urge the imagination with “flashes of inspiration [that] make objects new, different and more stimulating, and diversify design”<sup>14</sup>. The imagination is educated, nourished and directed towards an end; the intellect, we might say, is an *exalter* of the imagination, but also restrains fantasy, steers talent and intuition to an identified clear task, firmly anchored to the reality of things. Yet again nature is its term of comparison, now no longer mimetic but analogical: architecture composes and presents characters with the same degree of consistency and accuracy as nature, still the teacher, “making nature work”.

In this theoretical construct, the light of reason urges and guides each creative act, defines the *conditions* so that we can produce an idea, allow it merit, width and depth, suggest development and representation. It offers necessary but insufficient conditions. It indicates a *method*, a single fundamental component of the architecture that it can transmit, that can be theorized and taught.

An idea does not originate from deduction: there would be no creative act nor production of knowledge in this. Probably this is true not only for the arts, but in various ways, for all fields of knowledge, for engineering, and for science. We might say that every act of knowledge includes a creative act, an *intuition* that produces progress, a new idea, appropriate, precise, and simple. Nothing to do with originality and extravagance, quality is not required and not envisaged in any field of arts or science, but rather with adequacy and depth of thought. Except that, between art and science, the *goal* is different: in the latter no *representation* is contemplated, nor *emotion*, the other fundamental part of Boullée’s thesis.

It is therefore surprising to note that a century later, from the other side of the world, in search of an authentically “American” way to make architecture, Louis Sullivan again took a road parallel to that of Boullée. This vindicates the presence of an idea, of an original and precise character in every project, it suggests the need to learn from nature the bond between essence and appearance, and how to represent the identity of things with simplicity and clarity.

Faced with a new theme, as the skyscraper was at the end of the 1800s, in a vacuum of culture and method, aware of its role in artistically representing the possibilities of the new technique of iron, Sullivan wondered what architecture could relate, regarding the specific prime object to be defined. At the same time, he identified in the representation of *character* the precise rationality that guides architecture and raised the same questions as Boullée: what

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<sup>13</sup> A. Monestiroli, *Il razionalismo esaltato di Aldo Rossi*, Bologna 2012.

<sup>14</sup> É. L. Boullée, *op.cit.*, p. 77.

is the nature of the skyscraper? What is its intrinsic quality, its distinctive feature? Its height, was his answer<sup>15</sup>, and he turned his imagination to the representation of height, that amazing and heroic property, then still little in vogue; he too, so attentive to the construction, at times in contravention of the rules of positivist engineering in order to make the story of this character more explicit, more evident and exciting.

Through the most colourful and emphatic language Sullivan argued that creative power lies in the *freedom* offered by the “vital relationship between intellect and instinct, too often underestimated”<sup>16</sup>, where instinct is desire, where imagination provides the “vital spark”<sup>17</sup> to be pursued with freedom and boldness, albeit anchored to a world of necessity and common sense<sup>18</sup>, where the intellect “instructs” and leads the game, ensuring depth and consistency, placing a damper on whim and fancy. Freedom, included in the relationship between these two worlds, was to Sullivan a condition of necessity for every creative act: it meant pursuing life without pretences, preconditions and conformance, it meant following the *nature of things*, penetrating the essential meaning to represent it emphatically.

Likewise, we find the same yearning for freedom of the imagination and the same call for depth of thought in the writings and work of the most talented architects of twentieth-century European Rationalism. The same tension between sense and sensibility is the leitmotif of the treatise by Le Corbusier, Boullée’s ideal pupil. His book<sup>19</sup> is built on a peremptory call for rationality in method – the work of engineers, clarity in the objectives to be achieved, accuracy and determination in pursuing them – and at the same time the need to surpass it, *towards an architecture* whose distinctive property consists in an equally necessary expressive quality, a properly artistic quality that distinguishes art from craftsmanship, and architecture from engineering. An art that even for Le Corbusier, must be moving, must touch the senses, must trigger emotions. How? Through precision, he suggested: “contour and profile are the touchstone of the architect”. Or through accuracy, echoed Mies, through construction “brought to its exact expression”<sup>20</sup>, where the accuracy is a quality of the expression, and not the construction technique, which, for Mies, was also a fundamental tool for achieving it.

The accuracy of the representation and the accuracy of the expression, which presume a clarity of purpose, alone have the power to convert a process guided and sustained by *reason* in *emotion*, that same emotion which Loos felt upon encountering a mound of earth in the woods<sup>21</sup>. An emotion that comes from recognizing, in the mound of earth as in works of architecture, an aspect of one’s own life, represented or revealed under a different light, deeper, and more general. A recognition that takes place first of all through the senses, which

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<sup>15</sup> L. H. Sullivan, *The Tall Office Building Artistically Considered*, Lippincott’s Magazine, March 1896. Also in *Kindergarten Chats*, Lawrence, Kansas 1934; New York, Dover 1979.

<sup>16</sup> L. H. Sullivan, *The Autobiography of an Idea*, New York, American Institute of Architects, AIA Press, 1924; New York, Dover, 1956.

<sup>17</sup> *Ibidem*.

<sup>18</sup> “The solution achieved inevitably proves to be simple, and clearly an ally of common sense”, H. L. Sullivan *The Tall Office Building*, op. cit.

<sup>19</sup> Le Corbusier, *Vers une architecture*, Paris 1923.

<sup>20</sup> W. Blaser, *Mies Van Der Rohe. Lehre und Schule*, Basel 1977.

<sup>21</sup> A. Loos, *Ins Leere gesprochen*, Vienna–Munich 1962.

provokes amazement<sup>22</sup> and from there reaches the intellect, as in a game of mirrors where, in the forms of architecture, we see reflections of ourselves, an Us amplified and universal. We see, in the form of the places and of architecture, the narration of our own life, we see taking place in words of stone a *human comedy*<sup>23</sup> that portrays and represents us in our humanity.

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<sup>22</sup> A. Monestiroli, *Lo stupore delle cose elementari*, Bologna 2007.

<sup>23</sup> The reference is to the stories of Balzac in *La Comédie Humaine*, written between 1831–1850.