Orders and *Ordonnance*: the Carrée d'Art of Norman Foster in Nimes

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Abstract: This article attempts to discuss the significance of architectural orders in contemporary architecture, by applying our conclusions to the design of the Centre of Contemporary Art (Carrée d'Art) in Nimes, built by Norman Foster in 1993. This building, in the way it has been designed, encapsulates some basic questions surrounding the idea of order in architecture: from the classical orders of the Maison Carrée, to which it can be genetically compared, to its own design concept.
In his design project, Norman Foster in effect employed in his design project the classical language of the historical monument and adapted it to the formal rules of contemporary architecture, showing that order is the development of a formal solution of an architectural organism.

Keywords: Ordonnance, order, composition, counterpoint, classicism.

Orders, composition and technique

«The classical tradition is for us architects what counterpoint is for musicians: a lesson in counterpoint of the orders and expressive possibilities in architecture», wrote Hannes Meyer in 1933 in a manuscript written in German with the title *Wie ich arbeite*[2]. By making this comparison with musical counterpoint he neatly described how the architectural orders expressed meaning compared to the languages of contemporary architecture. He continued: «We Soviet architects[3] must

keep ourselves constantly informed by studying classical building systems of all ages and of the lower classes of any given age! So we must not copy classical models, but re-interpret them». Meyer declares that models should be re-interpreted, not copied, a position construing the interrelationship of design and history which was far removed from the prevailing approach taught by the Bauhaus, and led to Meyer's dismissal after his years as director (1928-1930).

Having introduced counterpoint, in other words a form of composition based primarily on imitation, and expressiveness, which, in the figurative arts, is the result of a form of composition heavily influenced by technique, we cannot discuss orders in architecture without referring to the familiar archetype of the architectural system of the trilithon, and the fact that it is basically the adaptation of a wooden structure into stone. We should also remember Gottfried Semper, who described this as 'material exchange' (*Stoffwechsel)*, or, more forcefully, as '*Mysterium der Transfiguration*'[4], to indicate the transfer of forms and technical solutions from one material to another.
More accurately, for our purposes, we can speak of a transfer from one architectural system, from one scale of design, to another.[5]

In developing our theme, therefore, we find Foster's design for the Carrée D'Art in Nimes particularly interesting as an exercise in technical transfer and contrapuntal imitation.

What the orders signify: some theoretical issues

Before we study in detail certain specific characteristics of Foster's Carrée D'Art, it is worth examining a cardinal theoretical work written by French physician Claude Perrault, in which the

Bauhaus, which Meyer ran from 1928 to 1930.

4. Gottfried Semper, *Der Stil in den technischen und tektonischen Künsten oder praktische Aesthetik* …, Vol. 1: Die Textile Kunst …, Frankfurt am Main, Verlag für Kunst und Wissenschaft, 1860; vol. 2, Keramik, Tektonik, Stereotomie, Metallotechnik, München, Friedrich Bruckmanns'Verlag, 18631, 1879-802. Ristampa, Mittenwald, Mäander Kunstverlag, 1977. Partial Italian edition edited by A.R. Burelli, C. Cresti, B. Gravagnuolo, F. Tentori, *Lo stile nelle arti tecniche e tettoniche o estetica pratica*, Bari, Laterza, 1992. For the passage quoted, see, 1977, vol. 1, p. 119 e 121; 1992, p. 229 e 233.

5. Marco Pogacnik mentions this in the support material for a seminar held with Bruno Reichlin at the IUAV of Venice in *Stile, Tettonica e Raumkunst. Da Gottfried Semper a Fr Kiesler*: http://www.iuav.it/Ateneo1/docenti/architettu/docenti-st/Marko-Poga/archivio-p/corso-di-s/pogacnik.doc.

significance of the classical orders in architecture is considered in light of the transition from the classical-Vitruvian conceptual principle to the modern-enlightenment premise. In 17th century France, in the reign of Louis XIV, the term *Ordre* (order) was used to indicate a political decree or ordinance – the *Ordonnances* of Colbert, for example – or in a more abstract fashion, to describe divine will or fate. In 1683, in the cultural climate that was to lead, eventually, to the French Revolution, in the course of a scientific revolution that declared itself 'politically' with the first Encyclopaedia, intended as an 'ordering' of topics, Perrault[6], referring to the idea of *ordre*, introduced the concept of *ordonnance* in the essay entitled *Ordonnance des cinq speces de colonnes selon la methode des Anciens* (Ordonnance for the five kinds of columns after the method of the Ancients[7]). This work re-opened a debate within French academic circles on the theories of proportion known since antiquity, and had been preceded some years before by the publication, also edited by Perrault, of a translation of the works of Vitruvius, in a critical edition of 1673. The essay on the five orders was an attempt to redefine the traditional problem of architecture in terms of modern scientific theory. Perrault makes a distinction between things that have absolute beauty and those that have a beauty that is relative – «the systems of architectural proportion were not 'true' but merely 'probable'», and develops a kind of interpretation that was novel for his times, but which became an essential point of reference for future theories of design.[8] In his preface to the volume containing the English translation of Perrault's essay, Alberto Perez-Gomez, the author of *Architecture*

6. The brother of Claude Perrault, Charles, was an acquaintance of Jean Baptiste Colbert in the Academy of Sciences.

7. The original English translation was made in 1708 by John James, and was probably the one that Norman Foster and Vincent Scully consulted in the library at Yale. This text is quoted here under the title *Ordonnance for the five kinds of columns after the method of the Ancients*, edited by Editor Published, The Getty Center for the History of Art and the Humanities in 1993. It was edited as follows: Lynne Kostman, Senior Manuscript Editor; Joan Ockman and Thomas Repensek, Manuscript Editors; Michelle Ghaffari Copy Editor; with a preface by Alberto Perez-Gomez.

8. In particular, Perrault's work, even though it was associated with the French Beaux Arts milieu, prefigured certain ideas that became decisive in the debate during the 70's on theories of language and meaning, which had a great influence on, for example, academic circles such as the American journal Opposition, in which many Italian scholars were active, and which more generally dealt with the topics of Italian architecture. Consider, for example, the work of Roland Barthes or Ferdinand de Saussure.

Fig.1. Aereal view of the Carrée d'Art and of the Maison Carrée.

Fig.2. The Carrée d'Art and the Maison Carrée.

Fig.3. The reading hall of the Carrée d'Art: in evidence the relationship between the interior and exterior space of the building.
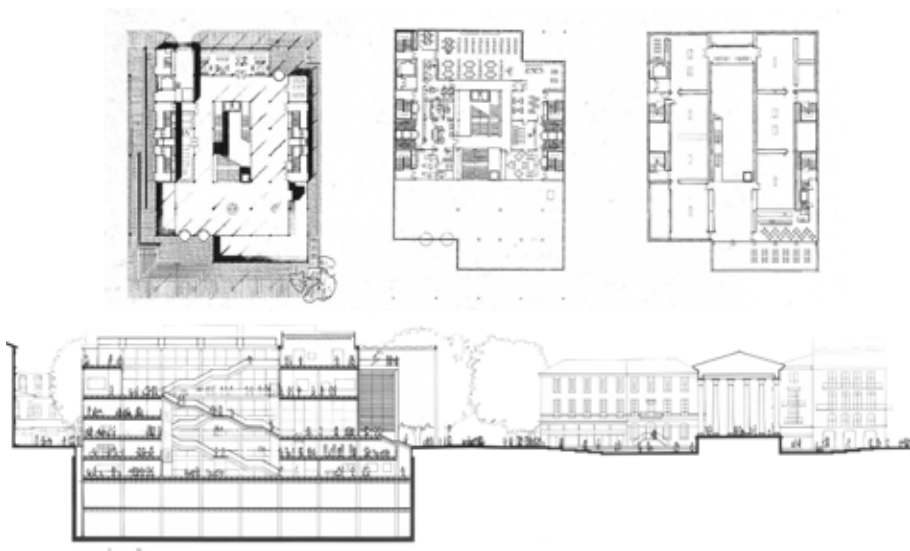

Fig.3. The Carrée d'Art: the floor plans (ground floor, mediatheque, gallery-terraces) and the cross-section

and the Crisis of Modern Science, states that: «The etymology of the title becomes especially significant if considered in relation to the more traditional meaning of *ordonnance* in late medieval French, when it implied literary or stylistic coherence; even in modern English the word denotes a correct arrangement of parts, as in a picture, so as to produce the best effect. Although, as said, the question of classical architecture could not yet be perceived as a purely formal problem of 'style' in Perrault's time, his title also prefigures the nineteenth-century reduction of architectural history and composition to 'conventional' formal styles and typologies of pre-existing buildings[9] […] unlike in music there were no natural beauties in architecture dependent on mathematical harmony and that it was therefore up to man to establish rules». With this proto-positivistic essay Perrault also went beyond the work of his major contemporaries, such as Jacques François Blondel, among whose followers we find Ledoux, the author of *Traite de la decoration, distribution & construction des batiments*: «In both cases invariable principles derived from ''induction and experience». He also failed to distinguish between the proportions of a building demanded by technical concerns and those motivated by aesthetic considerations. This 'confusion', which permeated traditional architectural practice and allowed for its meaning to be articulated inthe terms of traditional European philosophy, is precisely what Perrault's proto-positivistic theory finally dispelled; the notion of 'scientific' clarity was thus at the heart of the argument, substituting a scientific logos for traditional mythic discourse». Perez-Gomez ends his introduction by pointing out that Perrault's importance lies in his projecting architecture into the modern world, turning theory into an applied methodological science, and transcending the making of poetry in its original sense of *poiesis*.

Ludovico Quaroni; Ordre and Ordonnance – a technological system

As to why we have decided to discuss Foster's Carrée d'Art in a review dedicated to Ludovico Quaroni, it should be remembered that Quaroni addressed much thought to, and based designs on, the concepts of *ordre* and *ordonnance*, for example, in his design project for additions to the

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9. Perez-Gomez, 1993, pp. 32, 35, 36.

Opera House in Rome (on which we can read an essay in this review by Lucio Barbera) and his work in Palermo in Via Maqueda, which has recently been brought to completion. In his plans for the Opera House in 1983, Quaroni produced four different designs for the façade: one of them entitled 'Homage to Perrault'. In fact, in his 1985 book on Quaroni, Terranova wrote: "with no historicist misinterpretations nor any concessions to Beaux-Arts respectability, Ludovico Quaroni chose a lofty tone, yet one that was muted and austere in the enlightened sense of the *Traitè d'Architecture*, transcribed in the graphic elegance of a drawing without shading, an inked line, finely traced, of uniform thickness, suitable for constructive discussion and culled from the illustrated pages of an encyclopaedia. A series of 'Tributes' to Artists, to concepts, precedes the project, prepares the ground for 'composing'; a selection of encounters and attachments not yet with models but with affinities and analogies, transformed by history and by the place itself»[10]. Terranova throws more light on the Opera House project by quoting Quaroni himself: «to rediscover a 'way of updating' the image by using 'classical materials handled in a new way' and 'industrial' materials that can adopt the static and aesthetic functions of the classical elements of the architecture', since 'it is the *way* the elements are used that determines the *moment*'». However, Quaroni added a further development to the Perrault-related themes, as Lucio Barbera explains in his essay *Continuum*[11]: «Clearly there   should 'always' be an order (*ordre* in French), even if it is very diverse and full of 'surprises', which is obtained by means of an ordinance (*ordonnance* in French), that underlies the entire architectural framework of the unit." [...] At that time Ludovico was very fond of the different shades of meaning between the French words *ordre* and *ordonnance*, and used them often in conversation and in his lessons, always making sure to explain beforehand the meaning, or various meanings, of one or other of the words. He wanted his listeners to understand, above all, the need for an architecture that was as intricate as an ancient city fabric [...] «This *ordonnance* which gives *ordre,*» continued Quaroni, «should in fact be

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10. Terranova, 1985 p. 110.
11. Barbera, 2014, p. 120.

the technological, industrialised 'system'; a spatial network, an immense supporting framework of many storeys, inside which one can move, inside which one can find air, light, floors to walk on, stairways, roads for vehicles, shops, offices, bars, and all the other things already mentioned; and like the ancient orders, as well as having qualities of engineering, it must also possess qualities of expressiveness and 'decorum'»».

All these observations bring us back to Norman Foster and his Architecture as *Art of Necessity*, as Giovanni Leoni termed it in an exhaustive and structured essay that placed Foster[12] «in an explicit, literal relationship to William Morris, obviously not according to Pevsner's critical fantasy of the 'pioneer of the Modern' but rather within the deep-seated Anglo-Saxon tradition. On which subject it would be more expedient to quote John Ruskin… the English tradition of building that goes back to the middle ages, in which the architectural act is seen as the reinstatement of a lost harmony […] it has at its roots an obvious element of utopia, translated by Foster into something more realistic and contemporary [...] in which the design project is seen as a united process carried out by a close-knit team who combine different skills». In proposing Foster as an example, Leoni specifies a detailed portrayal of the Anglo-Saxon architectural scene, and maps out Foster's genealogy as an architect, not so much as one responsive to the history of architectural forms (Gothic *vs* Classical), but as one more interested in the rationality of building; «a tradition derived from an extensive exchange between France and England, with leading figures such as J.F. Blondel, A.W.N. Pugin, E.E. Viollet le Duc, and, in a sense more appropriate to Foster, augmented by the studies of Claudius Loudon and Joseph Paxton; it is no coincidence that these two figures were not educated in a discipline where architecture was a concept belonging to the 'fine arts', and who experimented in a 'substantial fashion' that marked a breaking point in architectural modernity [...] extremely close to the ideas of Fuller [...] it is a form dictated by its 'buildability' [...] leading to a close connection between a building's structure and its visible form». This train of thought leads us back to Perrault, but also reminds us of the conceptual framework of the architecture of Pier Luigi Nervi.

12. Leoni, 2007.

The Carrée d'Art of Nimes by Norman Foster (1984-1993)

It is intriguing to recollect that Norman Foster graduated from Yale in 1962, and as he himself has often said, he was deeply influenced by the dynamic professionalism of Paul Rudolph, the intellectual experimentation and social outlook of Serge Chermayeff, and the critical objectivity and depth of historical research of Vincent Scully.[13] According to Foster, the education provided by these three masters together endowed their students with a firm belief in the value of research and an awareness of the importance of history. Scully in particular was an influence on Louis Kahn and Robert Venturi, both of whom, in all their theoretical and design output, in different ways and to a different extent, came to grips with the idea or the ideal of classicism. Briefly put, one could say that in Foster's case, the importance of research and history that he learnt at Yale became a yardstick for dealing with his own utopian ideas.

The Carrée d'Art of Nimes, a nine-storey library and media centre, with four floors above ground and five below, can be seen as an exercise in almost academic rigor in its regard for *ordre* and its historical context, and yet at the same time free to experiment with and respond to new types of function by combining the visual arts with new technologies. In 1984 Foster Associates were awarded the commission for the project of the art gallery and attached library in Nimes, a few metres from the Maison Carrée, a hexastyle pseudo-peripteral Corinthian temple from the reign of Augustus (30 BC-14 AD), one of the best-preserved Roman buildings in existence, despite its 1700 years of history. Heavy flooding postponed the start of construction until 1987 and required the partial re-designing of the ground floor, which was built on a podium of around a metre and a half in height.[14] The building plan is centred on a court which recalls the interior courtyards with open staircases typical of the 15th-16th century town halls of the French Midi, and acts as an urban reconnection to other important urban patterns, making Foster's whole design project important urbanistically

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13. Vladimir Belogolovsky, 2008.
14. Pawley, 1999.

as well as architecturally.[15] The most interesting architectural element is the pronaos, with its five slender metal columns that support a sharply defined covering with sun screen louvres. The transparent walls of the rectangular building keep visitors in constant touch with the old city outside and have a geometrical interaction with the Roman temple. The upper levels house the art collections, the internal court with its terraces and internal layout acts as a conduit for the flow of visitors; the well-lighted levels below ground are used for temporary exhibitions and house the library, conference hall, cinema and storerooms.

An article on Foster's work in Nimes was published in 1993 by Mario Lupano[16], which uses analytical parameters that attempt to describe the building in terms of low-tech and the formal language of architecture; he writes that «The way that the Carrée d'Art blends in with its surroundings, one could say, takes us by surprise, it moves us out of the European space-time of the fifties and sixties, where the dialogue was held between the forms of today and the architectural cadences of the past, and that was all. Its classical stance, or rather its petit-bourgeois classicism, one might even say mini-classical, fits in well with this city encircled by its avenues and thoroughfares replete with urban life». Much more convincing are the words of Giovanni Leone, who says that in Foster's case, «the structure is certainly not merely the skeleton of the building, but rather an order, with which the design permeates a place, re-encompassing the pre-existent order. An order that is implicit and yet at the same time visible, which reminds us of Mies' idea of *bild* – 'image' – and the attitudes on technique that Mies shared with the philosopher Romano Guardini».[17]

15. Lupano, 1993, p.71.
16. Lupano, 1993.
17. Leoni, p. 24.

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