Orwell's *Nineteen Eighty-Four* and Etienne Louis Boullée's Drafts of 1784

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E. L. Boullée's predilection for monumental dimensions and his admiration for Newton's momentous definition of the mathematical basis of the form of the universe brought on a new stage in the interrelation of cosmology and architecture. Combining the new gigantic leap in scale with an architectural use of the mathematically pure geometric forms of the sphere and the pyramid, Boullée both echoed Palladio's injunction that our "piccioli tempii" ought to resemble the great one of the universe, and prefigured the totalitarian disregard for human scale and the individual human being. Thus, Boullée "landscaped" two centuries ago the emotional setting of Orwell's "1984." He also revealed the threat of an "unexamined" submission of the forces of representation, and of architecture, to the inhuman dictates of a totally mathematical science.

IN MY YOUTH, I was greatly impressed by Thornton Wilder's *The Woman of Andros,* mainly for the magnificent opening passage:

> The earth sighed as it turned in its course; the shadow of night crept gradually along the Mediterranean, and Asia was left in darkness. The great cliff that was one day to be called Gibraltar held for a long time a gleam of red and orange, while across from it the mountains of Atlas showed deep blue pockets in their shining sides. The caves that surround the Neapolitan Gulf fell into a profounder shade, each giving from the darkness its chiming or its booming sound.

Rereading this passage, I wonder if my lasting admiration for it is founded merely in my pleasure in Wilder's style or in the strong effect of the planetary perspective. The latter creates a vivid visual realization of the earth's shape as a sphere and it makes its revolving course clear. In the 1930s, when Wilder's book was published, only aviators had any view of this planetary perspective and that view was fragmentary. Nowadays, astronauts can see the entire perspective. This planetary configuration was best theoretically expressed long ago in Newton's theory of gravity.

It has taken me years to realize the historical fact that this kind of cosmology, namely its perceptual aspects, is related to architecture. I encountered the interrelation of cosmology and architecture while searching for evidence of the connection between the work of Etienne Louis Boullée and that of Palladio. The main objective of my work *Boullées Newton-Denkmal/Sakralbau und Kugelidee* (Basel, 1969), was to show that one of Palladio's most significant formulations was meaningfully applied as late as the 18th century, and even in Boullée's revolutionary architecture. This statement, in the introduction to Palladio's Fourth Book, reads as follows: "E veramente considerando noi questa bella machina del Mondo . . . non possiamo dubitare, che dovendo esser simili i piccioli Tempii, che noi facciamo; à questo grandissimo della sua immensa bontà con una sua parola perfettamente compiuto. . . " ("And when we observe this beautiful structure of the world . . . can we doubt that the small temples which we make ought to resemble that greatest one, which has been created by one single word of His infinite goodness?"[1]) Since at that time it was already known that the sun, the earth, and the moon are round, Palladio held them to be the proper analogues to be observed in constructing temples, and in his view, the analogy was convincingly demonstrated in antiquity in the roundness of the Roman Pantheon.

Although Boullée lived 200 years later, he found this same analogy valid. To be sure, he wanted to carry roundness even further, to produce concretely a full actual sphere and thus to complete the basic idea implicit in the Pantheon. Moreover, with this perfect roundness, he intended to represent the original "pure" state of the earth as a sphere before it was flattened at the poles through its rotation. Boullée's intention here cannot be gleaned by merely observing his designs, but must be based as well on a close examination of his writings. He dedicated the whole structure to Newton (Fig. 1). Although not the architect of the universe, Newton was revered by Boullée's generation as a superhuman hero of science, the first to define with mathematical accuracy the cosmic "machine," the product of the architect of the universe. Did Boullée himself, by carrying the old underlying idea of the Pantheon to its logical conclusion, *advance* architecture to a *new stage* or *reduce* it *ad absurdum,* or *both*?

The strange compulsion of French revolutionary architects to lift out, to expose, to make fully visible the sphere imbedded in the structural type of the Pantheon can be understood in the light of the problem which Immanuel Kant in his work *All-*

1. A. M. Vogt. *Boullées Newton-Denkmal,* Basel, 1969, 296.

gemeine Naturgeschichte und Theorie des Himmels (*General Theory of the History of the Universe and the Stars,* 1755) formulated as "The Newtonian Science of the Universe." This problem both irritated and fascinated Boullée's contemporaries. The immense difficulties it posed for avant-garde artists of the time attempting to render the implications of the mathematical laws into visual terms can be clearly demonstrated by Claude Nicolas Ledoux's engraving entitled "Planetary Piece" (Fig. 2).

Here the planets are suspended freely in the void—a totally new effect due to the placement of the sun's rays and the clouds in the spot where the eye is accustomed to see firm ground. The satellites hit by those rays seem to float. The roundness of the planets' spheres is emphasized by concentric circles which indicate the position of the respective poles and suggest the planetary motion and thereby also their rotation.

Viewing Ledoux's work alongside other attempts to visualize Newton's world system, we cannot but note the helplessness of the visual artists who had recourse only to the traditional compositional schemes of the time (Fig. 3). It took an architect like Ledoux, who was able to transpose his architect's experience of handling space into other dimensions, to grasp the visible consequences of the abstract mathematical system and to form its artistic equivalents.

If we can imagine what it was like at a time when the last elaborations of the Baroque and Rococo were giving way to the beginnings of Neo-classicism, we might understand the wonder that Ledoux's composition provoked. The obvious sacrifices in composition that Ledoux imposes are present: the ground area, the repoussoirs, and the borders are dropped; the mediation or contrast between the foreground and the distant points is missing, because there is no foreground any longer. The gains seem at first doubtful enough, namely, the cold bare masses, light, and clouds as the only dramatic elements in the composition, the lack of limits or borders. But the "suspension in the void"[2] has never before been rendered as impressively. Ledoux's "Planetary Piece" appears thus as the first competent visualization of the consequences of Newton's theory of gravitation.

In contrast to Ledoux, who plays up these new conditions in countless variations feelingly and lightheartedly, Boullée, eight years older, is affected deeply by a dimensional awareness, ob-

2. In his famous essay on "Beschreibung und Inhaltsdeutung von Werken der bildenden Kunst" (1932), Erwin Panofsky used the term "Suspension eines Körpers im Leeren" (Suspension of a body in the void). Regarding the difference between the German edition (1932) and the English editions (1939 and 1955) of this essay see A. M. Vogt: "Panofskys Hut" ("Panofsky's Hat"), *Architektur und Sprache,* ed. C. P. Braegger, Munich, 1982.

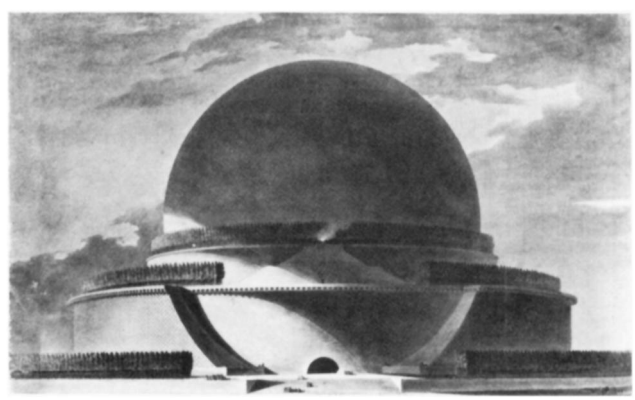


Fig. 1. E. L. Boullée, Cenotaph in honour of Sir Isaac Newton, 1784 (A. M. Vogt, *Boullées Newton-Denkmal,* Basel, 1969, Fig. 28).

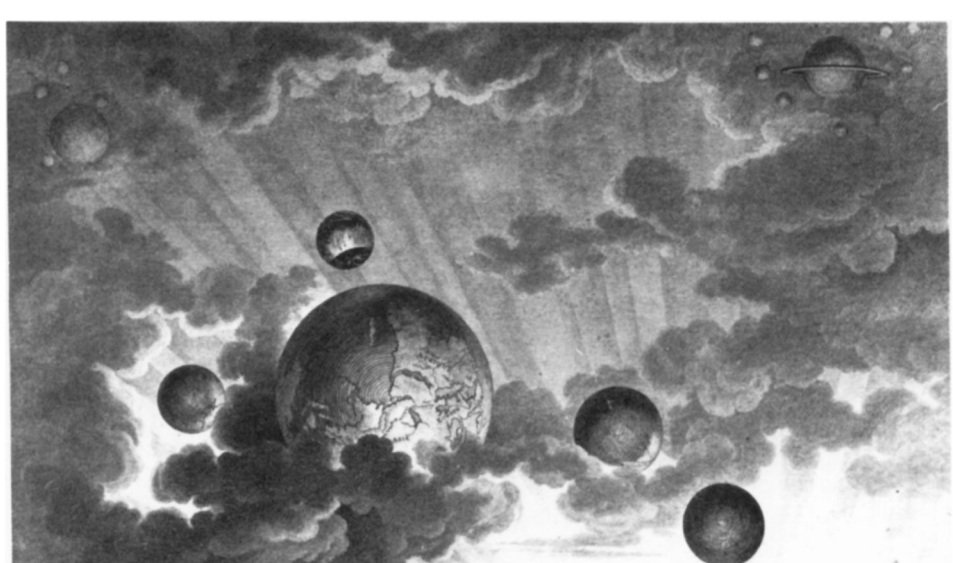


Fig. 2. C. N. Ledoux, The so-called Planetary Piece (Elévation du cimetière de Chaux). Engraving (Vogt, *Boullées Newton-Denkmal,* Fig. 77).

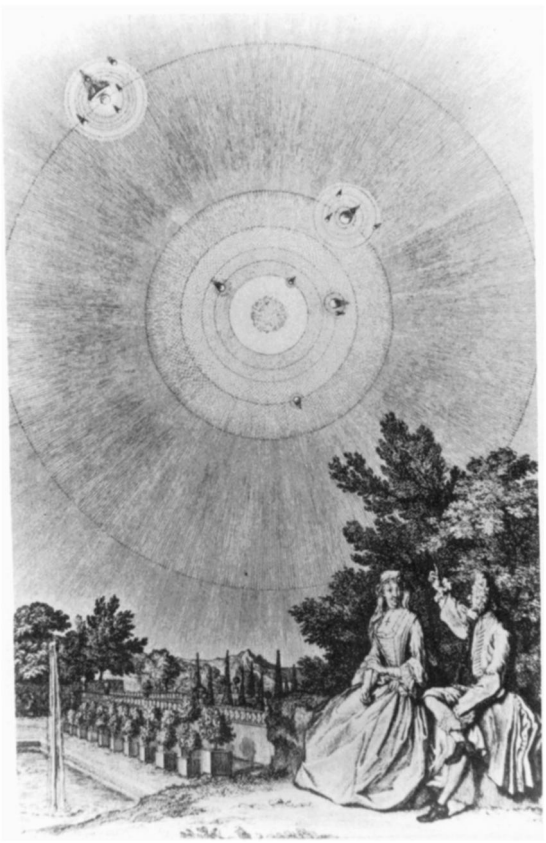


Fig. 3. Emilie Marquise du Châtelet, translator into French of Newton's works, explains the new system to Bernard de Bovier de Fontenelle, Secretary of the Académie Royale des Sciences. Engraving (photo: Cabinet des Estampes, Bibl. Nat., Paris).

Fig. 4. Henry Fuseli-Füssli, "The Artist Despairing before the Greatness of Antiquity," 1778–1779 (Gert Schiff, *J. H. Füssli,* Zürich, 1973, vol. II, Fig. 665, p. 145).

servable in his whole later work. He has been reproached for his tendency toward megalomania. The question is, does Boullée's megalomania not finally amount to a (seemingly simple) misunderstanding of Palladio's analogy. Palladio demanded, as noted above, that our "piccioli tempii" ought to fulfill an analogical relation to the "grandissimo della sua bontà." Thus for Palladio himself, this is not a quantitative but a qualitative analogy, not a question of meters but of form—the "roundness" of the circle.

Boullée, on the other hand, aims at a *double* analogy; not only the similarity of the form (the roundness, the sphere), but a quantitative difference has to be represented. Since the dimensional contrast between the universe and the earth proved enormous, he depicts it by the contrast of enormous buildings with antlike masses of human beings. Palladio did not seek such a contrast. He could, with equanimity, keep the "piccioli tempii" small; he was spared Boullée's upheaval by the quantifiable difference between the universe and the world of man.

However, in his own generation, Boullée was not the only one to confront enormous contrasts in magnitude. The Swiss-British painter Henry Fuseli-Füssli, for instance, depicted in 1778–1779 a pathetic seated figure of a man dwarfed by a gigantic foot and a gigantic hand—fragments of antique monuments (Fig. 4). He called this gouache "The Artist, Despairing before the Greatness of Antiquity." Both Boullée and Fuseli formulate a related and historically seen new problem: the one, the despair before the magnitude and coldness of the universe; the other, the despair before the distance and monumentality of antiquity. Both space and time are thus experienced as anxiety-provoking quantities which threaten to crush and annihilate human beings. Both remote ancient times and vast interstellar spaces act as forces of alienation.

There is no doubt that Boullée succeeded in creating imposing works of art by drawing on this experience of alienation and coldness. Though remaining only designs, without any chance of being realized, even as drafts they have become as important and influential as completed works of art and literature. This is true above all of the cenotaph for Newton, the "temple of Nature," the library, and the whole set of ideas for monuments based on the themes of pyramid and cone—astonishing inventions of cavernous and vaulted spaces, of grading stairs and structuring surfaces. Boullée's designs for churches, however, are definitely more problematic. Because of their immensely exaggerated size they call for enormous masses of people—for

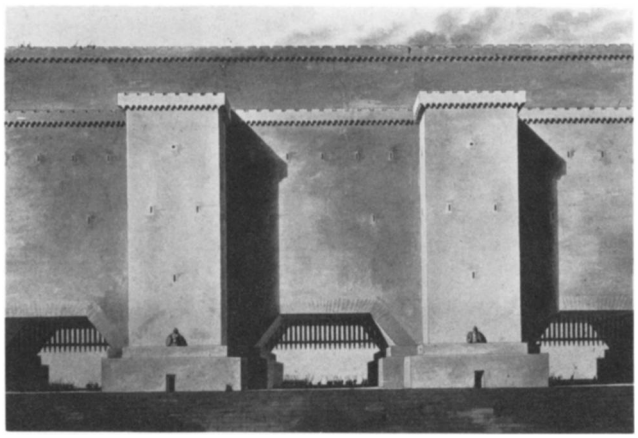


Fig. 5. E. L. Boullée: City-Gate, Detail (Vogt, *Boullées Newton-Denkmal,* Fig. 73).

armed masses but against the threat of the universe itself. In view of this aspect of Boullée's late work, one is compelled to speak of the spirit of totalitarianism. Here the features of power and defensive aggrandizement are so exaggerated that George Orwell's *Nineteen Eighty-Four* suggests itself logically enough.

In Orwell's work there are actually descriptions of architecture that could illustrate, without forcing the issue, the 200-year-old drafts by Boullée. Orwell himself would most likely have recognized in the Palace of Justice (Fig. 6) and the Municipal Palace (Fig. 7) the first demonstration pieces of the kind of totalitarian architecture which he describes in the following passage:

> The Ministry of Truth contained, it was said, three thousand rooms above ground level, and corresponding ramifications below. Scattered about (Paris) there were just three other buildings of similar appearance and size. So completely did they dwarf the surrounding architecture that from (the hill of Montmartre) you could see all four of them simultaneously. They were the homes of four Ministries between which the entire apparatus of government was divided. The Ministry of Truth, which concerned itself with news, entertainment, education, and the fine arts. The Ministry of Peace, which concerned itself with war. The Ministry of Love, which maintained law and order. And the Ministry of Plenty, which was responsible for economic affairs. Their names, in Newspeak: Minitrue, Minipax, Miniluv, and Miniplenty. The Ministry of Love was the really frightening one. There were no windows in it at all. Winston (Smith) had never been inside the Ministry of Love, nor within half a kilometre of it.[3]

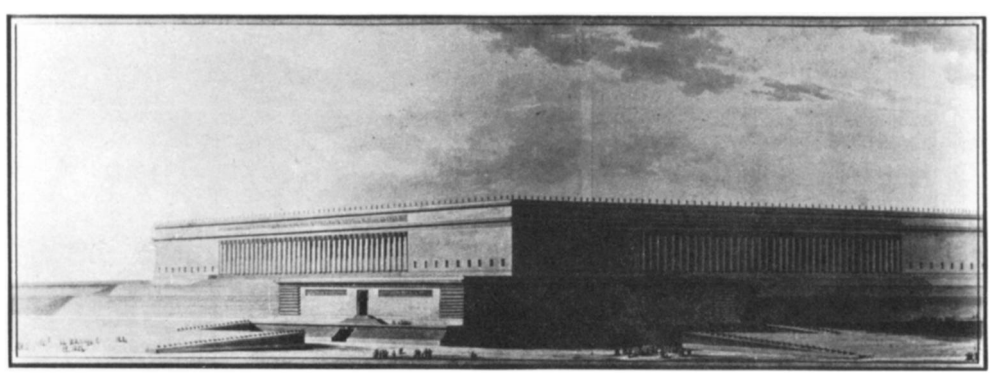


Fig. 6. E. L. Boullée: Palais de Justice (Vogt, *Boullées Newton-Denkmal,* Fig. 62).

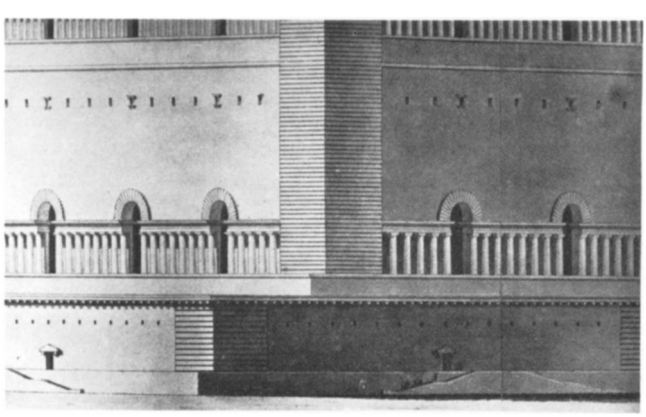


Fig. 7. E. L. Boullée, Palais Municipal, Detail (Vogt, *Boullées Newton-Denkmal,* Fig. 63).

alienating multitudes. Truly questionable is his handling of themes connected with the power of the state: fortifications, a fortified city-gate with a guillotine-like drop-lattice (Fig. 5), a Palace of Justice (Fig. 6), a Municipal Palace (Fig. 7). Here the state seems to brutally flaunt its defensive power and appears as resistant as if it were pitched not only against the attacks of

In another passage Orwell describes the pyramidal shape as especially resistant and it is just this shape which became the leitmotiv in Boullée's later work (Fig. 8):

> The sun had shifted round, and the myriad windows of the Ministry of Truth, with the light no longer shining on them, looked grim as the loopholes of a fortress. (Winston's) heart quailed before the enor-

3. George Orwell, *Nineteen Eighty-Four,* London, 1948, 7 (for Paris, read London).

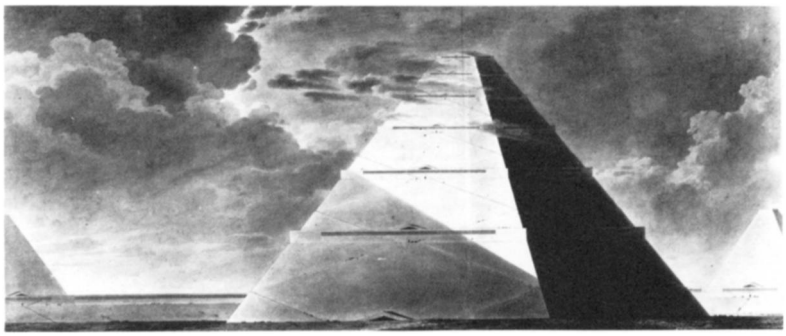


Fig. 8. E. L. Boullée: Pyramid (photo: HA 55/26 Bibl. Nationale, Paris).

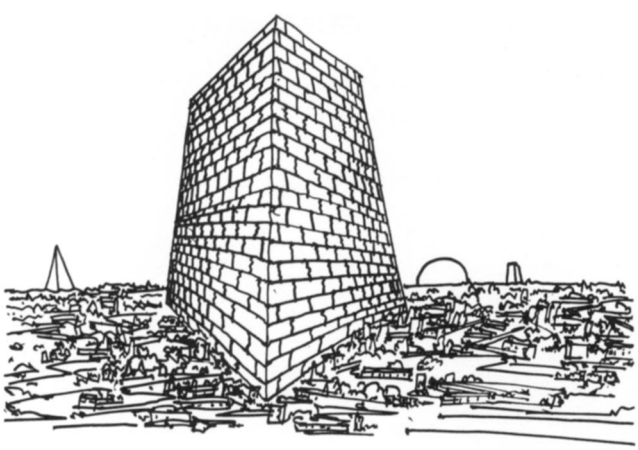
mous pyramidal shape. It was too strong, it could not be stormed. A thousand rocket bombs would not batter it down.[4]

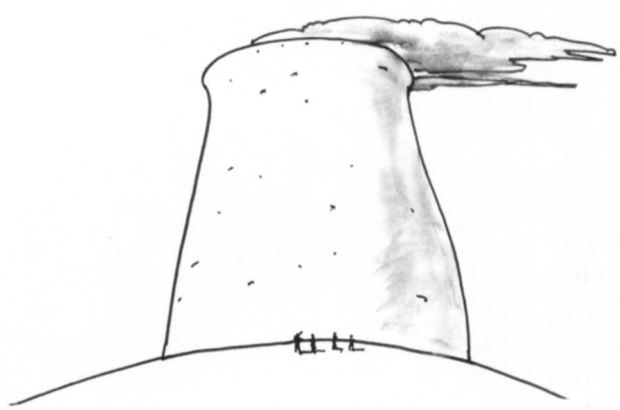
What is provocative is the relatively early appearance in architecture of this "totalitarian" part of Boullée's work. It appears, so to speak, to be a totalitarianism *avant la lettre,* before its implementation as a political system. In those years in France which resounded with cries for "Liberté" and "Fraternité," Boullée's designs already seem to embody some of Orwell's visions.

The impulse for these threatening visions came to Boullée from a rather unexpected source, namely from Newtonism. Why is it that a morally neutral exact science unleashes in an architect a vision of terror? This is Boullée's question, just as it seems to remain Orwell's problem.

(Translated by Radka Donnell)

4. Ibid., 25.





Drawings by Kenneth Bendiner
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