J. L. DE CORDEMOY'S THEORY OF ARCHITECTURE

First Appearance of Direct Architectural Criticism and of Rational-Functional Approach at the Beginning of the 18th Century

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Summary

In the 18th century, the theory of architecture of J. L. de Cordemoy was new, and not only in its title. Both approach and handling decisively differ from those of earlier theories of architecture. Functional solutions of natural simplicity residing in Gothic lightness coupled with Classic form are preferred to traditionally respected symmetry. Principles are supported by daring critical expositions, an unconventional new method in itself.

"All the moderns but M. de Cordemoi do nothing but comment Vitruvius, and confidently follow all his errings. Yes, M. Cordemoi is an exception: deeper than most of the others, he grasped the truth concealed from the others. His architectural treatise is quite concise but contains outstanding principles and deeply pondered views. He was able to develop them, drawing conclusions such as to throw sharp light on obscurities of architecture, and chased away the hurting incertainty, source of arbitrary treatment of its regularities."

This passage is a part of the preface of "Essai sur l'architecture" (Treatise on Architecture) by M. A. Laugier (1713—69); this book so decisively influencing an approach to architecture was first published in 1753, helping the evolution of Neoclassicism. All this sharpens our interest in "M. Cordemoi", an "exceptional" theoretician of architecture as stated by Laugier, a sharp critic.

Little is known about his life and activity, not even in the thorough Thieme-Becker lexicon. Several acknowledged specialists mistake him for a namesake, some do not recognize his significance. It was only in the '60s that the first detailed analysis of his theory has been published (R. D. Middleton: The Abbé de Cordemoy and the Graeco-Gothic Ideal: a Prelude to Romantic Classicism, Journal of the Warburg and Courtauld Institutes No. XXV (1962) and No. XXVI (1963)), but it does not tell anything about the man. It is only certain that "M. de Cordemoy, ordinary canon of Saint Jean in Soisson, and provost of Fertés-sous Joüars" published his book in 1706

for the first time, then again in 1714, in Paris: "Nouveau Traité de toute l'architecture ou l'art de bastir; utile aux entrepreneurs et aux ouvriers". Even in the text of the royal privilege ending the work, his name is only given as: J. L. De Cordemoy.

Nouveau Traité has been born at a time when leaders of the Academy of Architecture attempted to maintain the architectural ideal based on the classical orders. Some decades earlier, Claude Perrault attempted to at least raise doubts against the uncritical admiration of orders. It is certainly not by chance that Cordemoy refers to him alone in his book, although — as it will be seen — he praises his practical methods, rather than his principles.

From the list of contents, the novelty, "exceptionality" of this book is hardly apparent. It has three parts, and headings of the first two parts hint almost exclusively to a detailed analysis of the orders. Only the third part deals with various buildings, urban squares and bridges. But it suffices to read the first chapter of the first part to find some original ideas of the author. It is worth of quoting, the more so since it has the heading "Aim of the Whole Work".

"Errors and bad taste manifest in most of the works — due not only to masons, carpenters, joiners, plumbers and locksmiths but also to painters and sculptors — arise from their complete lack of acquaintance with architecture." (Part I, Chapter I.)

This introductory sentence is decisive for the markedly critical tone of the book. It continues by briefly expounding scarce studies, superficial erudition, and available books on architecture, then states:

"The book by M. Perrault, 'Ordonnance des cinq espèces de Colonnes selon la méthode des Anciens' may be the only one the workers may find proficient. This sage man gives a safe and easy rule for dimensions and proportions of any order. He inspires the idea of beauty, and points to mistakes to be avoided. But he may be said to be rather confused, and somewhat dull in expounding the principles . . ." (Part I, Chapter I.)

Let us reflect a bit on the above sentences. Reminding of earlier French works on the theory of architecture, they hardly aim at instructing workers. Of course, the concept of a good building has always been inseparable from that of careful realization. Philibert Delorme, the first significant French theoretician, compiles the most important instructions for masons in his "Architecture" published in 1557, but he regards their work as hardly significant. Academic theoretical works published in a rapid succession after the '70's of the 17th century either do not tell a word about workers active on the construction, or make their practical advices look like theory. A typical example is the book "Des Principes de l'Architecture, de la Sculpture, de la Peinture, et des autres Arts qui en dépendent" by André Félibien published in 1676, promising in the title to deal with fundamentals of architecture,

sculpture and painting, but nearly 40 per cent of the thick volume is a glossary. Illustrations to the text cover all masonry tools, various trusses — with carpenter tools — locksmithery . . ., etc. It is essentially a manual for architecture and fine arts, and the real needs of that age are indicated by its three editions in the last decade of the 17th century.

All this makes for an increased interest in the sentences in Nouveau Traité subsequent to the above: "Therefore I decided, in following (Perrault's) system, not only to offer a concise, safe and easy rule to our workers so that they could construct any order and create the most efficient means of an architecture pleasant to the eyes but I submit to them, in addition to different building modes, certain general advices to be followed or at least, to be known to exist." (Part I, Chapter I.)

The book has a quite simple, clear purpose; seemingly it is intended to help the building practice by giving "concise, safe and easy" rules more understandably than did earlier authors. But continued reading makes it clear that it is a practice relying on perfectly original theoretical bases:

"For the sake of regularity, remember that Architecture consists of three main parts: Layout (Ordonnance), Disposition or Distribution, and Fitness (Bienséance).

Layout provides for the due size of any part of the Building, in conformity with its function;

Disposition or Distribution means the proper arrangement of these parts;

and Fitness causes Disposition to eliminate anything opposite to nature, to custom, or to the use of things." (Part I, Chapter I.)

Stressing the concept of the customary occurred also in Perrault's theory — though in an other respect. Analysing architectural beauty, he distinguishes so-called positive beauty from arbitrary beauty. The former naturally arises from proportions and symmetry; the large-scale design beautifully and exactly executed from rich materials. The latter arises from custom, function and fashion, nevertheless, according to Perrault, it is more important for developing a correct taste:

". . .the single thing to distinguish a real architect, namely to be acquainted with most of the positive beauties, commonsense alone suffices."

Fundamentals of architecture according to Cordemoy miss the concept of beauty; he speaks of custom in the functional meaning of the word, a feature making his theory exceptional. The additional complex approach so to say equalized building spaces and structural solution:

"Building parts are understood not only as component spaces such as courtyard, hall, room, etc., but as all of their structural parts: such as wainscote, ceilings, casings, and above all, columns, of primary concern in this Treatise." (Part I, Chapter I.)

Further chapters in Part I generally outline and then describe particulars of classical orders, illustrated by fine engravings. A train of thought on antique architecture merits to be quoted:

"We are right in assuming that the first inventors of proportions of any order reduced them to easy units; and didn't dare to arbitrarily dimension . . . Corinthian columns, as seen for the Panthéon portico . . . Therefore the real cause of proportion deficiencies and deviations resides in the negligence of workmen of antique constructions." (Part I, Chapter II.)

(This quotation omits dimensions indicated by the author, useless for essentials of the train of thought.)

In connection with criticism to the negligence of workmen, again the theory by Perrault has to be remembered. He also observed that proportions of antique buildings often deviated from those of prototypes recommended in theoretical works to be followed. His original beauty ideal referred to relied exactly on variegatedness, he even doubted the existence of a "secret" of antique architecture. Cordemoy is seen to adher to the concept of perfection of antique proportions, and ascribes demonstrable "errors" to workmen. This view makes it perfectly clear that he wrote his book to help workmen.

The second part handles distribution and grouping possibilities of orders extensively. The author almost unobtrusively changes to concretizing principle remarks: he refers to examples of his age, criticizes the "moderns" i.e. his contemporaries. He administers praise rather sparingly, the colonnade of the Louvre by Perrault alone is repeatedly praised. It is interesting to quote a passage: ". . .it seems to me, column pedestals have to be entirely omitted, namely they cannot help to make orders . . . too thin, of dimensions visibly unable to support the building. This error is quite apparent in the case of the new colonnade of the Hotel de Soubise in Paris: on the other hand, for the Louvre portico where pedestals have been entirely omitted, dignity and force required for any order are self-intended." (Part II, Chapter III.)

Criticism on the architecture of that age is often of a general character but some comments point out views of the author: any purely ornamental, hence other than natural, architectural element has to be rejected:

"I know that most architects believe a work to be the finer the more ornaments it has; they are wrong in multiplying half-pilasters so as to multiply thereby also half pedestals, half capitals and entablature projections. But all these things have an unpleasant effect. Thus, possibly not only false beauty arising from pilaster penetration has to be refrained from, but also that of two half pilasters side by side creating a recessed corner, though it is encountered in several, rather acknowledged creations. These namely always assume interprenetration, opposite to strict regularity so very pleasing in architecture." (Part II, Chapter IV.)

If coupling or multiplying architectural elements challenges the author's opposition, the more does so the application of twisted shafts; first he states that the ancients never used them, expresses his doubts in the strength of such columns, then continues:

"I know that many admire twisted shafts; but — without being aware of it — their admiration may be due to the difficulty of constructing them, requiring highly skilled workmen. People of good taste don't consider them admirable. I think it would be a fair thing to see a cloister or portico of twisted shafts throughout." (Part II, Chapter IV.)

The irony of the last sentence is unmistakable. This, and several other examples make it obvious that the author applies his principle to every architectural detail consequently: nothing "contrary to natural, customary or useful" can be good.

In the following, thoughts in Part III of Nouveau Traité pointing even more markedly to Cordemoy's individual approach than those before will be quoted. Its heading — De la Bienséance — is somewhat difficult to translate; in lack of a better term, "Fitness" will be applied as above. Let us quote the introductory sentences of the first chapter:

"It is not sufficient to dispose or distribute all the things described in Part II if the places where they are applied are of no fine layout and don't meet the utility or comfort requirements for what they have been intended; or if in this layout things contrary to the natural or the customary occur. It would hurt good taste to have façades of slaughterhouses or of butcher's shops ornated with glamorous porticoes, or if magnificent halls or salons would lead to merchants' magazines. It is needless to hint to a lack of fitness." (Part III, Chapter I.)

Discussing various building types, the author has a great many opportunities to praise or reject; he is throughout consequent in his opinions, he does not tolerate anything deemed to be needless. He e.g. lists buildings where arches or entablatures are supported on columns attached to piers, then continues:

"It is believed that thereby stability will increase, and that simple columns do not suffice to support beams of several stones. But these arcades and piers, in addition to be useless, inferior and little daring, needlessly increase the cost; strength cannot be referred to since the success of the excellent, huge colonnade built as entrance to the Louvre. It has been constructed with such a competence that, although its beams span about 13 to 14 feet, the 35 or 40 years since it has been finished confirm the thought that our successors will enjoy its sight for centuries." (Part III, Chapter II.)

In addition to comments on architectural details, general, aesthetic remarks are relatively scarce. The author seems to have preferred a confirmation of precisely outlined fundamentals, always proved by details, again

for the sake of the original purpose to help. Though, in writing about e.g. symmetry, he tries to keep true to himself:

"Nothing is as easy as to construct comfortable dwellings. But nothing is as difficult as to arrange them symmetrically and still comfortably. Symmetry nearly always hampers to find correct dimensions, and to shape spaces for comfort and function. Often one symmetry inhibits the other, like beams do concerning windows and doors." (Part III, Chapter II.)

The terminology at the end of the second edition of Nouveau Traité is quite concise in respect of this concept, primordial in academic theories:

"Symmetry. In France, this term is understood simply as a correspondence between right side and left side: upper and lower parts, rear and fore parts, and so on."

Much more is learned about his views by reading the section on apartments. Nothing shows better the coming of age of social changes at the end of the rule of Louis XIV than the bold critical tone referring to the new constructions in Versailles:

"All these rules of good taste have been completely neglected in Versailles, for the new apartment of the King. The length of the anteroom is not in proportion to its width; there are very few windows, and these are poorly distributed, and so are both doors opening into the staircase and the gallery. They have been located at random, without coordination." (Part III, Chapter II.)

It is needless to continue the quotation, there are many items to enjoy mordant-witty criticisms of the author. Anyhow, according to the history of the construction of Versailles, this depreciatory criticism refers to nobody less than Jules Hardouin-Mansart, leading master of the age of Louis XIV. As to be seen later, Mansart or some of his works are criticized also in other places of his book. At the same time, his advice in the section on galleries unmistakably recalls with nearly all its details the Gallery of Mirrors in Versailles by J. Hardouin-Mansart. In the matter of staircases, the poor design of the staircase at St. Cloud, designed by the same master, is referred to, stating with pungent irony that its low ceiling constrains one to incline the head when walking. Thus, obviously, only the building is of interest to him, rather than the "style" of a seldom named master. As a matter of fact, at the time of publishing his book, all his readers certainly knew who designed the works referred to.

Nearly half of Part III in Nouveau Traité is about ecclesiastic architecture. His advices and criticism clearly outline his ideas on the ideal church. Anyhow, his considerations are introduced by criticism to a universally known, highly appreciated monument:

"The St. Peter basilica in Rome is considered as the most beautiful architectural creation ever built . . . though I am of a different view. Its huge extension, prodigious nave height, daring and carefully executed ornaments

might make its visitors admire them to a degree to believe anything in it to be beautiful.

But for the sake of just criticism, let us have a look at churches recently built in France visibly according to a concept developed by our architects following St. Peter in Rome.

All these churches follow about the same pattern. They have been composed of many vigorous arcades supported on massive piers articulated by pilasters. The huge, circular dome is supported on crossing arcades; nothing better has ever been done since the — righteous — denial of Gothic architecture and the acceptance of this kind of beauty.

Though, at a closer look they do not seem to be particularly pleasant. For instance, one may wonder if Val de Grâce, doubtlessly the best constructed, the lightest one and with the best layout among those of the same type were not much more beautiful with columns instead of the actual design of useless and heavy arcades, pilasters and piers, occupying much space and inevitably causing obscurity." (Part III, Chapter III, Section I.)

This lengthy quotation does not seem superfluous since it fairly demonstrates the concrete critical approach of its author. Beside lofty theoretical works usually enouncing abstract architectural principles, it may be considered as a revolutional novelty itself. At the same time, his well-founded deductions and formulation of results are a definite continuation to the respect paid to Gothics, appearing here and there in French architecture theory and sometimes even in practice. "Monocracy" of classical orders in authoritative academic theories almost naturally concluded to a rejection of mediaeval traditions, even if they were smuggled back for certain buildings. Some years before the first edition of just the Nouveau Traité, the chapel of Versailles had been completed, with a space effect of definitely Gothic reminiscences. Cordemoy's approach is of special interest by deeming the structural lightness of Gothic architecture achievable with the simplest Antique orders. As concerns St. Peter's in Rome, the above train of thought continues as follows:

"In fact, Michelangelo has merits by having returned to the taste of ancient architecture; moreover he kept also what is good in Gothics; I mean lightness and a strict order of spans rather pleasing to us." (Part III, Chapter III, Section I.)

Thereafter it becomes clear that he would consider a church in the style of the Louvre colonnade as "the most beautiful building in the world". Remembering his respect for Perrault, his views are self-intended, as a few decades ago it was exactly Perrault who did not join the general opposition to Gothics; he also defended Gothic architecture in his commentaries to the translation of Ten Books . . . by Vitruvius.

No precise advice is given concerning the ground plan of the ideal church but references outline Gothic cathedrals. Clustered pillars and arches are

replaced by classical columns and horizontal cornices in two, superimposed rows. He points to the Sorbonne church side facing the courtyard as a fine example of façade design, mainly due to the "rather fine portico". He objects to crammed ornaments, depressed proportions; the latter is exemplified by the Dôme des Invalides, characterized further on, in connection with the location of the main altar, as:

"People of good taste object to the four corner chapels of the Dôme des Invalides. First, because these spaces surrounded by thick walls offer no sight of the main altar. Second, chapel doors are supposed to lead to the stairs to the dome or elsewhere, rather than into the chapels. At last, this church with the chapels is nothing else but a cluster of five small churches; they could be separated without a bit of damage." (Part III, Chapter III, Section III.) The quoted sentences are followed by objections to almost all parts of the church; even the contained sculptures and paintings of a "sublime beauty" are only mentioned to express pity for their inconvenient surroundings. From time to time a suspicion against a somewhat too frequent criticism against Jules Hardouin-Mansart's creations emerges — though, no prejudice can be stated. His criticism is sharp but consequent, it would be wrong to oppose them according to the present scale of values.

Finally, here is some complementary information on the further contents of the 1714 edition of Nouveau Traité: the study itself is followed by an open letter answering attacks on the first edition; then by two similar polemic treatises, the second of them a detailed reflection on church architecture. The volume ends with a rich glossary and a list of contents. The open letter and the first polemic treatise (written, as a matter of fact, "by a fellow monk of the author, shortly before his death") bear the same sharp critical tone as the treatise. Some explanations in the glossary may be considered as minor analytic studies, mainly those on concepts contributing to the purport of the treatise, e.g. pier, portico . . ., etc. It is worth mentioning that the contents indicate only names of Bernini, Bramante, Michelangelo, Perrault, Scamozzi and Vitruvius (and some antique masters after Vitruvius), all with some short praise and criticism. Only indirect mention is made of J. Hardouin-Mansart under the entry of mansard roof, namely that he is not the inventor of it, his only merit being to have adopted his outstanding uncle's name . . . All these vivify the author's figure without any biographical data.

In final account, the book by J. L. de Cordemoy on the theory of architecture is an instructive lecture in itself. Such a purposeful manifestation of architectural criticism, throughout analysing the work itself, has hardly been encountered before. It was a rather daring act by that time, as — in spite of theoretical discussions — the Academy of Architecture stiffly defended its orthodox principles. Beyond that, a special importance is due to the rational-functional approach manifest in the study, relying on an effort to architecture

harmonizing with nature, custom and function. Some decades later, the effect of this daring new theory may be recognized in the Lunéville castle chapel by Germain Boffrand (1667—1745), from the very school of J. Hardouin-Mansart. Neither was it at random that M. A. Laugier, referred to before, called "M. Cordemoy" exceptional, as he adopted and developed his views and even the critical tone. At that age, mid-18th century, social changes helped the new approach to evolve, the architecture of "noble plainness" to prevail. This is how J. L. de Cordemoy became the theoretical founder of an architecture combining ease of Gothic structures with classical forms.

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