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LIANE LEFAIVRE, GUEST EDITOR
• LEON BATTISTA ALBERTI: SOME NEW
FACETS OF THE POLYHEDRON

JAMES S. ACKERMAN
• FILIPPO BRUNELLESCHI: THE
BUILDINGS
• ARCHITECTURE IN THE CULTURE OF
EARLY HUMANISM

RICHARD INGERSOLL
• TAFURI'S ROME

LIONELLO PUPPI
• THE SEDUCTION OF MODELS

DIALOGUE WITH JOSEPH RYKWERT
• ON THE EXHIBITION "LEON
BATTISTA ALBERTI"

ALEXANDER TZONIS
• POWER AND REPRESENTATION

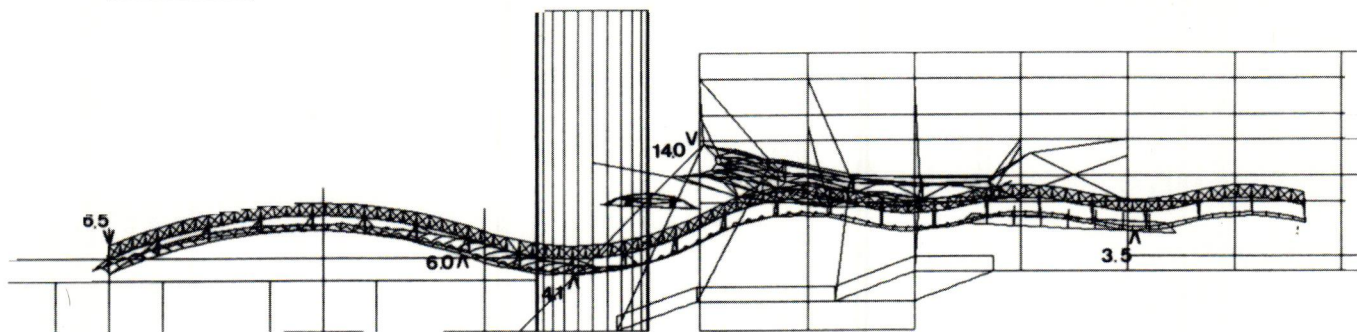
KURT W. FORSTER
• "LA PIU BELLA CAMERA DEL MONDO"

ALBERTO PEREZ-GOMEZ
• THE ARCHITECTURE OF GOD

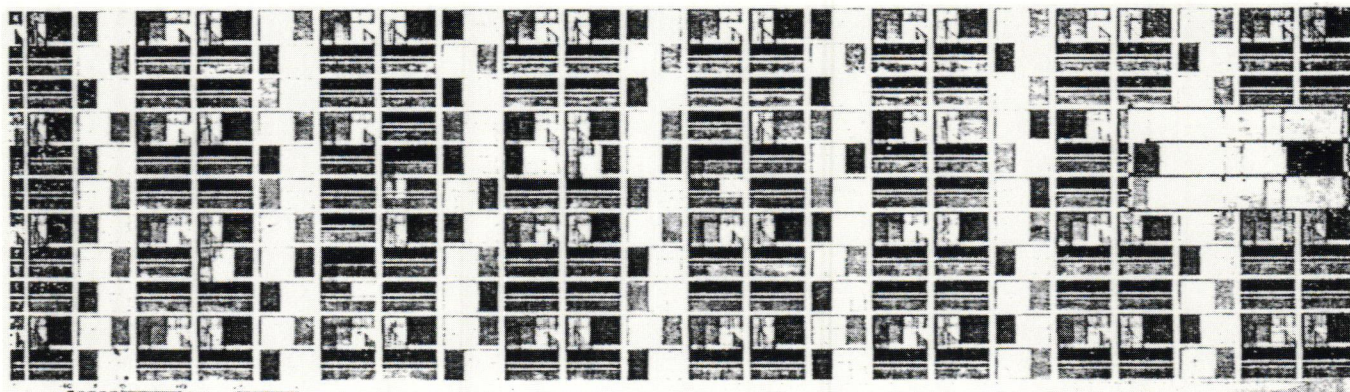
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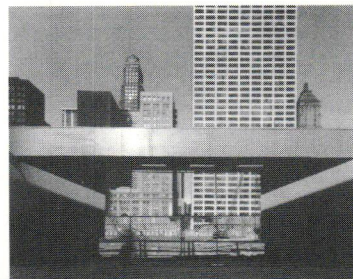
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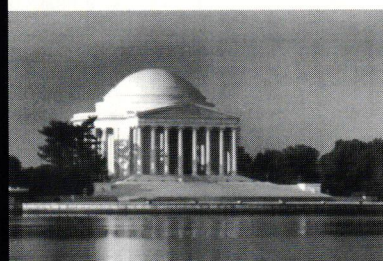
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FRONT COVER
PORTRAIT MEDAL OF LEON
BATTISTA ALBERTI, BEARING
HIS MOTTO, *QUID TUM?*
(WHAT NEXT?), BY MEDALIST
MATTEO DE'PASTI, C. 1454.

BACK COVER
SPLIT-OPEN MODEL OF
ANTONIO DA SANGALLO
THE YOUNGER'S PROJECT
FOR ST. PETER'S; BUILT BY
ANTONIO LABACCO, 1539-46.
(FROM *THE RENAISSANCE
FROM BRUNELLESCHI TO
MICHELANGELO*.)

BACKGROUND TEXT
ALBERTI'S *DESCRIPTIO URBS
ROMAE*, 15TH CENTURY.

FROM THE EDITOR: RETHINKING THE WESTERN HUMANIST TRADITION IN ARCHITECTURE

The purpose of this issue of *Design Book Review* is to reconsider two widely held views about Italian Renaissance humanism. The first is that it was an almost mythopoeic golden age for architecture, extending from Leon Battista Alberti to Andrea Palladio, an era when Western culture glided along on automatic pilot, serenely delivering masterpiece after masterpiece. It seemed fueled only by a revivalist, historicist cult of neoplatonism, of holistic, theocratic, microcosmic-macrocosmic correspondences, of harmonious proportional systems, and of formulas borrowed from antiquity. This interpretation has been largely associated with Rudolf Wittkower's 1949 classic *Architectural Principles in the Age of Humanism*.¹

Of course, this interpretation was never universally adhered to among historians of Italian Renaissance architecture. Many studies suggested there was more to humanism. As early as 1949, James Ackerman demonstrated in an article published in the *Art Bulletin* how, rather than relying on pre-established rules, early Renaissance builders invented new methods to carry out their work. Nine years later, writing in the same journal, Henry Millon showed that Francesco di Giorgio was not as orthodox in his application of proportional systems as Wittkower had argued. More recently, Howard Burns has argued that antique authority was not considered sacrosanct. Need we mention Piero Sanpaulesi's monumental studies of Filippo Brunelleschi's stupendously innovative science of engineering, as yet untranslated into English? And more than any other survey, Ludwig Heydenreich's inexplicably overlooked history of the period stressed the innovation rather than the conservatism of Quattrocento architecture.²

Following in the tradition of Edgar Wind, Eugenio Garin, and Paolo Rossi, all of whom observed the decidedly irrational side of humanist thought, Eugenio Battisti's brilliant (and also still untranslated, unfortunately) *L'anti-rinascimento* established that the fantastic, the wild, and even the magical were at the very heart of Renaissance humanist art and architecture. Manfredo Tafuri's early writings dismissed Wittkower's image of the Renaissance as "utopian," arguing that it—and the work of Alberti in particular—was the product of an intense social and political crisis provoked by the triumph of nascent tyrannies over humanist republics. (He takes up this point up in his last book, *Ricerca del Rinascimento*, reviewed here by Richard Ingersoll.) Even Wittkower himself seems to have been dissatisfied with his original interpretation and has written about Alberti's propensity for totally innovative design.³ Nevertheless, so overwhelming was the appeal of Wittkower's paradigm, so comforting, inspiring, and even therapeutic to a culture attempting to recover from its own barbarity as evidenced

during World War II, that it remained curiously impervious to such challenging studies.

Only recently, in the books reviewed in this issue of *DBR*, has this interpretation begun to be supplemented by others, with the result that, to use James Ackerman's words about Christine Smith's *Architecture in the Culture of Early Humanism*, "the veils of habit [are beginning to be] lifted from our eyes." Indeed, the Quattrocento is beginning to appear to be perhaps the most inventive period in the history of Western architecture, technically and socially as well as visually—a view that is beginning to take shape in many studies. Smith, for instance, has outlined Alberti's theory of composition, as put forth in one of his early treatises, *Profigiorum ab aerumna* (Flight from distress), and in his plan for the city of Pienza which, far from being orderly and neoplatonic, is full of surprises and variety. And Joseph Rykwert certainly dwells on Alberti's utopian impulses in our featured interview with him. (The exhibit "Leon Battista Alberti," which he curated with Robert Tavernor, is currently being held at the Palazzo Te in Mantua.) New studies on Francesco di Giorgio and Antonio da Sangallo the Younger, reviewed here by Alexander Tzonis, reveal a similar innovative spirit, as does Henry Millon and Vittorio Lampugnani's exhibition "Rinascimento da Brunelleschi a Michelangelo," held at the Palazzo Grassi in Venice earlier this year. (The show and its catalog, which focus on the novel representation techniques of the Renaissance, are reviewed in this issue by Lionello Puppi.) Kurt Forster's reflections on the relationship between painting and architecture, exemplified by the Mantuan tradition of the *camera picta*, also fit squarely within this new vein of interpretation.

These *camere pictae* constitute the subject of several new and superb books that offer a spectacular glimpse into a period when architecture and painting were part of an indistinguishable whole. New York publisher George Braziller's new series on the most famous of the painted chambers reveals how the richness of the visual culture of architecture during the Italian Renaissance exceeded that of any other period. The series, which has an extremely affordable format, includes Bruce Cole's *Giotto: The Scrovegni Chapel*, Andrew Landis' *The Brancacci Chapel*, James Beck's *Raphael: The Stanza della Segnatura*, and Randolph Starn's *Ambrogio Lorenzetti: The Palazzo Pubblico, Siena*. Special mention should also be made of Carlo Bertelli's *Piero della Francesca* and William Hood's *Fra Angelico at San Marco* (both from Yale University Press, 1993). The reproductions of Paolo Uccello's *Chiostro Verde* in Santa Maria Novella in Florence (which uses a *terra-verde* palette intended to imitate bronze high-relief, with chromatic nuances expressed in claylike red, black, and white) in Franco and Stefano Borsi's *Paolo Uccello* (Paris: Hazan, 1992; London: Thames and

Hudson, 1994; New York: Harry Abrams, 1994), along with the amazing *Giotto: The Arena Chapel Frescoes* by Giuseppe Basile (New York: Abrams, 1993; London: Thames and Hudson 1993; Milan: Electa, 1993), and the equally astonishing *Andrea Mantegna's Camera degli Sposi* (Milan: Electa, 1993; New York: Abbeville, 1993) prove that Italian printing is the best in the world. Even if mechanical reproduction can never replace the real thing, these publications are proof that it has at least been elevated to a remarkable art form in itself, in a way that Walter Benjamin could not have imagined when he criticized it in its formative stages. If it does vulgarize the work of art, it also offers unique advantages: these books allow audiences an infinite amount of time to study and admire these rare works, to partake in the immensely pleasurable act of examining them in detail by providing access to information that is increasingly reserved for a small elite (as in many instances general visitors are no longer allowed to visit the actual sites). Moreover, at no previous time, even during the 15th century, were viewers able to get the close-up views afforded by these publications.

In this issue of *DBR*, the new emphasis of modern scholarship on the value of invention during the Renaissance characterizes studies of both the immediate forerunners of Quattrocento humanism (for example, Chiara Frugoni's *A Distant City*, which deals with the unbuilt and often unbuildable *imaginaire* of 13th- and 14th-century European cities, reviewed by Robert Harbison), and of the Cinquecento. In essence, the same emphasis on newness is found in several recent important publications on 16th-century architects, revealing their work to be more innovative than previously suspected. Myra Nan Rosenfeld points this out in her review of Mario Carpo's writings on Sebastiano Serlio, as does Daniel Sherer in his review of Claudia Conforti's and Leon Satkowski's studies of Giorgio Vasari, and Alberto Pérez-Gómez in his comments on Juan Antonio Ramírez's *Dios arquitecto*. Giulio Carlo Argan and Bruno Contardi's studies of Michelangelo focus on his "transgressive

originality," as reviewer Paolo Berdini puts it. And recent work on Dutch urban history reveals the roots of a particularly humane strand of Renaissance theories of town planning, as Nancy Stieber observes.

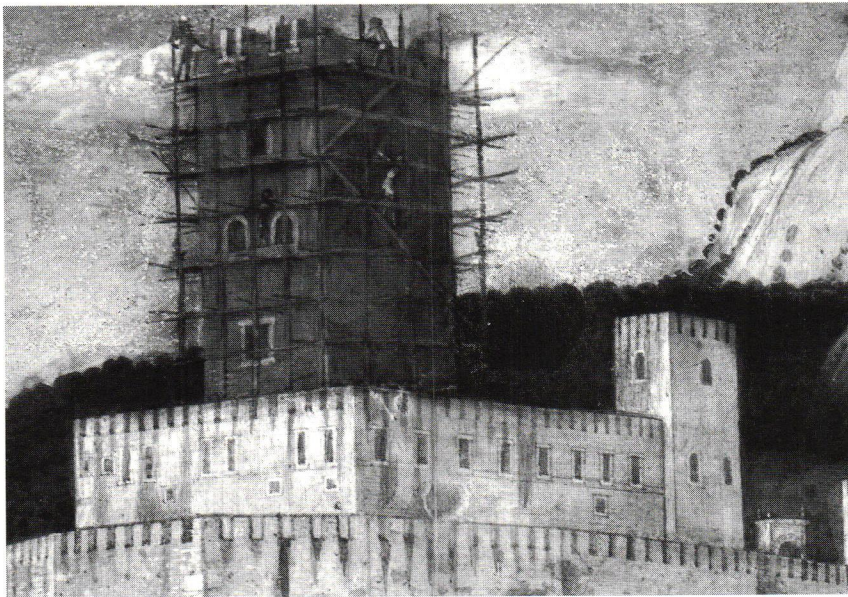
But was the architecture of the Renaissance, and, more specifically, of the early Quattrocento, really a kind of Icarus flight into the unknown? Probably no more than it was a ploddingly pedestrian and rote repetition of time-worn formulas. More likely, it was something in between. This brilliant insight is put forward in Tafuri's last book, *Ricerca del Rinascimento*, in which he argues that the paradigm of humanism is Janus-faced, characterized by both an attachment to tradition and an urge to innovate and experiment—a view which he himself attributes to the Soviet Renaissance historian Leonid Batkin.⁴ This perspective perhaps comes close to the one put forth in Salvatore Settis' three-volume compendium, *L'uso del antico* (Turin: Einaudi, 1989), on the novel uses to which Renaissance culture put antique prototypes.

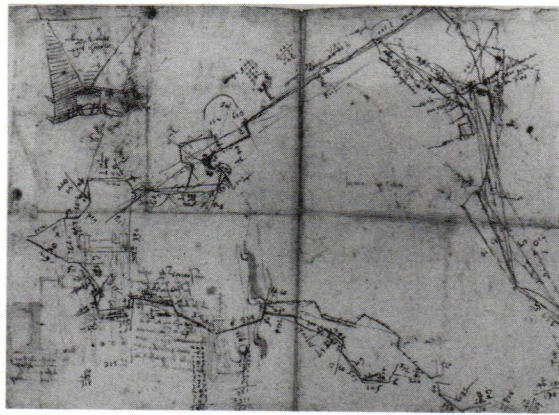
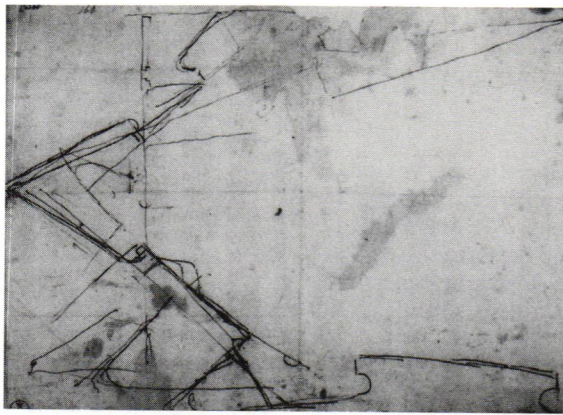
This view is correct, but it could be to an even greater degree. Of course humanism was Janus-faced. But it is wrong to see the double-sided *episteme* as an exclusive feature of the Renaissance. As Ernst Robert Curtius pointed out in *European Literature and the Latin Middle Ages* (Princeton: Bollingen, 1953), the opposition between ancient and modern already existed in Latin culture. In fact, there is no culture in which the old is not juxtaposed with the new, in which tradition is not set in opposition to experimentation, rule-making, rule-breaking. The difference with the Renaissance is that, for the first time, the balance tips in favor of the modern, of the new, of progress. Stasis is broken. The body to which the Janus face belongs gets up and moves. The effect is as explosive as the opening of Pandora's box. All of a sudden, a culture came into being where there was no absolute authority. The impact on architecture was drastic. It has been one long relativity theory ever since. As a result, humanist architecture is a fantastically creative dream-machine, and a nightmare, in *potentia*.⁵

Quid tum? What now? This was Alberti's motto. It could not have been the motto of any architect prior to him, but it could be the motto of every Western architect since. The *episteme* of Renaissance humanist architecture is something in between, an ambivalence, a dilemma, an insurmountable problem constantly outpacing its solutions, infinitely open to recategorization, reevaluations, rethinking—of its relation to other fields of visual thinking such as painting, sculpture, and drawing, and to the sciences, to engineering, to new technologies, to language and music, to political power, to divine experience, to gender, to natural order, to civic society and urbanity, to regional and universal culture, to domesticity, to morality, to dreams, to reason, and, last but not least, to passion. This brings us to the cognitive nature of creativity in architecture.⁶

This also brings us to the second misconception of the Renaissance, which this issue of *DBR* aims to redress: that Renaissance humanism is over. It is generally presumed to have ended with Claude Perrault, whose endorsement of architectural innovation on the

Background detail in the fresco on the west wall of the *Camera degli Sposi* showing a building with scaffolding (the fresco features in its foreground a meeting between Ludovico Gonzaga and his sons); Andrea Mantegna, completed 1474. (From Mantegna's *Camera degli Sposi*.)





Sketches by Antonio da Sangallo the Younger for the city of Castro. The drawing at left shows variations of the bastions on the city's land bridge; the old, gated city wall is also sketched in; after 1537. The sketch at right shows machines for water movement; ca. 1541. (From *The Architectural Drawings of Antonio da Sangallo the Younger and His Circle*.)

grounds that the rules "of the ancients" were arbitrary rather than absolute signaled the advent of "post-Renaissance" or "post-humanist" thought. In fact, Perrault was simply restating a position that Alberti had already propounded over two hundred years earlier.

As Hans Baron pointed out in a 1959 essay that appeared in the *Journal of the History of Ideas*, Alberti confessed in his famous dedication of his treatise, *On Painting*, that during his youth in exile, he had always assumed and deplored that the great ancient leaders of the arts and sciences had few, if any, equivalents in his day: "So I believed what I had heard many people affirm, namely that Nature had grown old and tired, and was no longer producing giants in body or mind. . . . But when I returned from exile to our beautiful native city, I realized that talents, sufficient for any worthy task, are still alive in many people, in the first place in these, Filippo [Brunelleschi], but also in our dear friend Donato [Donatello], the sculptor, and others [including] Masaccio—talents that cannot be valued less in these arts than those of the famous ancients." He realized that industry and virtue could be more powerful than the gifts of time and nature, "for here in Florence we find *arte* and *scientie* that had never been seen or heard of before, among them those employed in the erection of Brunelleschi's dome"—abilities which "may not have been understood or known at all by the ancients."⁷

Alberti's defense of the idea of innovation was clearly more radical than Perrault's comparatively middling utterance. The search for the new seems to be at the very heart of the early Italian Renaissance itself. Perrault's real importance, as well as that of the French engineers, as Martha Pollack cogently points out in her review of the extensive writings of the young historian of architecture and engineering Antoine Picon, rests on the phenomenal pace at which new knowledge was produced in 17th- and 18th-century France. This was the result of the large-scale implementation in the new French *académies* and *écoles* of the rational, scientific, empiricist paradigm of architecture first formulated by earlier humanists such as Alberti, Francesco di Giorgio, Leonardo da Vinci, and Antonio da Sangallo the Younger. In this issue, Alexander Tzonis reviews a number of books in this tradition, including Christoph Frommel and Nicholas Adams' edition of the drawings of Antonio the Younger and a study of military engineering by Martha Pollak.

Renaissance humanism is a long-enduring phenomena. What Jacob Burckhardt said nearly one hundred and fifty years ago in *The Civilization of the Renaissance in Italy* still holds true today: the "civilization" of the Renaissance is "the mother of our own, and [her] influence is still at work among us." Sylvia Lavin's study of Quatremère de Quincy (reviewed here by Lily Chi), the entire tradition of French architecture books of the 16th to 19th centuries, commented upon by Dora Wiebenson (in a book reviewed by Denis Bilodeau), Robin Middleton's remarks on Nicolas Le Camus de Mézières (reviewed by Richard Cleary) all reveal that the search for new rules went on unabated through the 19th century. And the 20th century is hardly an exception. Everything is an answer to the same question, *Quid tum?* Humanism has no end. It was invented by free-thinkers and is by definition a paradigm in the making, open-ended, risk-taking, and forward-looking in its attempt to formulate a better future without losing sight of those parts of the past that are worth preserving. Humanism cannot be kept still.

Liane Lefaivre
Delft, The Netherlands

NOTES

1. R. Wittkower's *Architecture in the Age of Humanism* was originally published as volume 19 of the Studies of the Warburg Institute series (reprinted in 1952 by Tiranti). It was influenced by Erwin Panofsky's *Idea*, which was first published in German in 1924.
2. J. Ackerman, "Ars sine scientia nihil est," *Art Bulletin* 31 (1949): 84–116; H. Millon, "The Architectural Theory of Francesco di Giorgio Martini," *Art Bulletin* 40, no. 3 (1958): 257–61; H. Burns, "Quattrocento Architecture and the Antique: Some Problems," in R. Bolgar, *Classical Influences on European Culture A.D. 500–1500* (Cambridge: Cambridge University Press, 1971), pp. 293–312; P. Sanpaulesi, *La cupola di S. Maria del Fiore* (Rome, 1941), *Brunelleschi* (Milan, 1955), and *La cupola di Brunelleschi* (Florence, 1966); and L. Heydenreich, *Architecture in Italy, 1400–1600* (Harmondsworth: Penguin, 1972), pp. 1–148.
3. E. Wind, *Pagan Mysteries in the Renaissance* (Oxford, 1980); *Lo Zodiaco della vita: La polemica sull'astrologia dal Trecento al Cinquecento* (Rome-Bari: Laterza, 1976); P. Rossi, *I filosofi e le macchine* (Milan: Feltrinelli, 1962); E. Battisti *L'anti-rinascimento* (Milan: Garzanti, 1962, reprinted 1989); and M. Tafuri, *L'architettura dell'umanesimo* (Bari: Laterza, 1969), pp. 55–56.
4. Leonid Batkin, *Gli umanisti italiani: Stile de vita e di pensiero* (Rome-Bari, 1990).
5. This view has its parallel in M. Nussbaum's criticism of H. Bloom in "Undemocratic Vistas," *NYROB* (January 1986).
6. This is the subject of A. Tzonis' book *Creative Design* (Cambridge, Mass.: MIT Press, forthcoming).
7. H. Baron, "Querelle of Ancients and Moderns," *Journal of the History of Ideas*, vol. 20, no. 1 (1959). See also A. Buck, "Aus der Vorgesichte der Querelle des anciens et des modernes in Mittelalter und Renaissance," *Bibliothèque d'humanisme et Renaissance* (September 1959).

ACKNOWLEDGMENTS

The guest editor would like to thank Cathy Ho for turning this collaboration into a pleasure, Alex Tzonis for his help, all the contributors for their hard work, Luca Melloni for his efficiency, and especially Richard Ingersoll for his support.

LETTERS TO THE EDITORS

TO THE EDITORS:

In DBR 31 ("Landscapes"), Odile Hénault's review of our publication, *Designing Parks* by Lodewijk Baljon, unfortunately contains some serious and disturbing errors. I can only conclude that she has not read the book carefully enough, and consequently her review does a disservice to the author, Architectura & Natura Press, and your readers.

It would be pedantic to list all of the errors in Ms. Hénault's review. A few should suffice to make the point. It is disturbing, for example, to find the name of our publishing house misspelled on two occasions (not Architectura & Natura Press, nor Architecture & Natura Press). Disturbing, too, to find *Modern Park Design* described as having been published by Architectura & Natura Press (it is in fact published by the Dutch publisher THOTH, no relation). We are very concerned by the implication that a book published by Architectura & Natura Press has been anything other than carefully edited. Architectura & Natura sets high standards in its editorial practice.

More alarming, though, is your reviewer's misreading of Baljon's book. She claims, "Neither Bernard Tschumi's nor OMA's schemes were selected for this preliminary study." In fact, *Designing Parks* contains extensive consideration of Tschumi's various plans. She also claims that the author "neglects to provide any information on the history of this particular competition." Even a cursory reading of the second chapter would demonstrate that the author has in fact provided an extensive analysis of the program of requirements and background on the competition. Hénault claims that "the firm Bakker and Bleeker, with which [Baljon] entered the competition, was not among the winners," and suggests the author therefore lacked objectivity. Yet, on page sixteen of the book, Baljon states quite explicitly that he "was a member of the team from Bakker and Bleeker from Amsterdam, which won joint first prize." Further, it is clear that Hénault was either uninterested in the methodological aspects of Baljon's design analysis, or she simply didn't understand them. There is not mention, for example, of the four stages used in the analysis. Given that the application of this method of analysis was such an important theme of the book, it is regrettable that your reviewer failed to even mention it.

It is distressing to find such carelessness in a review published in such an important journal, particularly since librarians in many academic libraries rely on such reviews in their purchasing decisions. We would therefore appreciate a rectification in your next issue in order to correct any misunderstandings readers of your journal may have as a result of Hénault's review.

Guus Kemme
Architectura & Natura Press
Amsterdam, The Netherlands

FROM THE EDITORS:

The misspelling of the publisher's name, Architectura & Natura Press, as well as the miscrediting of the book *Modern Park Design* (published by THOTH) as a publication of Architectura & Natura Press, were editing and copyediting mistakes. We sincerely regret the errors.

ODILE HÉNAULT RESPONDS:

Let me begin by stating that when I was asked by *Design Book Review* to review Lodewijk Baljon's book, *Designing Parks*, I was very enthusiastic about it. First of all, on a personal level, I am extremely committed to the idea of architectural competitions and I was hopeful that Mr. Baljon's thesis would constitute a strong argument in favor of this type of selection process. My second reason for wanting to write this review is that I believe landscape architecture should play a more significant role in shaping our urban environment.

The task of reading Baljon's book, however, quickly turned into a tedious chore because, as far as I am concerned, it does not live up to its promise. To answer a few of your comments, namely, that concerning Bernard Tschumi's and OMA's schemes not being "selected for this preliminary study," allow me to refer you to pages 152 and 153 of *Designing Parks*. The schemes selected by Baljon for his basic "comparative analysis" are those by Pilton, Pesce, Corajoud, Drewniak, Zagari, and Hara—not Tschumi's nor OMA's.

On another issue, I am well aware that chapter two of *Designing Parks* deals extensively with the history of the site and the program of Parc de la Villette, but it does not deal with "the history of this particular competition"—that is, it does not explain the 1976 competition, which to my mind would have been necessary in order to fully document the 1982 competition. Readers are abruptly alerted to the occurrence of a previous competition upon reaching page 121, which presents a drawing of Léon Krier's project from the 1976 event. A brief description of the program of the earlier contest would have contributed toward an understanding of how French authorities arrived at the program for the later competition.

I am afraid your letter has not altered my opinion of the book, and I am alarmed at such vehement protest on your part. To conclude, let me assure you that I was not "uninterested in the methodological aspects of Dr. Baljon's methodological approach." I only found them unconvincing, and his conclusions unsubstantial.

Odile Hénault
Montreal, Canada

Design Book Review (ISSN 0737-5344) is published quarterly (winter, spring, summer, and fall) by The MIT Press, Cambridge, MA, for the editors of *Design Book Review*, Berkeley, CA. Send subscriptions and address changes to: MIT Press Journals, 55 Hayward St., Cambridge, MA 02142; (617) 253-2889; E-mail: journals-orders@mit.edu. Subscription rates are: individuals \$34.00, institutions \$85.00, students/retired \$20.00. Outside U.S. add \$16.00 for postage and handling. Canadians add additional 7% GST. Current issues are \$9.00; double-issues \$18.00. Back issues are: individuals \$15.00, institutions \$30.00. Back double-issues: individuals \$30.00, institutions \$60.00. Outside U.S. add \$5.00 per issue for postage and handling. Canadians add additional 7% GST. To be honored free, claims for missing issues must be made immediately upon receipt of the next published issue. Prices subject to change without notice. Copyright © 1994 by the Massachusetts Institute of Technology. Second-class postage paid at Boston, MA, and additional mailing of offices. Postmaster: send address changes to *Design Book Review*, MIT Press, 55 Hayward St., Cambridge MA 02142.

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Invention (Rizzoli, 1992), which received an AIA Book Award last year. Her forthcoming books are *Architecture in North America Since the Kennedy Era* (Thames & Hudson, 1995), with Tzonis and R. Diamond, and *Leon Battista Alberti's Hypnerotomachia Poliphili* (MIT Press, 1995).

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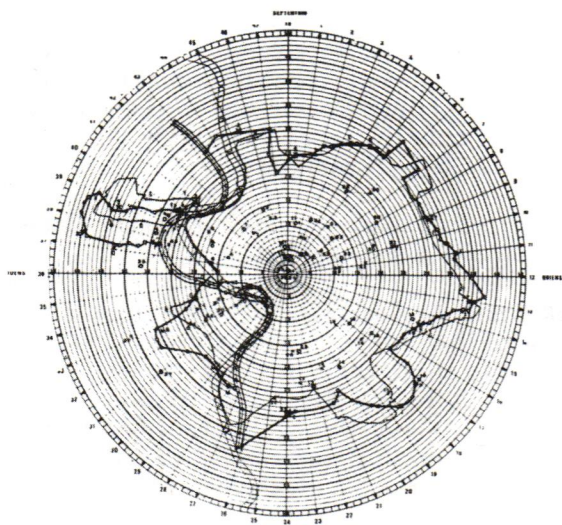
TABLE OF CONTENTS

THE ARCHITECTURE OF HUMANISM

Editor's Page: Rethinking the Western Humanist Tradition in Architecture	1	JAMES S. ACKERMAN	23
Letters to the Editors	4	The First Renaissance Buildings	
About the Contributors	5	• <i>Filippo Brunelleschi: The Buildings</i> , by Howard Saalman	
Dialogue with JOSEPH RYKWERT	8	JAMES S. ACKERMAN	27
• On the exhibition "Leon Battista Alberti," curated by Joseph Rykwert and Robert Tavernor. Held at the Palazzo Te, Mantua, Italy. September to December 1994.		The Architecture of Rhetoric	
		• <i>Architecture in the Culture of Early Humanism: Ethics, Aesthetics and Eloquence 1400–1470</i> , by Christine Smith	
LIANE LEFAIVRE	12	RICHARD INGERSOLL	29
Leon Battista Alberti: Some New Facets of the Polyhedron		Tafari's Rome	
• Exhibition catalog, <i>Leon Battista Alberti</i> , edited by Joseph Rykwert and Anne Engel		• <i>Ricerca del Rinascimento: Principi, città, architetti</i> , by Manfredo Tafuri	
LIONELLO PUPPI	18	ALEXANDER TZONIS	32
The Seduction of Models		Power and Representation	
• Review of the exhibition "Rinascimento da Brunelleschi a Michelangelo," curated by Henry A. Millon and Vittorio Magnago Lampugnani. Held at the Palazzo Grassi, Venice. May to November 1994.		• <i>The Heritage of Giotto's Geometry: Art and Science on the Eve of the Scientific Revolution</i> , by Samuel Y. Edgerton, Jr.	
• Exhibition catalog, <i>The Renaissance from Brunelleschi to Michelangelo: The Representation of Architecture</i> , Henry A. Millon, general editor		• <i>Francesco di Giorgio architetto</i> , by Francesco Paolo Fiore and Manfredo Tafuri	
ROBERT HARBISON	21	• <i>La gloire des ingénieurs: L'intelligence technique du XVI^e au XVIII^e siècle</i> , by Hélène Vérin	
Imagining Cities		• <i>Villard de Honnecourt: La pensée technique du XIII^e siècle et sa communication</i> , by Roland Bechmann	
• <i>A Distant City: Images of Urban Experience in the Medieval World</i> , by Chiara Frugoni		• <i>The Architectural Drawings of Antonio da Sangallo the Younger and His Circle: Fortifications, Machines, and Festival Architecture</i> , edited by Christoph L. Frommel and Nicholas Adams	
		• <i>Military Architecture, Cartography and the Representation of the Early Modern European City: A Checklist of Treatises on Fortification in the Newberry Library</i> , by Martha Pollak	
		• <i>Papiere Bolwercken</i> , by Charles van den Heuvel	
		DANIEL SHERER	37
		Vasari as Architect: Urban Strategies, Art Theory, and the Language of Disegno	
		• <i>Giorgio Vasari architetto</i> , by Claudia Conforti	
		• <i>Giorgio Vasari: Architect and Courtier</i> , by Leon Satkowski	
		MYRA NAN ROSENFELD	41
		The Mask and the Model	
		• <i>La maschera e il modello: Teoria architettonica ed evangelismo nell'Extraordinario Libro di Sebastiano Serlio</i> , by Mario Carpo, preface by Joseph Rykwert	



The oculus of Andrea Mantegna's Camera degli Sposi.



- PAOLO BERDINI 43
Experiencing (Michelangelo's) Architecture
 • *Michelangelo Architect*, by Giulio Carlo Argan and Bruno Contardi, translated by Marion L. Grayson

- KURT W. FORSTER 46
"La più bella camera del mondo"

- ALBERTO PEREZ-GOMEZ 49
The Architecture of God
 • *Dios arquitecto: Juan Battista Villalpando y el Templo de Salomón*, edited by Juan Antonio Ramírez, translated from the Latin to Spanish by José Luis Oliver Domingo. With essays by André Corboz, René Taylor, Antonio Martinez Ripoll, and Robert Jan Van Pelt

- DENIS BILODEAU 54
Books and Buildings
 • *The Mark J. Millard Architectural Collection, Volume I: French Books, Sixteenth through Nineteenth Centuries*, introduction and catalog by Dora Wiebenson, bibliographic descriptions by Claire Baines

- RICHARD CLEARY 55
Beauty: Absolute or Arbitrary?
 • *Ordonnance for the Five Kinds of Columns After the Method of the Ancients*, by Claude Perrault, translated by Indra Kagis McEwen, introduction by Alberto Pérez-Gómez
 • *The Genius of Architecture; or The Analogy of That Art with Our Sensations*, by Nicolas Le Camus de Mézières, translated by David Britt, introduction by Robin Middleton

MARTHA POLLAK 58

Engineering Truth and Beauty

- *Mémoires de ma vie*, by Charles Perrault, with an introductory essay by Antoine Picon
- *Claude Perrault 1613–1688, ou la curiosité d'un classique*, by Antoine Picon
- *French Architects and Engineers in the Age of Enlightenment*, by Antoine Picon
- *L'Invention de l'ingénieur moderne: L'Ecole des Ponts et Chaussées, 1747–1851*, by Antoine Picon

LILY H. CHI 64

The Artifice of Speaking Architecture: Modernity and Its Limits in Quatremère de Quincy

- *Quatremère de Quincy and the Invention of a Modern Language of Architecture*, by Sylvia Lavin

NANCY STIEBER 67

A New Perspective on the Urban History of the Lowlands

- *Stedebouw: De geschiedenis van de stad in de Nederlanden van 1500 tot heden*, edited by Ed Taverne and Irmin Visser



Vitruvian plan, 1521, by Cesare Cesariano.

DIALOGUE WITH JOSEPH RYKWERT

ON LEON BATTISTA ALBERTI

From September 10 to December 11 of this year, the Palazzo del Te in Mantua, Italy, has hosted the first exhibition devoted to the architectural career of the great humanist Leon Battista Alberti. Mantua, home to two of the few built works by Alberti, the churches of Sant'Andrea and San Sebastiano, has a special connection to perhaps the most universal of Renaissance intellectuals. The idea for the show began more than ten years ago when preparations were being made in honor of the five-hundredth anniversary of the publication of Alberti's architectural treatise, *De re aedificatoria*. The exhibition, which is largely sponsored by Olivetti, Italy's largest computer manufacturer, is one of the first to rely heavily on computer modeling, used in this case to demonstrate various alternatives of Alberti's projects and to show proportional relationships within them. Aside from computer installations, the exhibition will feature several freshly made models, notable for their large scale, a variety of 15th-century paintings that used Albertian principles for their architectural settings, as well as manuscripts and medallions. The catalog, published by Olivetti and Electa, runs over five-hundred-pages long and includes contributions from a wide range of international scholars. It will no doubt become the definitive source on Alberti and architecture.

The show is curated by Joseph Rykwert and Robert Tavernor, who were responsible for the annotated English translation—the first based on the original Latin text—of *De re aedificatoria* (it was published six years ago under the title *On the Art of Building in Ten Books*). Rykwert is one of the most versatile and illuminating scholars involved with architectural theory. In *On Adam's House in Paradise* (New York: Museum of Modern Art, 1972) and *The First Moderns* (Cambridge, Mass.: MIT Press, 1980), he articulated the lines of the history of architectural theory in original and compelling ways, reviving a general interest in the intellectual transitions that occurred during the Enlightenment. He is also an active critic, writing frequently on contemporary architecture. Some of his essays were gathered in the volume *The Necessity of Artifice* (New York: Rizzoli, 1982), and he recently published a monograph on Spanish architecture during the 1980s. Rykwert is currently the Paul Philippe Cret Professor of Architecture and the chair of the Ph.D. program at the School of Architecture at the University of Pennsylvania. He is also one of the editors of *Res* quarterly. We spoke with him in Florence in July 1994.

DBR: Why is it important to present an exhibition about an architect like Leon Battista Alberti at this moment in history?

Joseph Rykwert: Architecture right now is in a very bad way. It usually is, but it is perhaps at its worst at this particular moment because we are building more

than we ever have before. As you know, architects are not taught to think. They are taught to quantify and it's very important to show them an architect who thought through buildings, who in some way had thoughts that were incarnate. This is why I'm so concerned with showing Alberti's work.

DBR: Do you think such abstract relations can be shown in the format of an exhibition?

JR: Neither I nor anybody else involved in the exhibition would want Alberti imitations to result from it. It is not like the people in New York who hope there's going to be a Frank Lloyd Wright revival as a result of the recent exhibition at the Museum of Modern Art. The intention of our exhibition is not to provoke an Alberti revival, but to stimulate an Albertian way of thinking. We want people to consider what building is all about and why we build in one way and not in another. What can we do? My calendar has a motto to that says: "We all want results, but we get consequences." So I can't predict what the consequences of such an exhibition could be.

One thing that has been totally obscured about Alberti's thinking is the distinction between beauty and ornament, and this is something that I hope will be clarified by exhibition. Alberti did say that ornament was something that was added and stuck on. Unfortunately, we read this comment through 19th-century theorists, and take him as an advocate of the use of garlands and statues and moldings—which of course he did, but to think this is all that he meant is a terrible mistake. It has misled as great a historian as Rudolf Wittkower (I am proud to claim him as my teacher) who therefore could not understand why Alberti, who considered the columns the main ornament of building, also spoke of them as its bones. Of course, bones are never the ornaments of a live animal and Alberti maintained that a building can only be understood by analogy to an animal. But he was making a very lucid distinction, and one which is not readily accessible to us. He makes the distinction between beauty, which is noetic and has to do with the mind, and ornament, which has to do with the senses. Beauty is something that is *insita*, inherent in building; it cannot be extracted from it and seen "for itself." It consists of contours and lines and measurements and *not* of surfaces. But everything that is phenomenal is ornament for Alberti, and this includes the stone or plaster surfaces, as well as the name of the place, the quality of the air, the quality of the water—in other words, everything that gives building color and perceptible shape through which the interior beauty can be perceived. Such a notion of ornament, which is an entirely lost notion, is what I hope to represent in the exhibition.

DBR: What are the means for representing it?

JR: To begin with, the catalog contains an excellent essay on the notion of ornament by Christine Smith. One of the things we question is the idea of Alberti's development from a pseudo-antique columnar architecture to a wall architecture. We shall emphasize that his design thinking was very concerned with materials: there is a stone architecture that is columnar and a brick architecture that is wall architecture, and this insistence on the materiality of Alberti's buildings is one of the ways that we hope to bring his ideas to people's attention.

DBR: What items, for example, in the exhibition evoke this new notion about Alberti's approach to ornamentation?

JR: There will be many models; the most obvious example is the facade of Sant'Andrea in Mantua, which was elaborately painted. Today it is seen as a gray, neoclassical building. We are going to show at least three of the tondi that decorate the facade—one from Andrea Mantegna's workshop and two attributed to Correggio. Even though they were executed after Alberti's death, places were left for them and they were obviously part of the design. One of Alberti's self-imposed tasks was to design an *all'antica* facade for a public space—that is, a building that would address the public realm, a new kind of building that would be both ancient and modern. I suppose I am thinking of Augustine's evocation: "*O pulchritudo tam antiqua et tam nova!*" (O beauty so ancient and so new). I am sure that Alberti read the Confessions. The greatness of the Tempio Malatestiano in Rimini is that Alberti invented a new type of church facade, similar to that he would later develop in Santa Maria Novella.

While in the case of both Santa Maria Novella and the Palazzo Rucellai in Florence, Alberti was called upon to add a facade to an existing building, it would be a great mistake to think of him as a scenographer because his whole theory insisted on the integrity of every part in relation to the whole.

DBR: Isn't it curious that Alberti was a treatise-writer, making rules for architecture, before he began his practice as an architect?

JR: We are not quite sure exactly how all that happened. If he presented the first five books of *De re aedificatoria* to Nicholas V in 1452, as is generally supposed, he had already been involved in building, perhaps in Ferrara. He certainly judged a competition for a statue of the Marquess there, and some experts think that he also modeled his stunning bronze-relief self-portrait while in Ferrara and influenced Pisanello. This would make him the father of the portrait-medal, and thus an important artist long before he wrote the treatise.

DBR: Are his buildings an illustration of the treatise, since there were no illustrations in the book? That is, once he had clarified the proper ideas of architecture did he then proceed to apply them?



JR: I suspect that he had been pushed to do a commentary on Vitruvius because he had already shown an interest in architecture. I mean, people wouldn't say to a poet or a grammarian "Why don't you do a commentary on Vitruvius?" He must have shown a real knowledge about and passion for architecture. He had written on sculpture and on painting; *Della pittura* was dedicated to Brunelleschi, the greatest architect of the day. Alberti knew exactly what was happening in Florentine art, the most advanced of his time. He was not an innocent who had appeared out of nowhere on the architecture scene; he was a well-known writer who could also claim the title of philosopher; he was a critic and a theorist of language, but also had some contact with builders. It may well have been Leonello d'Este in Ferrara who first suggested that he write a commentary or explanation of Vitruvius. And of course, once Alberti started working on it, he realized that what he would have to do would be something entirely different. At any rate, that is what he suggests in the first chapter of his Sixth Book.

DBR: Still, it is difficult for an architect to follow an architecture book without pictures, so one wonders whether the works of Alberti are not didactic fulfillments.

JR: But of course the treatise had no pictures. It was not meant to be read silently but aloud; nor was it a book for architects, but for their patrons—for princes and prelates and men of letters. It was meant to make architecture look grand and intellectually ambitious. What is striking in our time is how architecture has fallen in status, particularly among artists and intellectuals.

DBR: But I don't think there has ever been a period such as the present when architecture has been so intellectualized.

JR: Well, much has been written about it, yet many of those who relate architecture to philosophy are

Computer-generated view of the Loggia Rucellai. Leon Battista Alberti provided the plan of the facade of the Palazzo Rucellai in Florence, and later drew up that of the Loggia in front of the palace; 1446–51. Drawing executed by The Alberti Group. (Courtesy of The Alberti Group/Olivetti/Palazzo Te.)

telling us that architecture is no longer possible. The late-capitalist condition precludes the making of architecture. Alberti, on the other hand, was writing to propose an architecture that had not yet come into being.

DBR: Was he true to his treatise?

JR: Yes, absolutely. He was working on it at the time of his death in the 1470s, and even in the last manuscripts, there are lacunae which he had not filled in. He must have been working on it all the while he was designing his buildings. It is not the case that he finished the treatise and then went on to do the architecture. I am sure he did the two things concurrently, and there are some extraordinary coincidences. When we enhanced the consecration medal of the Tempio Malatestiano on the computer, we found that, although it seemed so rough, its proportions actually maintained those of the built church. This came as a great surprise. We can now maintain fairly safely that, in the Tempio Malatestiano, Alberti was almost obsessively concerned with the use of whole numbers and with cross-referencing dimensions. In Rimini, he used the local *braccio* and the ancient Roman foot; in Mantua, he used the Roman foot again, in relation to the Mantuan foot, but he also used the Mantuan brick as a module. All these things we can affirm with a fair degree of certainty, with the use of the computer.

DBR: Is this proportional attitude the secret of Alberti's theory of *concinntitas*? And can we be brought to an understanding of it through the artifacts of the exhibition?

JR: *Concinntitas* is the harmony that binds parts to the whole. It is not an easy concept to explain briefly and, in fact, my partner, Robert Tavernor of Edinburgh University, started working on Alberti by writing his doctoral thesis about the notion of *concinntitas*, which took him 350 pages! There are one or two obvious things that may be said about the concept,

however. I have already alluded to the business of whole numbers and the interrelationship of dimensions. Underlying them is much Greek and Roman thinking, as well as some Christian ideas. St. Augustine in *The City of God* sets out the numerical relationship between the vessels of salvation, three of which are buildings: Noah's Ark, the Tabernacle in the Desert, Solomon's Temple, and, finally, the body of Christ. It is another equation which relates the building to the body.

DBR: Is this concern for proportions mystical or practical?

JR: Real mystics are usually very practical people! Alberti's religion has been something of a problem ever since Paul-Henri Michel called him a pantheist some sixty years ago. There is no doubt that he had been ordained. Alberti says about himself that he had been made a *flamen*, and I think that someone so meticulous about ancient terms would have known that it meant a sacrificing priest, even though many people think he only had minor orders. The fact that he was a canon of the cathedral in Florence and held a number of other ecclesiastical livings does not, of course, mean he was a priest. Moreover, he does not talk about Christ or the Virgin anywhere in his works. In fact, he almost always refers to God in the plural. Still, he does call himself a *flamen*.

DBR: Would you consider him a pantheist?

JR: Of course, it is an anachronistic term, but in fact the passage on which Michel based his view turns out to be a quotation from Ovid. And although he hardly ever writes about theology, Alberti does make some rather rigorist remarks about church discipline. For instance, in *De re* he is very disapproving of bishops who never celebrate the liturgy in their own cathedrals. The passage was sharp enough to be censored by the Inquisition in Spain, where ecclesiastical libraries had it heavily crossed out in their copies. It would have been an odd view for someone who is as indifferent to religion as some people want to make him.

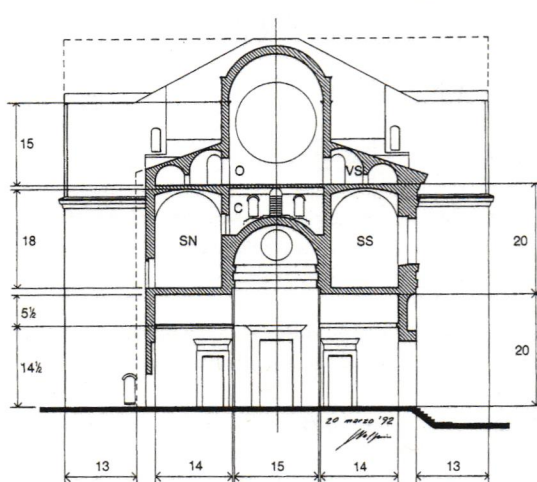
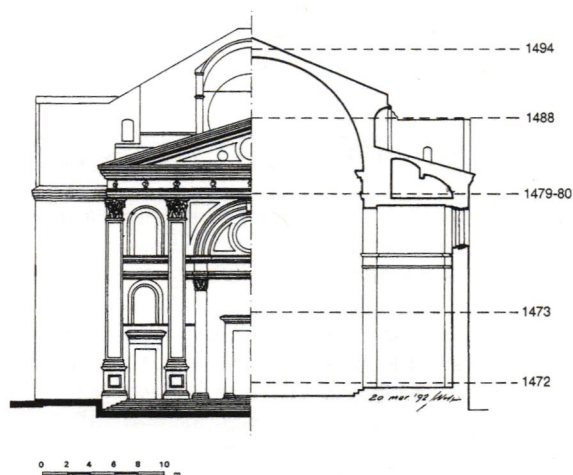
DBR: According to Manfredo Tafuri, Alberti was arguing in favor of a well-built tissue for the city. Part of the message of the treatise was actually advocating humble buildings that are not showy.

JR: Alberti is always going on about *mediocritas*, advocating a middle way between the two excesses. Of course, the word does not have the negative connotations that we give to the modern *mediocrity*; it is much more "the happy medium." Even Vitruvius considered the Ionic column the best because it provided the golden mean between the sturdiness of the Doric and the gracility of the Corinthian. It was, in any case, the usual Hellenistic way of presenting the categories: not *a*, *b*, and *c*, but *a* and *c*, and *b* as the resolution—the two extremes and a happy medium.

But of course Tafuri is right in a way. Alberti was

Computer-generated interior view of the Basilica di Sant'Andrea, 1472–94. Drawing executed by The Alberti Group. (Courtesy of The Alberti Group/Olivetti/Palazzo Te.)





Left: The current state of the facade and section through the nave and aisles of the Church of Sant'Andrea, Mantua. The approximate dates of construction are indicated. Right: Section of the narthex, showing the buried and reconstructed stairs and chambers over the vault of the main entrance; the circular "rose" window was inserted in the 19th century. The measurements, in braccia, show the main dimensions of the interior space. (From Leon Battista Alberti.)

not only concerned with great monuments, churches, palaces, and so on, but also with the infrastructure of the city, with roadways, bridges, and even drainage systems.

DBR: In current practice, designers either are forced to produce things that they would not want to associate their name with because of its lack of quality, or they produce extravagant signature buildings. There does not seem to be much room for an architecture of *mediocritas*.

JR: Well, Alberti's buildings were all conceived for public space, and our society no longer has public spaces. We no longer believe in our institutions and our institutions therefore no longer represent themselves in buildings. And when they build, they produce faceless objects. Take, for example, the UNESCO building in Paris, the Council of Europe in Strasbourg, even the United Nations building in New York.

DBR: So, from the nature of the institutions themselves, we might deduce that the faceless solution makes a lot of sense and therefore Alberti's message about form may not be considered applicable.

JR: Some of us do wonder if the loss of public space is not a mixed blessing. Some sociologists would even say that the primary task of the social forces is the reconstruction of public space. If it is public space they wish to recreate, then they will have to find a way in which institutions can represent themselves in it. And that is, of course, precisely what Alberti was obsessed with.

DBR: Alberti's attitude had so much to do with the culture of the medieval republics and the question of accountability—something which seems to be undesirable to those in power today. You would never want to have yourself identified with a public institution.

JR: Exactly. And I think this is a very bad thing. The

tissue of our cities is collapsing all over the world. It has already collapsed in the States, it is gradually occurring in Europe, and its rapid decline in China is frightening.

DBR: But institutions do not follow architecture. Architecture follows institutions, so how would you effect this return to a sense of public responsibility without the institutions themselves assuming awareness?

JR: I don't think that architects are merely pawns of nameless social forces. I think we are individuals, active in a social framework, and I think it's our responsibility to make buildings for a society that we aspire to.

DBR: There seems to be in Alberti a precise message about this notion, wherein he maintains that, through the goodness of a building, one can influence civic behavior against forces such as anarchy and tyranny. In effect, he insists that good architecture has the power to reform society. Even though Alberti usually presents things in a realistic manner, one might identify in his work a strain of utopianism.

JR: I think his was a very optimistic message, and I think it is well worth thinking about, even if circumstances seem to make it irrelevant. Of course, there is a strain of utopianism in Alberti, who was proposing an architecture that did not yet exist, yet his realism is evident because he did not illustrate his text and, instead, wanted individuals to construct a virtual reality for themselves, in their own imagination. He didn't give you a kit of parts, like Sebastiano Serlio did a century later; Alberti provided a method. He constructed an architecture for a society that had not yet come into being, and I think we are perfectly entitled to do the same. We can design an architecture for a society we want but haven't got. Utopian sensibility has been frustrated and, if only for this reason, I think it is worth turning to Alberti and reading his message for our own times. *

LIANE LEFAIVRE

LEON BATTISTA ALBERTI: SOME NEW FACETS OF THE POLYHEDRON

"Leon Battista Alberti" exhibition, curated by Joseph Rykwert and Robert Tavernor. Held at the Palazzo Te, Mantua, September 10 to December 11, 1994.

LEON BATTISTA ALBERTI, Joseph Rykwert and Anne Engel, editors, Olivetti/Electa (Ivrea/Milan), 1994, 565 pp., illus.

Leon Battista Alberti's output was immense, embracing poems, love stories and plays, political and moral treatises on civic humanism, painting, sculpture, architecture, garden design, urban design, mathematics and civil, mechanical, hydraulic, and construction engineering. And amazingly, there are still parts of this uniquely polymorphous body of work that remain enigmatic. It is so large that its exact limits have not yet been fully surveyed, despite the quantity of books devoted to it. Many of Alberti's works have disappeared, while others await definitive attribution. And at least one work, a renowned text most certainly authored by him, has been attributed to someone else for the last five hundred years.

The exhibition "Leon Battista Alberti," currently at the Palazzo Te in Mantua, curated by Joseph Rykwert and Robert Tavernor, presents all the Quattrocento Alberti manuscripts and incunabulae, encompassing his incredibly vast, multifaceted oeuvre alongside computer-generated renderings and models of his architectural projects, not one of which was completed in his lifetime. The documentation accompanying the objects in the show is exhaustive and impeccable, and in these terms alone, the catalog is an indispensable resource for anyone interested in Alberti. Its only shortcoming is that it does not contain much information related to the computer reconstructions of Alberti's buildings, which were carried out by the architecture department of the University of Edinburgh under the direction of Tavernor. But this only makes one look forward to a CD-ROM version of this work in the future.

The catalog contains more than just a description of the exhibition. Rykwert and Anne Engel have assembled over twenty-five scholars to contribute essays, many of them highly valuable for putting forth new hypotheses about attribution or new evidence or arguments to support older ones. The essays are clearly and engagingly written, and remarkably well-integrated into a coherent whole. The editing of this volume is a remarkable exercise in *concinnitas*.

The catalog opens with a general overview of Alberti's life and works by Cecil Grayson, who has been instrumental in breaking new ground in Alberti scholarship. He stresses in particular the "two cultures" aspect of the architect's work, the scientific

and the humanistic—a point that is taken up by Alberto Tenenti in the article that follows.

Alberti's role in the plan of Pienza, the new town founded by Pope Pius II in the late 1460s, has long been a subject of controversy. There are many Albertian traces in the city—Pius' palace is a near-replica of Alberti's design for the Palazzo Rucellai in Florence, and the layout is exemplary of Albertian *concinnitas*, as Christine Smith has shown in her *Architecture in the Culture of Early Humanism* (see review on page 27). The objects of Jan Pieper's study are the capitals of the two semicolumns flanking the entrance to the Duomo of Pienza. He claims that the one on the right, a winged mask of a man's face framed by leaves, contains an emblematic representation of Alberti. Pieper maintains that the leaves, which sprout from the forehead and chin, give the face the appearance of a lion. He also argues that the face has the same proportions as other portraits of Alberti, and that the location of the ears in relation to the wings resemble Alberti's emblem of the winged eye. It is true that Alberti, for some reason, did not tend to take credit for his works, and in fact was strangely reticent about it. Still, the only persuasive component of Pieper's otherwise tenuous argument is that the left column, which has a representation of a crayfish, is emblematic of Bernardo Rossellino, whose real name was Bernardo Bambarelli, deriving from *gambero*, meaning "crayfish." The argument that the two columns are emblems, one representing the theoretician and the other practitioner, takes on some plausibility. Readers may look forward to Pieper's forthcoming book on Pienza for more solid clarification of Alberti's much-disputed role in the design of that city.

How much of an artist was Alberti? Practically nothing remains of the many works of art he produced, which he himself and others such as Giorgio Vasari have described. This is not surprising as there is almost no trace of any drawings by any artist of that time, but Alberti is known to have been a portraitist. In his autobiography, he describes his practice of painting and sculpting images of his friends. Was he any good? Yes, if the only remaining work left in Alberti's hand—his own self-portrait in bronze relief which he made in his youth—is any indication, according to Luke Syson. In his contribution, Syson also points out that this bronze relief was the first of its kind, making Alberti an inventor in yet another field.

Never has there been a more exhaustive philological analysis of the sources of Alberti's architectural theoretical categories than that put forth by Hans-Karl Lücke in this volume. It has been established that Alberti's two great sources were Vitruvius and Cicero, and that he was less inclined toward the for-

mer than the latter. His most original theoretical concept, *concinntas*, is derived from a number of Cicero's texts. The strength of Lücke's essay lies in its clear exposition of Alberti's deep belief that architecture was akin to spoken language, to be used as a means of expressing human thought, as a form of speech, not just grammar. No other Renaissance architect thought in these terms.

Alberti never illustrated his architectural treatise, *De re aedificatoria*, something for which Francesco di Giorgio (who did illustrate his) criticized him. Now Gabriele Morolli has done it for him, at least with regard to his chapter on temples. The result is a stupendous feat of scholarship. The reason why Alberti did not illustrate the treatise himself, Morolli argues, is that he was interested in forming a new language, as Lücke explains so well. If Alberti did not illustrate his manuscript, it would not have been for lack of drafting talent, but simply because of his humanist's faith in the word. At a time prior to the invention of the printing press, when ideas were diffused essentially through manuscripts, the text became the most meaningful. This posed problems of its own, as Giovanni Orlandi points out in his contribution. The manuscript of *De re aedificatoria* was five-hundred pages. It took twenty manuscript writers three weeks to produce one copy of it for the Duke of Ferrara. In spite of Alberti's own efforts to correct the manuscripts—obvious from his own addenda to the pages—errors abounded. Yet, as Morolli points out, it is with words that Alberti chose to forge a new language of architectural composition. This is also why his book was eventually superseded by illustrated works, such as those by Giacomo Barozzi da Vignola, Andrea Palladio, and Sebastiano Serlio. But its form is only part of the reason; indeed, as Morolli observes, Alberti's treatise presents a much more complicated set of compositional directives than that put forth by Vignola. The buildings that could be created with his rule system are extraordinarily vast, far more so than anything that could be derived from the more popular and conservative architectural rule books that followed.

Alberti was not only actively involved with the corrections of his manuscripts, but he was assiduous on the building site as well, battling to have his designs implemented, as Arturo Calzona demonstrates in his sagalike narration of the events surrounding the construction of the Church of San Sebastiano in Mantua. His essay is based on recently discovered archival material, which is published in an appendix to the article. Yet, for all of Alberti's efforts, the Church of San Sebastiano, like his manuscripts, was impossible to control, which explains the building's bizarre facade, obviously lacking in *concinntas*, whose logic scholars have been speculating about for the past hundred years.

Did Alberti play a role in the urban projects for Rome of the humanist Pope Nicholas V? Since 1880, when the Austrian scholar Georg Dehio published a list of attributions—including the aqueduct of the Aqua Vergine, the erection of the Fountain of Trevi, the works on the Campidoglio, the restoration of San

Stefano Rotondo, and the Castel Sant'Angelo, the restructuring of Saint Peter's Basilica and of the Vatican palaces, the urban project for the Borgo region of the city, and various works on fortification and roads—the answer has been yes. This was broadly accepted by scholars involved with the subject, including Ludwig Pastor, Piero Tomei, Charles Singer, Carroll William Westfall, Franco Borsi, Christoph Thoenes, C. R. Mack, and Cecil Grayson—until Manfredo Tafuri stated in an article published in the *Harvard Architectural Review* in 1987 that Alberti's involvement was almost nil. As a civic humanist, Tafuri argued, Alberti could never have been party to Nicholas' schemes because the Pope was in fact not a humanist but a Machiavellian despot whose political program was authoritarian, coercive, and pre-absolutist.

In his contribution, Charles Burroughs responds to Tafuri's challenge in an extremely cogent and balanced manner. In his view, Tafuri's interpretation leaves out the more indeterminate character of the political context, which was necessarily fluid and complex. He suggests that the only way to correctly weigh Alberti's part in Nicholas V's plans is to analyze them individually rather than in a sweeping manner, and to do so employing a broad, multidisciplinary approach. He examines four projects to illustrate his point. First, he invokes the urban renovation scheme for the Canale di Ponte, the area across the Tiber from the Castel Sant'Angelo next to the entrance to the bridge. He argues that Alberti could have been directly involved in it because of his close ties with the Florentine banker Tommaso Spinelli, the *depositarius* of the Church who, as an intermediary between the papacy and the local republican citizenry, played an extremely important role in the development of the project. Moreover, he sees a direct application of Alberti's theory of perspective in the marvelous and illusionistic dimension of the design of the new piazza. Second, Burroughs brings up the design for the Vatican Basilica, which was never realized. By reconstructing the micropolitical context of the papal court and the highly charged local politics, he argues convincingly that Alberti could have been initially commissioned to supply a design, but that the project subsequently met with opposition from either the building site or in-fighting within the papal court. What did the design look like? No one knows for certain. But Burroughs, considering the Tempio Malatestiano in Rimini, suggests



Self-portrait by Leon Battista Alberti. (From Leon Battista Alberti.)

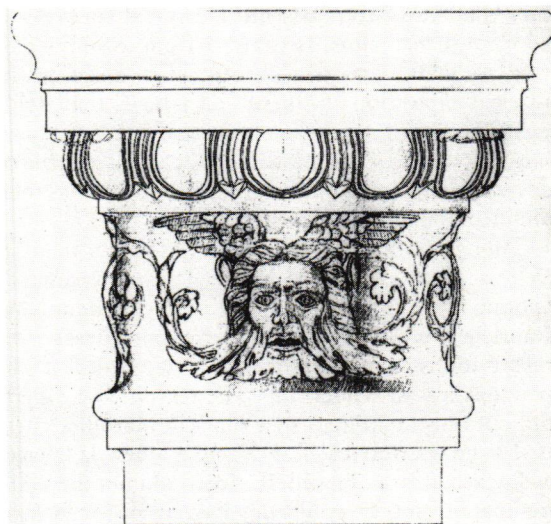
Sketch of the masked capital in one of the two semicolumns flanking the entrance of the Duomo of Pienza; completed in 1460. According to Jan Pieper, the relief is an emblematic representation of Alberti. (From Leon Battista Alberti.)

most plausibly that the design wound up on this latter building. Why would Alberti reuse the design here? Because it was at the other end of the Via Flaminia from the Vatican, which had been restored for the Jubilee of 1450, and it would have been part of no initial plan to have two Christianized triumphal symbols at either end, fitting in most felicitously with the political ambitions not only of Nicholas, but of his *conditiere*, Sigismondo Malatesta.

Burroughs cites as his third example the restoration of the Fountain of Trevi, arguing that Alberti would have carried it out for Prospero Colonna, and not for the Pope. This stands to reason. Alberti's real ties in Rome were to the Colonnas, as Burroughs rightly points out. Little wonder. An uncle of Prospero's, Oddone, Pope Martin V, used his influence with the Florentine Signoria to revoke the ban against the Albertis, which had been in effect since the beginning of the century. As a result, Leon Battista entered the beloved city of his forebears for the first time in his life. He owed much to the Colonnas and he was a member of their family circle. For many reasons he may even have identified with them; as a civic humanist, he shared their republican sympathies. The Fountain of Trevi was within the Colonna district, and its restoration would have enhanced the family's political prestige, more so than the Pope's.

Burroughs' fourth and last example is the Tridentine scheme for the Borgo, with its three aligned, commercial, porticoed streets converging on a large square centered by an obelisk, facing the Vatican. Why does Burroughs attribute this project to Alberti? Because it is modeled on Bologna, where Alberti studied law. Burroughs sees the project as a reconciliation of papal and republican interests. Out of this analysis, Nicholas V emerges as a civic humanist, bent on establishing a new *modus vivendi* for traditionally opposing factions—that of his own court and that of the city of Rome—and Alberti appears as a trusted and ingenious consultant at large.

Joseph Rykwert's contribution takes us from Ferrara, where the Arco del Cavallo and the Campanile, traditionally attributed to Alberti, are located. According to the author, however, Alberti is not responsible for them. In both cases the arch rests on a cylindrical column, and no one knows better than Rykwert that this is absolutely unacceptable, as propounded in Book XII of the *De re aedificatoria*. In addition, the capital of the column supporting the arch of the Arco del Cavallo is completely out of proportion according to Alberti's own canon, giving the entire structure a bizarre, clunky, ungainly appearance, as if the capital were hydrocephalic. But who designed it then? After all, in the Arco del Cavallo, the column's proportions are faithful to Vitruvius' formula. Who else would have known this but Alberti? Rykwert's answer is that, while it is impossible to exclude the possibility of Alberti's participation, he was unable to achieve the results of the Tempio Malatestiano, conceived at the same time, but elaborated much later, because he had not yet reached maturity.



It is known that Alberti built monumental works for the new "princes" of Mantua, the Gonzagas. But in a letter, Alberti also describes a "loggia" that he designed in the city. This would mean that he was also engaged in shaping the more common, mercantile urban fabric of the city. The loggia has never been identified with any certainty. Birolamo Mancini, Alberti's first scholarly biographer who in 1911 defined the limits of Alberti's oeuvre in a work that remains a standard-bearer today, believed it was the loggia superimposed on the Porta Pustela which was destroyed in 1903. Kurt Forster, on the other hand, argues that it is the Loggia dei Mercanti. He cites as evidence the two inordinately refined, composite pilasters holding up the arch at the intersection of the Loggia dei Mercanti and a small side street, which are clearly based on the ones in Brunelleschi's design for the Basilica of San Lorenzo, where the transept intersects with the nave. This is a most compelling argument. Who else would have been as familiar with Brunelleschi's design as Alberti? Who else was more inspired by him? Who else would have desacralized an ecclesiastical element and used it in a civic context?

Mantua is again the topic of discussion in Paolo Carpeggiani's essay, which considers Ludovico Gonzaga's plans for a *renovatio urbis*. He discovers the location of Alberti's Church of Sant'Andrea in a new alignment in the city, starting from the new Gonzaga Palace and extending right through the city, through the Church of Sant'Andrea. Ludovico used this symbolic and visual axis, the *asse gonzaghesco*, to connect himself with the mercantile and commercial tissue of the city, as a means of symbolically representing the new order.

Vision is, of course, also the topic of Hubert Damish's insightful essay on the relation between architectural composition according to *concinnitas*, and the composition of a painting according to the rules of perspective. He concludes with a citation of Serlio: without architecture there would be no perspective. Then he turns it around: without perspective there could not have been architecture.

Christine Smith is one of the scholars who has

contributed the most to changing our view of Alberti by exploring his architectural views posited in his nonarchitectural writings. It has been traditionally assumed, based on a partial reading of *De re aedificatoria*, that he disliked ornament and preferred the geometrical proportion based on Plato's *Timaeus*. Smith overturns this view by looking at his early writings, such as *Della tranquillita dell'animo* and the fourth book of his *Della famiglia*, entitled *De amicitia* (On friendship), in which he enthusiastically describes the ornamented Temple of Diana in the Ephesus. This she sees as influencing his design of the facade of Santa Maria Novella in Florence, San Sebastiano in Mantua, at the Tempio Malatestiano in Rimini.

For all of Alberti's great love of ornament, he was no less passionate about number, geometry, alignment, and proportion. This is clear from his belief, underlined in Lücke's contribution, that the *numerus animus* was the essential nucleus of life. This notion is also corroborated in George Hersey's essay, which centers on Alberti's proportions for the Etruscan Temple, as well as Paul von Naredi-Rainer's piece on his numerological aesthetics. Livio Volpi Ghirardini's astounding analysis of Sant'Andrea, employing the rigorous iconometric techniques associated with classical archaeology, reveals the proportional systems at work in the church and permits the dating of its various interventions. Maria Karvouni's essay demonstrates the complexity of Alberti's mathematics, based not on whole numbers but irrational numbers (such as V2a, B3a, and V4a)—a surprising approach even for someone who was a close friend of Paolo Toscanelli, the greatest mathematician of his day. Another aspect of Alberti's proportional system is uncovered by Tavernor. Apparently Alberti abandoned the antique model of the navel as the center of the outstretched human body inscribed inside a circle or a square (which Leonardo da Vinci used, for example). The effect on the overall system of proportion, based on his own concept of *concininitas*, was that it deviated from the antique Vitruvian prototype of perfection and was more oriented toward the body as found in nature.

Alberti's relation with the painter Andrea Mantegna is well known. Both were protégés of Ludovico Gonzaga of Mantua. Mantegna settled in Mantua, a city Alberti visited often. Mantegna was the most learned of all the Renaissance painters, as his depictions of architecture and mastery of Albertian perspective amply demonstrate. It has always been assumed that the architectural elements that play such a great role in his paintings (in particular, the frescoes in the Ovetari Chapel and the Camera degli Sposi) were the result of close consultation with Alberti. Keith Christiansen's contribution focuses on the illusionary *oculus* painted on the ceiling of Mantegna's Camera degli Sposi, where painted space is totally integrated with built space—a strong Albertian inspiration.

While the Tuscan or Etruscan references in Alberti's buildings in Florence and Mantua are well known, his regionalist inclinations also extended to

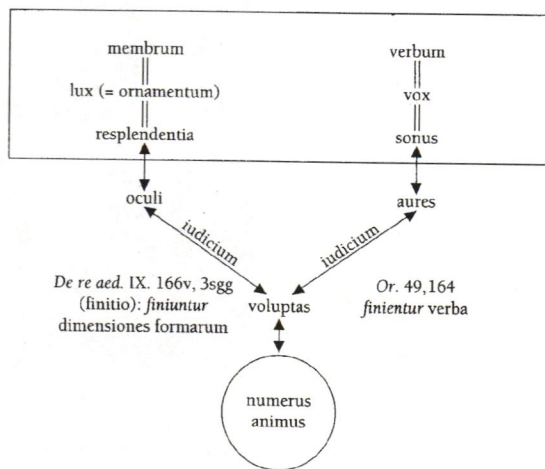
other areas of his creative production. Armando Petrucci's brief study offers an insightful and surprising glimpse into a previously uncovered facet of Alberti's inventiveness: his handwriting. As Petrucci points out, it is neither completely classical nor totally Tuscan, but it does constitute an attempt to form a new synthesis, like his architecture.

Strangely, not much has been written about Alberti as an engineer, aside from Joan Gadol's classic, unique, and unfortunately much-overlooked study *Leon Battista Alberti: Universal Man of the Renaissance* (Chicago: University of Chicago Press, 1969). Alberti, like all humanists, is commonly seen as simply a designer interested in architectural forms and aesthetic theory. In fact, it must be said that *De re aedificatoria* is at least as much, if not more, a technical manual than a theoretical treatise. It is concerned with materials, construction, foundations, soil, hydraulics, building management, mechanics, construction techniques for vaults, plastering, roofing, pavements, stairs, city walls, schools, hospitals, and infrastructure, including roads, artificial river banks, canals, locks, and bridges. Alberti was particularly concerned with sewers and drains in general. One of the two key passages in the book on his theory of *concininitas* is located, almost as a second thought, in the middle of a chapter dealing with pins, wheels, pulleys, levers, different types of mortar and stucco, and the preparation of lime.

Gustina Scaglia, a leading specialist on Jacopo Mariano Taccola (known as Il Taccola) and his student Francesco di Giorgio, discusses in her contribution the many technological facts contained in Alberti's *De re aedificatoria* and *Ludi matematici* (Mathematical games). She points out, for example, that the architectural treatise contains fifty references to engineering. Her list includes: the reparations of the walls of Saint Peter's, a tunnel through the hill at Pozzuoli, the foundations of the Temple of Latona in Rome, ventilation shafts in the Church of San Marco in Venice, and the discovery of a type of humid clay in Palestrina.

From Scaglia's study, Alberti the engineer emerges as a pale shadow of the picture Gadol painted, and certainly not the person whose engineering thinking so impressed Leonardo da Vinci—in particular Alberti's surveying techniques and his treatise *De navis* (Now lost), a technical book on ships. Scaglia presents him as a mere commentator of first-century Greek scientists Hero of Alexandria and Pappus. Two of Hero's inventions in particular might have influenced Alberti, she observes: a device for measuring distances traveled on land, called an odome-

Alberti believed that architecture was analogous to spoken language, to be used as a means of expressing human thought. This graphic representation of his analogy between architecture and speech accompanies Hans-Karl Lücke's essay. (From Leon Battista Alberti.)



ter, and another for distances traveled on water, although they are also described by Vitruvius who lived a century before Hero. She establishes that the five elementary machines—the capstan, lever, pulley, wedge, and screw—described in *De re* are in fact paraphrases of Hero's *Mechanica*.

The two inventions Scaglia does allow him are the surveying device he employed in his map of Rome—which has been dealt with exhaustively by Gadol (who is not footnoted)—and something Alberti called the *fontane a termini*, an air-pressure siphon in which air and water rise and fall alternately. Alberti comes out short-changed in this essay, which fails to give due credit to one of the most active mechanical, civil, hydraulic, and construction engineers of the Renaissance.

The last essay in the catalog, by Pietro Marani, reflects, very appropriately, on the relationship between Alberti and Leonardo. Leonardo's possession of Alberti's *De navis* is undisputed as he mentions it in his notebooks. Scholars have shown that he also knew of Alberti's *De pictura*, *Ludi matematici*, and one version of *De re aedificatoria*. Carlo Pedretti has established that San Sebastiano and San Andrea directly influenced Leonardo's architectural designs. Eugenio Garin has shown the influence of Alberti's *Intercoenales* (a collection of dialogues, apologies, and short stories), in particular, *Lapides*, on one of Leonardo's "ideal" designs. Marani curiously leaves out the influence of Alberti's map-making techniques on Leonardo's maps of central Italian towns, an observation that does appear in Franco Borsi's *Leon Battista Alberti* (Milan: Electa, 1975). Nevertheless, Marani's conclusion—that, without Alberti, there would have been no Leonardo—rings true, casting light on the crucial importance of the transmission of knowledge to humanistic and scientific discovery.

As Marani puts it, Alberti had a polyhedral mind. He cut a distinct figure, standing out among other Quattrocento humanists whose work was similarly multifaceted—Il Taccola, Francesco di Giorgio, Brunelleschi, Bonaccorso Ghiberti, Donato Bramante, Mantegna, Paolo Uccello, and even Leonardo. Only one work comes close to reflecting the polyphilic character of Alberti's oeuvre, and that is the *Hypnerotomachia Poliphili*, a text that has been attributed to Francesco Colonna for the past five-hundred years.

An examination of Alberti's poems, plays, and novels, however, reveals reasons to believe that, in fact, he was the author of this hyper-erudite, hyper-passionate, hyper-inventive book. Traces of its title appear in his other writings, *Philodoxeos*, *Ecantofilia*, and *Amator* (Latin for *philo*), and, like the *Hypnerotomachia*, almost all of the heroes in these works have names that are Greek in derivation. The fantastic, extravagant, Lucian "serious/facetious" aspect of the *Hypnerotomachia*, to quote Cecil Grayson, is also prefigured in earlier works by Alberti, such as *Momus*, *Mosca*, *Canis*, and parts of *Intercoenales*.

But the *Hypnerotomachia Poliphili* is not just a literary work, as is well known. It is an architectural treatise. In this respect there is further evidence of Alberti's authorship. To begin with, the book contains over eighty verbatim and quasi-verbatim quotations of Alberti's *De re aedificatoria*. Even more remarkably, it is the only other book of the Renaissance to employ Alberti's highly idiosyncratic terminology, including the term *concinnitas*. If it is true that the author is Alberti, it would explain the overwhelming number of obsessive descriptions of proportion, number, and geometry in the book.

What is less well known is that the *Hypnerotomachia* contains ingenious machine devices, including a gigantic light bulb that projects moving images and automatic doors whose intricate workings are minutely described, and some *fontane a termini*, taken almost literally from *De re aedificatoria* and *Ludi matematici*. The book's protagonist is effusive in his admiration for structural ingenuity and construction techniques. He is particularly interested in drains as well as hemispheric dome structures (like the one Alberti had in mind for the Annunziata in Florence, as opposed to Brunelleschi's dome at Santa Maria del Fiore, which bears the trace of a pointed Gothic form). The book also echoes Alberti's theory of perspective as put forth in his *De pictura* in particular, with regards to the role of *quadratura* (gridding) in framing a picture. *De pictura* resonates in another passage of the *Hypnerotomachia* which deals with how color perception changes with distance. The passage even contains reference to the concentric topographic technique Alberti developed in his map of Rome in the map of Cithera.

If Alberti was the author of the *Hypnerotomachia*, it would explain the presence of the trireme in the book. Alberti wrote *De navis* after lifting a trireme out of Lake Nemi. Alberti's authorship would also explain the bucking steed so admiringly described and illustrated in the novel because no one loved



The Fountain of Trevi, depicted in a 17th-century engraving by Filippo Maria Mancini. (From Leon Battista Alberti.)

horses more than he did. He prided himself on his excellent horsemanship in his autobiography, and is famous for giving the visiting Rucellai contingent a rigorous riding tour of Roman ruins when he was well into his sixties. He also devoted a treatise to horses called *De equo animante*. Finally, in *De re aedificatoria*, he used the body of a horse as a model for beautiful architecture.

Another element of the *Hypnerotomachia Poliphili* that attests to Alberti's authorship is the presence of the eye on a winged treasure represented among the hieroglyphs. Alberti's love of inscriptions, which covered his own buildings, is expressed in the more than eighty Greek and Latin epigrams in *De re*. In addition, Alberti's education at the school of Barzizza in Bologna would explain the polyglot protagonist, who uses a mixture of Latin, Greek, and vernacular Tuscan, while his friendship with Hebrew specialist Manetti and Arabologist Nicolas of Cusa (colleagues of his at the papal curia) would explain the smattering of Hebrew and Arabic in the work. And, on an autobiographical note, Alberti's authorship would explain the strangely ecclesiastical garb worn by the hero of the story.

If Alberti indeed wrote the book, it would explain the high level of visual culture in its illustrations. No one knows more about contemporary painting than the author of *De pictura*. His ability as a draftsman was looked down upon by Vasari, but it is known that Vasari was jealous of Alberti. His drafting skill was in fact lauded by Angelo Poliziano, among others, who, as a close observer of Florentine contemporaries such as Sandro Botticelli, was no mean judge of artistic qualities.

Finally, if Alberti was the author of the *Hypnerotomachia*, ironically, it would even explain why the book was never attributed to him. Alberti was totally uninterested in self-promotion, to the extent that his own autobiography was anonymous, and he signed his first literary work under someone else's name. He never even took any credit for the architectural designs he executed, which has made attributions so problematic. The one instance when he signed one of his works, the Church of San Martino a Gangalandi near Florence (he renovated the apse), it was only in an indirect way: he signed as *vir populi*, man of the people. Furthermore, Alberti was notoriously negligent when it came to keeping track of his manuscripts once he had finished writing them. His brother Bernardo, writing to a friend about one particular manuscript, describes how Alberti had given it away as a present to an enthusiastic bystander:

You have asked me many times in the past for these works, *de profigiis aerumnarum*, which were lost to us, and which out of respect I shall not specify how, but you well know the nature of my brother, Master Battista, it is impossible for him to deny anyone what they ask of him: I will not say more. A certain domestic of his asked for these books as soon as they were completed. Thirty years have passed since then. And he had the first original.¹

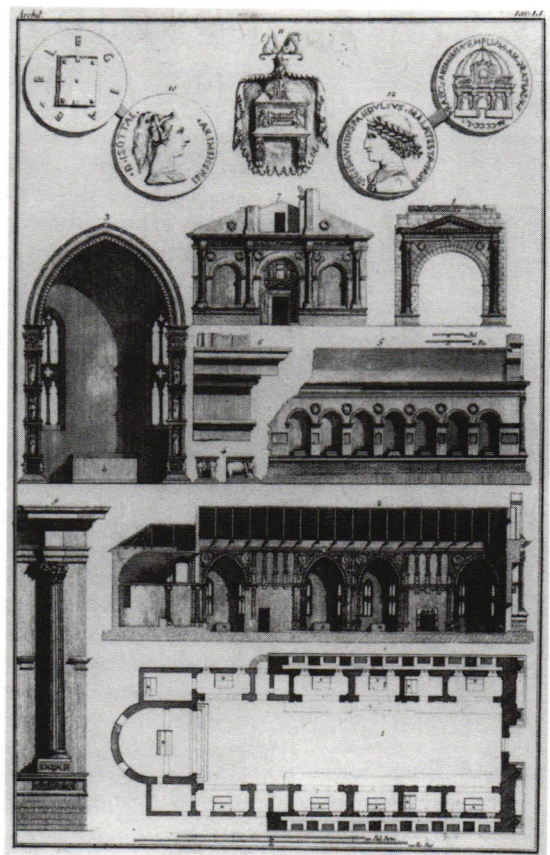
Alberti was probably simply too busy creating to keep track of his creations. This is no doubt why only the third book of his *Della famiglia* was known up until the 20th century and was attributed to Agnolo Pandolfini, the book's main speaker. (Alberti is one of three characters, but he is virtually silent all the way through. Pandolfini is his spokesman.) This is also no doubt why the last chapter of even his most famous book, the *De re aedificatoria*, though mentioned in the book's index, is absent from the final publication.

Why would Alberti have written *Hypnerotomachia Poliphili*? If the date 1467 is correct, it was written almost twenty years after *De re aedificatoria*, a period of not merely architectural theory but intense practice. In addition, at that time, he would have just been relieved of his duties at the papal court, and would have had more free time than usual on his hands. It is plausible that he conceived of this novel as a summary of his literary, artistic, architectural, technical opus. This would make the *Hypnerotomachia* the legacy of a humanist deeply enamored of his life's work and of the very principle of creativity itself, cast in the most passionate terms he could imagine. The book is not just a literary work, or an architectural treatise, or for that matter, a treatise on engineering, mathematics, geometry, painting, or perspective. It may also be seen as a reflection of the workings of Alberti's own mind, an analysis of the cognitive processes involved in his own creativity, of which he seems to have been very aware and which he seems to have applied to all areas of his activity, and which he brings together in a synthetic way for the first time in this book: architecture, in engineering literature and the arts.

The problem of the authorship and meaning of *Hypnerotomachia Poliphili* is an intriguing and rich subject, and reveals yet another enigmatic side of Alberti's highly creative *ingegno*.² What current Alberti studies reveal, as demonstrated in the catalog and the exhibition by Rykwert, Tavernor, and Engel, is that the investigations concerning Alberti's opus are far from being exhausted. *

NOTES

1. *Opere volgari di Leon Battista Alberti, annotate e illustrate da A. Bonucci*, vol. 1 (Florence, 1843-49), p. 185.
2. This is the focus of L. Lefavre's *Leon Battista Alberti's Hypnerotomachia Poliphili* (Cambridge, Mass.: MIT Press, 1995).



Etching of the Tempio Malatestiano in Rimini, by D'Agincourt; Leon Battista Alberti. (From Leon Battista Alberti.)

LIONELLO PUPPI

THE SEDUCTION OF MODELS

Review of the exhibition "Rinascimento da Brunelleschi a Michelangelo: La rappresentazione dell'architettura," curated by Henry A. Millon and Vittorio Magnago Lampugnani. Held at the Palazzo Grassi, Venice, May to November 1994.

THE RENAISSANCE FROM BRUNELLESCHI TO MICHELANGELO: THE REPRESENTATION OF ARCHITECTURE, Henry A. Millon and Vittorio Magnago Lampugnani, editors, Rizzoli, 1994, 734 pp., illus., \$85.00.

Of models, Vincenzo Scamozzi had great distrust. In an eloquent passage in his 1615 treatise *Idea dell'architettura universale* he warns that models are misleading: "Like birds when they are young, which among themselves have difficulty discerning whether they are male or female . . . it is fairly easy that patrons will be deceived under the spell of models." The accusations of this architect from Vicenza point above all to the irrelevance of the model in the conception of an architectural work, and to its lack of usefulness in the scope of design and construction. Rather than serve as a useful tool, an accurate three-dimensional version of a design that could be used as a point of reference on the construction site, the model serves instead as an approachable, alluring translation of the "idea," capable of inspiring and seducing the client.

Was the model, at least within the context of Scamozzi's 16th-century architectural culture, only a partial representation of a project, considering the negative attitude demonstrated toward them at the time? While there is no explicit proof to support this claim, one case which occurred during his lifetime would lead to this assumption: a full-scale mock-up of one of the arches in the arcades Andrea Palladio designed for the Basilica in Vicenza was built expressly for propagandistic purposes (as documented in payments to one "maestro Martin Maragon"). An examination of the historical material surrounding this incident strongly indicates that models (whether in wood, clay, or plaster) were only infrequently used for professional purposes (see "Maquette," *Rassegna* 9, no. 32/4 [1987]: 20). In a similar case, a wooden model was entrusted to Gianmaria di Vettore in 1569 for the reconstruction of a bridge in Bassano that was destroyed in a catastrophic flood two years earlier. The model was provided in order to check the progress of the construction. Does this exceptional case, involving a project of delicate structural complexity, detract from the consensus favoring the use of models for resolving formal issues? In Book II of *De re aedificatoria* Leon Battista Alberti argues in support of the usefulness of a correctly calculated model, not only for judging a work's aesthetic result and its fit within its proposed context, but also for the efficient verification of the

static solutions to be adopted. Alberti writes:

I must say that frequently I have come to conceive a work in forms that at first seemed to me commendable but, once drawn, revealed errors, serious ones, exactly in the area that was the most pleasing to me. Returning then with some meditation on what I had drawn and measuring the proportions, I recognized and deplored my carelessness. In the end, [after] having built models, often examining closely the elements, I realized that I had even made mistakes in their number . . . [This led to inevitable corrections made to] the relationship between the site and the surrounding district, the shape of the area, the number and order of the parts of a building, the appearance of the walls, the strength of the covering.

These points are also brought out in the undaunted determination of Michelangelo, who once remarked, "Having made a model, as I always do."

What, precisely, was the place of models in the production of architecture during the Italian Renaissance, and on the horizon between the two poles of seductive exhibition and the rigorous study of the spatial object? Even from the narrow perspective of the Venetian experience, it is still not clear whether models were of truly notable importance as representations either of entire architectural propositions or of details. Although innumerable scale models were purportedly produced during the Italian Renaissance, only a few exist today. The surviving models are all made of wood, and almost all of them depict religious buildings. In the introduction to the catalog for the exhibition "Rinascimento da Brunelleschi a

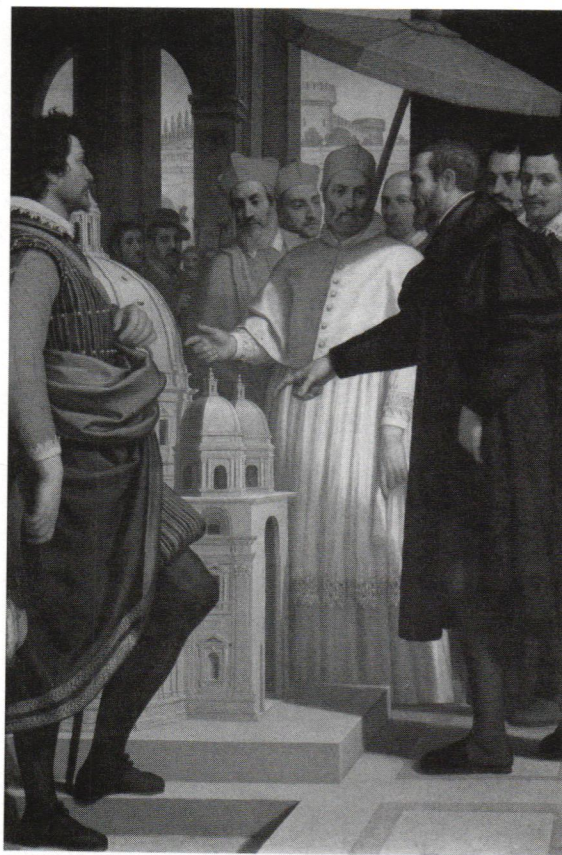
Wooden model of Antonio da Sangallo the Younger's project for St. Peter's, built under the supervision of Antonio Labacco, 1539–46. (From *The Renaissance from Brunelleschi to Michelangelo*.)



Michelangelo: *La rappresentazione dell'architettura*," held at the Palazzo Grassi in Venice from May to November of this year, Henry Millon, curator and general editor of the catalog, states: "The thirty-odd models in this exhibition are virtually all the known extant models from the 15th and 16th centuries." This indisputable fact, in addition to the extraordinary feat of assembling the models in Venice, make this exhibition a rare event. The show is further enhanced by the inclusion of other types of representation of incomparable quality and significance. Gathered from all over of world, these items include sketches, drawings, paintings, wood inlays, miniatures, medals, and work tools. The exhibit is a cultural accomplishment that cannot be downplayed, and its organizers deserve only gratitude for having the courage to gamble on such an adventurous exhibition, to take the blame for its scholarly invention, and to seek the financial support necessary for pulling it off.

This having been said, the execution of "The Renaissance from Michelangelo to Brunelleschi" is, unfortunately, disappointing (despite the seemingly blaring contradiction in this statement). In truth, it is a let-down, and not just because of the exorbitant expectations about the form that such a unique exhibit should have, or because of the inevitable problem that handicaps all architecture exhibitions—the ineluctable fact that "the real object is absent." Curators Millon and Vittorio Magnago Lampugnani were well aware of this challenge. It might be helpful to explain what misfired by focusing on the problematic presentation of the models. According to the curators, the models provided a focus: "Thanks to their historical significance, their marked illustrative nature, and evocative potential, these wooden models were chosen as the main poles of attraction for an exhibition designed to illuminate the discoveries rather than the course of its history." This approach ultimately imposed a narration that was "cruelly limited and conditioned by chance survival or destruction." And while the editors themselves admit that curating an exhibition is quite different from writing a book, they succumbed to the task nonetheless, enlisting the participation of prominent historians of 15th- and 16th-century architecture to produce a massive, impressive catalog. However, aside from the essential historical descriptions of the individual works—which exhaust in a ponderous and burdensome manner every possible relation between the objects on display and the accompanying volume—the catalog cannot really be considered an efficient instrument for probing the logic of the exhibition.

Despite its intricate and arduous appearance and the well-intentioned and suggestive captions, the catalog is overly afflicted with interweavings, interruptions, reprisals, and repetition, and with sections that are belabored and sloppily assembled. The whole is ungoverned by any unifying obligation or logic. The editors state that the first goal of the enterprise was to present the complexity of Italian Renaissance architecture to a lay audience (common, obligatory

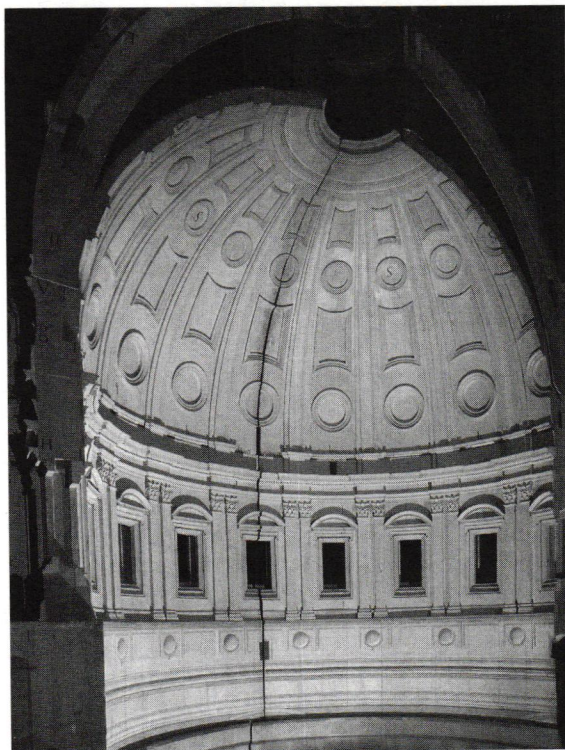


Painting of Michelangelo presenting his model for the completion of the fabric and cupola of St. Peter's to Pope Paul IV, by Domenico Cresti da Passignano, 1619. The painting was commissioned by Michelangelo Buonarroti the Younger as part of a decorative program for the gallery of the Buonarroti house in Florence. (From The Renaissance from Brunelleschi to Michelangelo.)

topos for exhibitions), but the substantial disorder of the catalog is enough to disorient even well-heeled specialists. This is not helped by the book's segmentation of the incredibly varied influences that surrounded the "limpid discipline" of 15th-century architecture.

Even more vague and ineffectual is the editors' stated "desire to provide a means for delving deep into the discipline of architecture and revealing the design process"—by reconstructing the course of a project from the initial sketch of an idea to its graphic organization through plans, elevations, and sections, to the confirmation of compositional and spatial effects through technical drawings, to the predisposition of models. Models were conceived as the last point of control before the opening of the construction site, or as a reference tool for construction activity (perhaps for the purpose of supervision, establishing an obligatory measure of preliminary experimentation on the living body of realized architecture), or as propaganda. The exhibition, however, does not allow the model such diverse purposes; nor—and this was the most enervating problem—does it give a sense of the model's role in the adventure of an architectural project as a stage in the development of a graphic work. Aside from the fact that it would have been most useful to have a lively demonstration of the connection between the impressive 14th-century architectural tradition and that of the 15th century (how was it possible to avoid the methodologically irreplaceable reading of the *Architekturmodell* from Ludwig Heydenreich's *Reallexikon zur deutschen Kunstgeschichte*?), neither

View of the interior of the model of half of St. Peter's drum and dome; built under Michelangelo's supervision, 1558–61, but with changes made by Giacomo della Porta in the late 16th century, and by Luigi Vanvitelli in the mid-18th century. (From *The Renaissance from Brunelleschi to Michelangelo*.)



the exhibition nor the catalog addresses the question of whether discrepancies exist between the drawings used to fabricate the models, and those used for built works.

The majority of the spectacular and precious materials in the exhibition remains inert, without interacting. They are presented as splendid, prodigious fragments, and the coldest solitude has been reserved for the models. If some of the components of the catalog prove to be illuminating and thorough (the contribution of Massimo Scolari on the models for the cupola and lantern of the Duomo of Florence is an example), these parts stand on their own, with scant relation to the lay-out of the exhibition. It is as if the show belonged to a set of intentions that did not pertain to the catalog. The diverse ambitions of the catalog are emphasized by the inexplicable juxtaposition of rich, scholarly essays which are relatively contiguous (such as those by Millon, Christoph L. Frommel, Hubertus Günther, and Oswald M. Ungers, on models, the birth of the architectural drawing, the revival of antiquity, and the architectonic criteria of the Renaissance, respectively) to essays that are completely outside of the theme. What connection could there possibly be to Cesare de Seta's (nevertheless brilliant) essay on the interesting but well-known influences on the urban structure of Naples? Or of what interest is the sophisticated, if unpersuasive, introduction by Carlo Bertelli of the role of the Sienese painter Vecchietta in the team of artisans that decorated the Chapel of the Mascoli in St. Mark's in Venice?

The curators hoped to represent the functioning of architecture, even on the level of the urban plan, but they failed to exploit the presence of the models. While the exhibit draws exuberantly from imagina-

tive visions derived from the Vitruvian scenographic tradition (which are inserted into the exhibit in a fascinating but uprooted manner), the intention to investigate urban questions gets lost, and can only be found, with some difficulty, in the dense pages of the catalog. This brings us to the matter of surprising contradictions among the catalog's many contributions, the most obvious being an essay by Hubert Damisch, who ignores Richard Krautheimer's clamorous reversal of opinion with regards to the perspective panels of Urbino, Berlin, and Baltimore. Krautheimer's chapter, which reconsiders his earlier conclusions, exemplifies intellectual honesty and self-criticism.

Both the exhibition and the catalog render secondary the issue of models of cities, which might have been interesting with respect to their dialectical connection with the models of individual buildings. The lack of commitment to this topic is characterized by the token entry on the fresco depicting San Vincenzo holding a model of the Palladian Basilica and a model of the city Vicenza, reported as "gravely damaged" during the war of Cambrai. Ample documentation of the model of Vicenza exists, but in this catalog it is treated only with conjectures.

While I could cite further weaknesses, it would be pleonastic and unfair in light of the undeniable fact that, on the whole, this exhibit deserves praise for assembling within a single location a wide array of rich, suggestive, and usually inaccessible objects. This singular accomplishment transcends all possible complaints. Moreover, the restoration of many of the items, expressly for the occasion of this exhibit, can only be applauded. "The Renaissance from Brunelleschi to Michelangelo" is a generous exhibit that fosters a deeper awareness and encourages further study of the objects that comprise the architectural culture of the Italian Renaissance. *

ROBERT HARBISON

IMAGINING CITIES

A DISTANT CITY: IMAGES OF URBAN EXPERIENCE IN THE MEDIEVAL WORLD, Chiara Frugoni, translated by William McCuaig, Princeton University Press, 1991, 206 pp., illus., \$39.50.

Chiara Frugoni's book, *A Distant City*, examines not so much the fabric or growth of particular cities as medieval attitudes toward the city. Her approach is remarkably scrupulous and the primary objects of her attention are mosaics in Ravenna, frescoes in Siena, and other depictions of urban life, whether in visual images or literary texts. In fact, her main methodological principle is that the two should be used in concert.

This book consists of episodes that focus intensely on particular patches of the "distant city." The first chapter is more synoptic than the others, surveying a range of abstract visions that do not differentiate between the individual cities but, rather, assimilate them all to the grand model of Jerusalem. For example, there is the bishop who founded four monasteries at the northern, southern, eastern, and western entrances to his city in order to place it more firmly under the sign of the cross. There are also depictions of Florence with twelve gates instead of the fifteen that were actually built in order to bring it into alignment with its model, Jerusalem. In the world of symbols, cities were often represented by single churches, and churches often appeared as fortified cities. The scale of resemblance between all human communities, from the family to the state, is more powerful than individual peculiarity and difference. The house,

the city, the realm—each is organized socially, like the human body with its head, its distributive organs, and its dumb active members.

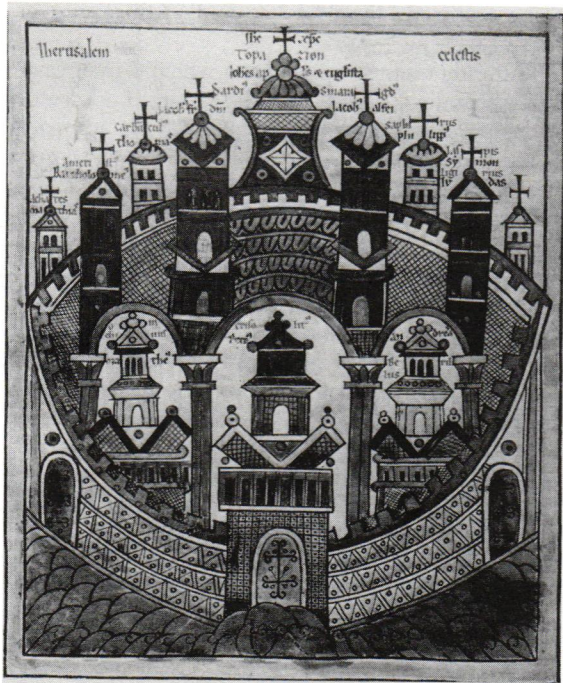
The first chapter is followed by an impressively focused essay on the propaganda associated with the building activities of Theodoric, king of the Ostrogoths, in Ravenna at the turn of the fifth century. This chapter is, among other things, a commentary on the slow death of many Italian cities between the fourth and sixth centuries. In many ways, Theodoric's model was Constantinople, whose model in turn was Jerusalem. In an astonishing display of hubris, Constantine the Great projected his own tomb at the center of his replica of the Holy Sepulcher. All the while, Christian relics flowed west, from Jerusalem to Constantinople, helping to make the new Rome more like a new Jerusalem.

Many of Theodoric's models were taken from the "heavenly city." As had happened before, the more prestigious bits of decayed buildings in the rest of Italy were brought to enrich the buildings of Ravenna. Building programs, which were mainly defensive during this time of military crisis, were dressed in the rhetoric of reviving past grandeur. In fact, much of Theodoric's building was rebuilding, in an attempt to recover some of what had been lost. His whole enterprise is poignant as an energetic denial of decline.

The main focus of this chapter is the painstaking reconstruction of a single mosaic band on the side walls of the great Palatine basilica Sant'Apollinare Nuovo. The mosaic contains symbolic representations of two processions setting out from two cities, Ravenna and Classe, toward two others, Bethlehem and Jerusalem. In one of the most important segments of the mosaic, Ravenna is symbolized by the Palatium with a throne and rows of now-empty niches (only the ghosts of figures remain, as they were edited out when the mosaic was corrected under a different political dispensation). Frugoni's juxtaposition of texts with an iconographic inspection of the battered, if glittering, walls makes for an absorbing narrative. Her conclusions are muted, not sensational, a subtle rather than radical overturning of earlier interpretations. She sheds light on how such symbolism worked and how earthly egos made themselves felt in spiritual realms.

A series of short chapters are devoted to peculiar literary forms that were the main vehicles during these centuries for formally expressing urban attitudes—for example, the "praise" for a particular city or the biography of a bishop which conventionally includes an account of his cathedral city.

Frugoni's route to the final stage of her argument is unexpected. Her destination is the secular city, where the church takes a back seat and commerce and the mechanical trades enjoy new prominence. Her path of inquiry leads to new forms of religious observance, notably the proliferation of urban-cen-



Illumination, The Heavenly Jerusalem, from Lambert of Saint-Omer's Liber floridus; second half of the 12th century. Jerusalem served as the model for Constantinople, which, in turn, was the model for Ravenna. (From A Distant City.)

"Allegorical" depiction of Good Government, fresco in the Sala della Pace, Palazzo Pubblico, Siena; Ambrogio Lorenzetti, 1338–39. (From *A Distant City*.)



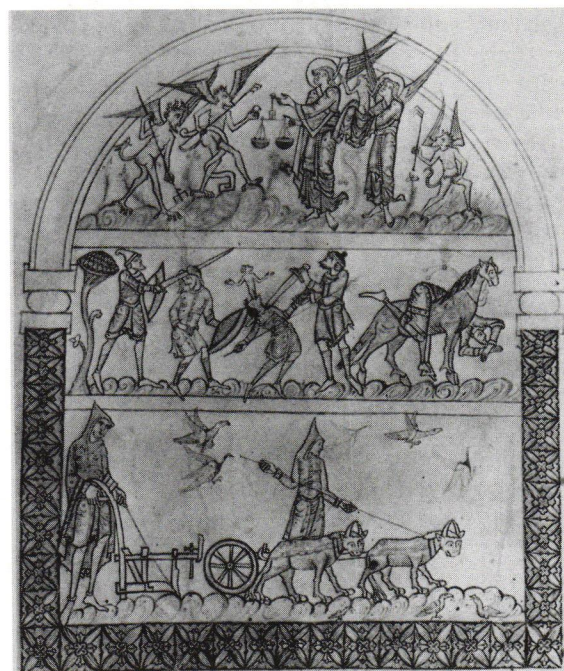
tered mendicant orders and a new breed of nonclerical local saints, who are depicted in contemporary dress and include such characters as the first merchant saint (Omobono di Verona, late 12th century). Even after these developments, even after Giotto freed the human figure from the last traces of hieratic, timeless presentation, architectural backgrounds remain rigid and noninteractive. This lag is noted by the author but not fully explained.

The final chapter contains the book's longest, most detailed examination of a single work, Ambrogio Lorenzetti's *Good Government* and *Bad Government* frescoes in Siena's Palazzo Pubblico. This seventy-page chapter is an exemplary demonstration of Frugoni's methodology. She approaches the fresco subject by subject, figure by figure, weaving into her inspection Aristotelian sources as well as Siena's social and political history under the government of

the Nine, a consortium of big merchants and bankers whose position needed shoring up around the time the frescoes were commissioned.

It is particularly interesting to have these teeming tableaux pinned to their time and place more exactly than they have been in previous studies. Many of Frugoni's observations strike home, such as her assertion that the depiction of a network of roads is not just an example of Chaucerian ebullience but, rather, concerted propaganda propounding that the public works program and the law enforcement carried out by the Nine made travel quicker and safer. The upshot of her analysis is that *Good Government* is depicted "generally" and "allegorically," and *Bad Government* more "specifically"—with scenes of war raging in the city streets, of highway robbers, of political disasters and political unrest of all sorts—an awful warning of what would happen if the Sienese citizens should be so foolhardy as to overthrow the Nine.

Still, important truths remain which cannot easily surface under Frugoni's close reading. Lorenzetti's depiction of *Good Government* versus *Bad Government* comes close to the relationship between Dante's *Paridiso* and his *Inferno*. There is something intrinsic about the bad that consistently invites more "specific" or vivid depictions than the good. Moreover, the original edges of such works inevitably—one might even say legitimately—get rubbed off. The Lorenzetti frescoes resonate with us, however, if in a narrower and less apposite way than they did for their intended audience, the people of their time. There are gains as well as losses when the original intentions of artistic works are forgotten. In the case of Palazzo Pubblico frescoes, Frugoni's insightful study allows a comparison between two otherwise incompatible senses of a painter such as Lorenzetti. We cannot help being outside the fray of those distant times, but we can nevertheless enjoy an intellectual apprehension of what it meant to be right in the middle of it. *



The Heavenly City, the Earthly City, illumination from Saint Augustine, *De civitate Dei*; ca. 1125. (From *A Distant City*.)

JAMES S. ACKERMAN

THE FIRST RENAISSANCE BUILDINGS

FILIPPO BRUNELLESCHI: *THE BUILDINGS*, Howard Saalman, Pennsylvania State University Press, 1993, 470 pp., illus., \$175.00.

Architectural historian Howard Saalman's study of Filippo Brunelleschi has been anxiously awaited by his colleagues for decades. It is the fruit of forty years of intense research which he carried out in the buildings and the archives of the first Renaissance architect. This volume brings us the closest we are likely to get to the last word on the patronage, the commissioning, the design process, and the chronology of the construction of Brunelleschi's buildings, not to mention the alterations made by both his contemporaries and later architects. It contains persuasive discussions of proportions in the architect's major buildings. But, as the title states, the book is about the buildings; it is thorough and useful, yet not, as I shall try to explain, an adequate book about Brunelleschi as an architect. For critical insight into the work one will still rely on Eugenio Battisti's 1981 monograph, *Filippo Brunelleschi: The Complete Works* (Rizzoli).

Saalman's special talent is his grasp of the politics and social implications of building in Quattrocento Florence and of the role of institutional and public power in the formulation of architectural projects. Earlier studies on Brunelleschi did not make as effective use of this material, partly because it is only in the last twenty-five years or so that historians—to a large extent British and American—have revealed in depth the workings of early Renaissance Florentine society, politics, and finance.

The book is richly illustrated with new photographs. The major ones, taken by Phyllis Dearborn Massar, are admirable for their modesty of affect, preserving the documentary virtues of their Alinari and Anderson predecessors, but with a more sympathetic response to the buildings. I shall follow the format of the book in discussing the buildings in chronological order, attempting to summarize points of particular interest.

From 1419 to 1427, Brunelleschi worked on the Hospital of the Innocents, his first autonomous structure (the cupola of the Florence Cathedral having been in many respects the execution of a 14th-century project). The hospital grew out of late-medieval Florentine hospital structures with porticoes on a street or square and cloisterlike interior courts. It was built at great expense under the auspices of the Silk Guild. As he does throughout the book, Saalman provides a detailed history of the nature and degree of the patrons' involvement. The graceful arches and innovative pendentive vaults of Brunelleschi's portico were made technically feasible not only by the visible tie rods but, according to the documents, hidden rods over the transverse arches. Antonio di Tuccio

Manetti's *Life of Brunelleschi* (written in the late 15th century) reveals that the architect's design for the portico on the square was recorded in drawings and not in the traditional model, and that the masons failed to follow them properly. What changes were made has been heavily debated; Saalman's convincing reconstruction places closed bays with portals at piazza level on both ends, similar to the one now on the right, and to add, in this bay only, small pilasters over the ones framing the lower bay (the bases of the latter being on the same level as the columnar ones of the portico).

The extensive investigation of the proportions leads to the conclusion that the classical modular system had little influence on basically medieval determinants, and that the architect's ornament conformed in its almost exclusive dependence on Florentine Romanesque models. Even the pendentive vaults reflect those in the mosaics of the Florentine Baptistery. The chapter closes with an uninspiring summary of Brunelleschi's style throughout his career: "Relatively little innovation in plan and elevation; geometrical design methods, modified by consideration of modular form *all'antica*, reduction of varied parts to a minimum, even at the cost of leaving differing parts undifferentiated; equal illumination of all parts."

The Barbadori Chapel of 1418/19–23 in the Church of Santa Felicita occupies the bay immediately to the right of the entrance and was built like a tabernacle, independently of the church structure. In this book, the history of its patronage is revealed in detail for the first time. Saalman proposes—contrary to some recent studies—that Brunelleschi, not a later



Arcade, Hospital of the Innocents, Florence; Filippo Brunelleschi, 1419–27.
(From Filippo Brunelleschi: *The Buildings*.)

Howard Saalman's proposed reconstruction of the facade of the Pazzi Chapel, Florence; Filippo Brunelleschi, begun 1439. (From Filippo Brunelleschi: The Buildings.)

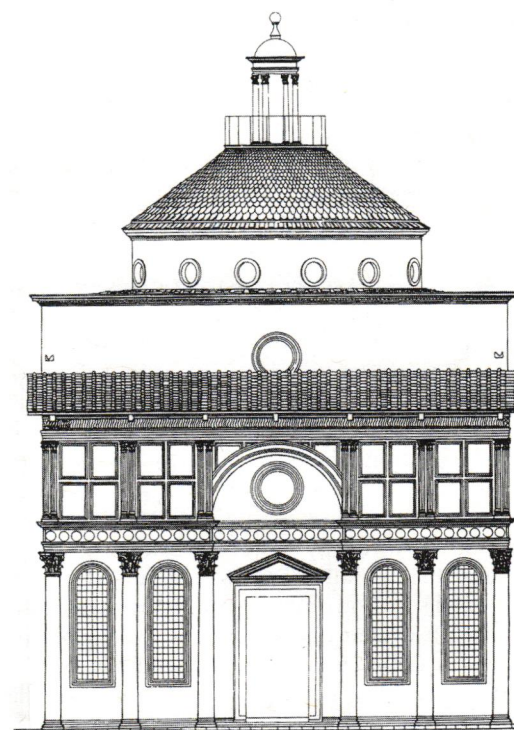
architect, covered the chapel with a saucer dome on pendentives, and that it was the first of its kind in Tuscany (perhaps in the Renaissance). He cites as evidence a Uccellesque fresco of the Annunciation in the Collegiata of Castiglione d'Olona, some elements of which are close to those of the chapel. Also, the articulation of the chapel's exterior of the resembles that of the chapel depicted in Masaccio's *Trinita*. If these are indeed reflections of Brunelleschi's design, they document the impact it had on contemporaries and demand that the surviving fragments be accorded more respect. Relevant to the first of these reflections is the dedication of the chapel to the Virgin of the Annunciation. Saalman claims that Jacopo da Pontormo's later *Annunciation* on the facade wall should be seen as the cult object, not the famous *Pietà* altarpiece, and that this follows a Tuscan tradition.

The chapter on the Church of San Lorenzo goes even farther than other recent studies in whittling away Brunelleschi's participation in this project. The architect seems to have departed, willingly or not, in 1429, after having made designs for Giovanni de' Medici; he proposed an unachievable plan with chapels all around, like Santo Spirito, and possibly one with chapels only around the transept. But Giovanni's son, Cosimo, had no taste for Brunelleschi's work, preferring Michelozzo de Bartolommeo's more ornate style.

The first section of the chapter is devoted to a reconstruction of the property ownership in the area of the church, which provides a background for understanding the complexities of patronage. Saalman then discusses the Old Sacristy (which served also as the Medici mausoleum), not as an integral part of the church but as a "freestanding independent building." The Baptistery at Padua has been recognized as a source, but Saalman holds that the same

ideas could be derived from the one in Florence, which is more closely linked with antiquity. Neither was actually topped with a melon dome; nor were they as rationally and precisely articulated as the Sacristy, with its strongly defined surface elements accentuating every edge. That was the mark of Brunelleschi's hand. The discussion of the meaning and style of the Sacristy in relation to representation, proportions, and structure is the most effective analysis in the book.

The church itself was the site of veritable chapel wars, with the powerful families of the



parish trying without success to keep the Medici from dominating the patronage process with huge financial infusions and irresistible political clout. Brunelleschi must have been the author of elements of the transept that had not already been fixed by the plan of his predecessor, Prior Dolfin. The chapel elevations are his, but he must have intended a melon dome like that of the Sacristy, and the elevations at the end of the arms, with their disturbing compression, Saalman sees as already Michelozzo's. A document of 1534 describes absidal nave chapels by an unnamed designer. The present ones were not only executed but designed by Michelozzo.

The Pazzi Chapel, which owes its unusual plan to its associated function as a chapter house, was first mentioned in 1439 as sponsored by Andrea Pazzi, but Brunelleschi might have been called to design it shortly after the Medici began the restoration of the cloister of the monastery of Santa Croce after 1423. The intriguing story of the patronage, detailed here for the first time, explains the building history protracted by a combination of Pazzi's parsimony and the crushing taxation to which he was subject as a wealthy magnate.

Saalman believes that the interior of the chapel followed Brunelleschi's design, at least up to the entablature. The columnar porch, executed after Brunelleschi's death (the dates 1459 and 1461 are inscribed on the plaster over the dome and vault) by a team from the shops of Rossellino (sculpture), Giuliano da Maiano (wooden doors), and Luca della Robbia (terra cotta) has recently been attributed entirely to the executors. Saalman believes that it was essentially Brunelleschi's design, except that the cupola behind the entrance arch was substituted for an intended pendentive vault, which required the elevation of the shed roof and caused the unsightly void

Saalman's analysis of the Old Sacristy (interior pictured here) reveals the extent of Brunelleschi's participation. (The Church of San Lorenzo was by Michelozzo de Bartolommeo, 1420-34.) (From Filippo Brunelleschi: The Buildings.)



over the entablature (the roof should rest directly on the entablature). The chapter includes a valuable discussion of the Roman sources of the vault construction and design.

Brunelleschi was responsible for a small—although the most important—portion of the Palazzo del Parte Guelfa, the Sala Nuova, and its simple and elegant but unfinished facade, which was being ornamented in 1452 and appears to depart significantly from the intended design. (For example, the coffered ceiling cuts right across the round clerestory windows, and Saalman entertains, without confirming, Battisti's proposal that the pilaster articulation was an interpolation of the Michelozzo school.) The chapter concludes with a perceptive assessment of the urbanistic and representational impact of the facade design. Forty-three of the fifty pages of this chapter relate to the history of the accumulation of structures that preceded and followed Brunelleschi's intervention in the late 1430s or early 1440s. Apart from those portions relating to the Parte Guelfa as an institution and to the financing of the mid-15th-century construction, the material might have been better assigned to an antiquarian journal.

Saalman shows the extent to which the form of the church of Santo Spirito in Florence, like that of San Lorenzo, was determined by its role as the principal locus for burials and patronage of powerful local families. But here, unlike San Lorenzo, the families were on an equal footing, not in the shadow of the Medici; there had to be many chapels and they could all be equal. The *operai* (lay supervisors) were named in 1436 and presumably preliminary work started at that time. Building in earnest appears in the records of the Mercanzia from the assignment of the first public funds in 1440. I found the analysis of the subtleties of this design the most satisfying of any in the book, with innovative deductions of proportional methods, both modular and geometric. Yet here, as elsewhere, proportions are approached more casually than is demanded by the author's own guidelines for measurement and margins of error. Saalman provides individual relationships but they are not placed into the context of an overall system that binds plan and elevation.

After Brunelleschi's death in 1446, there was a prolonged argument over whether the facade should have three or four portals: the former was chosen in a meeting whose minutes are preserved; the latter was recorded by Giuliano da Sangallo in his plan of the building—he testified that Brunelleschi had told him that he favored the four-portal solution. Giuliano's plan also reveals the semicircular form of the chapel walls on the exterior. After Brunelleschi's death they were radically changed when they were encased in a planar wall. Giuliano's plan seems to have been made from the model left by Brunelleschi.

The chapter concludes with a discussion of a project recorded in Manetti's *Life of Brunelleschi*, to construct a piazza toward the Arno River and to reorient the church in the opposite direction. Unfortunately, Saalman's interpretation of this scheme as a means of increasing the visibility of the church does not

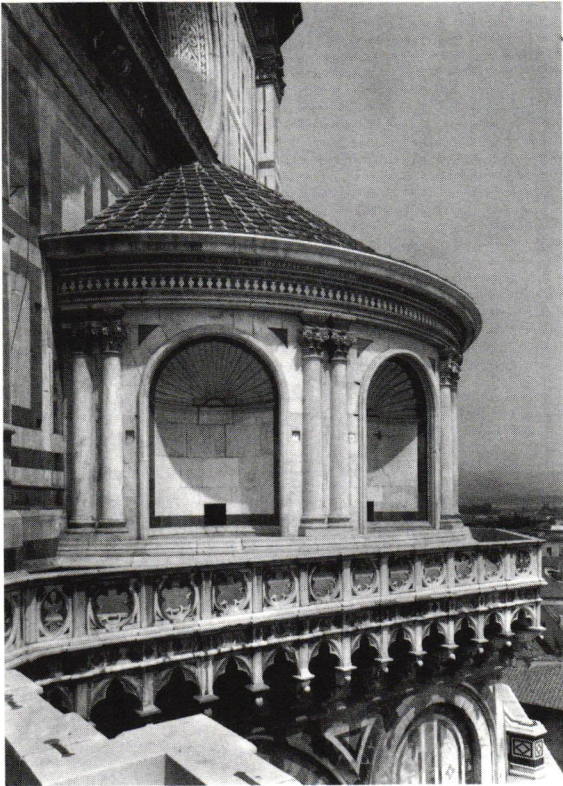


Interior, Pazzi Chapel, Florence; Filippo Brunelleschi, begun 1439. (From Filippo Brunelleschi: The Buildings.)

sufficiently explore the implications of the project.

The Scolari Oratory, imprecisely known as Santa Maria degli Angeli (the name of the monastery to which it is attached), was founded in 1434 and was the first freestanding central plan structure of the Renaissance. Saalman has uncovered the full history of the 1426 testament of Filippo di Stefano degli Scolari, known as Pippo Spano, and of the changes of contract and plan that led to the building of an oratory. Only the lower portions were built as planned but Renaissance drawings provide clues to a reconstruction. As an oratory, the structure required a separate choir for the monks; Saalman proposes that this was not the appended rectangle shown in the plan by Giuliano da Sangallo (which, he suggests, was added by Giuliano in the 1480s after the original requirements had been relaxed), but that it constituted the entire interior perimeter of the octagon, which was sealed off from the lay public by screens (*graticole*) mentioned in the documents. Thus the function of the passages connecting the chapels was to give access to the eight altars around the perimeter. New documents also show that there was a small square (*campaccio*) before the oratory and a portico of seven bays, mediating between it and the oratory so that the building had more urbanistic impact than indicated by earlier studies which isolate it—even from the monastery—as a freestanding structure.

About the last of Brunelleschi's projects, the *tribune morte* and the lantern of the cupola of the Santa Maria del Fiore, Saalman has surprisingly little to say, other than that they make reference to the Baptistry of San Giovanni and that they exemplify the principal characteristics of Brunelleschi's architecture: simplicity, clarity, and homogeneity—which are more evident in the *tribune* than in the lantern). In striking



Santa Maria del Fiore, cupola with lantern and tribuna morta, Florence; Filippo Brunelleschi, begun 1420. (From Filippo Brunelleschi: The Buildings.)

contrast to the earlier chapters, no date or document appears; the reader is left to assume that these are the final works because this chapter comes last. The designs were the focus of Ludwig Heydenreich's thesis in his classic 1931 article, "Spätwerke Brunelleschi's," which is reprinted in *Studien zur Architektur der Renaissance* (Munich, 1981). In this essay he proposes that the architect had evolved from an early, more planar and medieval style to a later, more sculptural and *all'antica* one. But, while the chapter atypically emphasizes issues of style, Saalman expresses no opinion on whether it is indeed justifiable to

propose an evolution, and, if so, whether it followed the course Heydenreich suggested.

The overview of the architect in the book's conclusion presents Brunelleschi as a traditionalist who successfully harmonized his design to the goals of the ruling class, of which he was a member in a marginal sense. Saalman presents him as having brought a new order and clarity to medieval models; even his system of proportions, which earlier scholars identified as a benchmark of Early Renaissance vision, was derived from medieval practice. The distinguishing marks of his style were a minimum of differentiation, ornament, and color. Saalman's concluding sentence—"The truly revolutionary thinker and planner of the Early Renaissance was not Brunelleschi but Leon Battista Alberti, who turned architectural theory and practice in a wholly new direction, but that is material for another monograph"—is not exactly a grand finale. I wonder whether Saalman felt that he had spent the last forty years barking up the wrong tree. But no—he simply must have been tired after 420 pages. At times he really admires Brunelleschi, such as when he describes the Pazzi Chapel as "an immaculate gem of mute perfection, an Early Renaissance masterpiece." But he doesn't provide the kind of illuminating interpretation that would help readers to share his assessment, or to see why the architect was more than an able adapter of late-medieval ideas.

The lack of such interpretation even constitutes a flaw in methodology. At several points—for example, in his analysis of the transept end elevations at San Lorenzo—Saalman questions Brunelleschi's authorship of a particular element, asserting that it is contrary to his approach. However, the author fails to adequately characterize that approach, doing so in

only a rudimentary way. Similarly, Saalman informs readers that Santo Spirito could not have been vaulted because, apart from the structural improbability, such vaulting was contrary to Brunelleschi's vision, and, for the same reason, the Badia di Fiesole cannot have been his work. These assertions are probably correct, but not just because the author states it.

Saalman makes little mention of Brunelleschi's interest in and use of ancient architecture. The architect did travel to Rome to study the ruins, but the author does not reveal what effect his sojourns had on his subsequent work. Occasionally, Saalman refers to the style of Brunelleschi's buildings as *all'antica*, but how this conforms to the description of his work as traditional is not articulated.

Given that Brunelleschi was the inventor of artificial perspective, one would expect an examination of how this might have affected his architectural vision. Was he the designer of the architectural setting of Masaccio's Trinity fresco (ingeniously described as an inexpensive device for a patron to endow a chapel)? If so, why is it so much more overtly *all'antica* than any of the actual architecture, and if not, isn't it relevant to Brunelleschi's formation that such an alternative—to both his architectural style and his perspective method—was available in Florence in the 1420s? Further, given Saalman's emphasis on Brunelleschi's innovations in the design of urban spaces (at Santa Maria degli Angeli, Santo Spirito, and so on), he should have examined the two panels described in Manetti's *Life of Brunelleschi* that demonstrate perspective technique, both of which represent urban squares—the Piazza del Duomo and the Piazza della Signoria. Manetti discusses them amply enough to support a useful analysis. While the exclusion of these paintings could be justified by the subtitle of the book, *The Buildings*, it is myopic nevertheless to exclude evidence that could bear on an understanding of the subject.

Saalman's achievement of assembling with unchallengeable discrimination a huge body of evidence relating to Brunelleschi's structures is impressive and deserves the gratitude of all scholars in the field. His work brings to the subject a fresh and exemplary command of the social and political forces at work in his designs. Future studies of Brunelleschi's buildings will have to be based on the information contained in this book. Ultimately, however, the work has no unifying vision—no articulation of what made Brunelleschi's designs for these buildings important. As the remarks in this review indicate, the book shares with most contemporary publications on architectural history a limited view of the potential of scholarship and criticism, a view that I could not call humanistic. In the absence of philosophical or theoretical grounding, the nature and depth of interpretation depends largely on how much and what kind of documentation the archives and direct examination of the structure provide. The book is unlikely to attract readers who are not specialists in Florentine Quattrocento architecture and patronage. *

JAMES S. ACKERMAN

THE ARCHITECTURE OF RHETORIC

ARCHITECTURE IN THE CULTURE OF EARLY HUMANISM: ETHICS, AESTHETICS AND ELOQUENCE, 1400–1470, Christine Smith, Oxford University Press, 1992, 298 pp., illus., \$35.00.

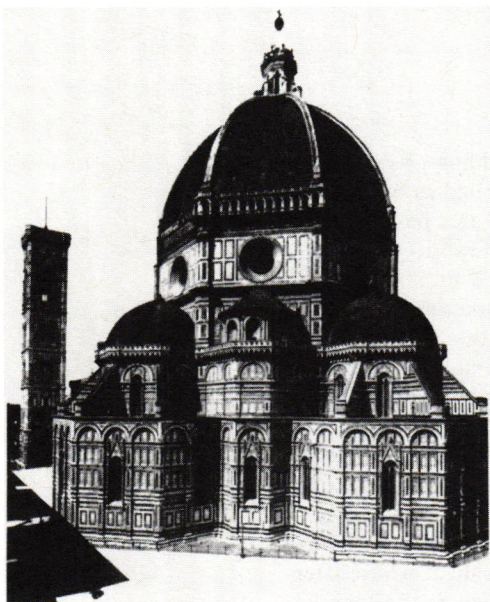
Over forty years ago, Rudolf Wittkower's *Architectural Principles in the Age of Humanism* changed the way we understand Renaissance writing and thinking about architecture, and guided and dominated two generations of scholars, as it has been assigned in almost every course on Renaissance architecture. Now, Christine Smith's book, *Architecture in the Culture of Early Humanism: Ethics, Aesthetics and Eloquence, 1400–1470*—grounded in the same kind of profound, Warburgian scholarship—challenges Wittkower's paradigm and offers an alternative. It is a thrilling experience to have veils of habit lifted from one's eyes, one that very few writers have the capacity to offer, and especially writers who, like Smith, have pursued extended scholarly careers virtually without having published previously. Essentially, their achievement is based on reexamining sources, seeking the humanists' (particularly Leon Battista Alberti's) Aristotelian rather than Platonic and Pythagorean philosophical roots. Their success also stems from their interest in Late Antique and Byzantine as well as classical rhetoric as a source for the structure and vocabulary of descriptive and critical writing. Smith's book will not enjoy the popularity of its predecessor, however, first because it is more specialized and is filled with references to writers with whom even Renaissance experts are not familiar, and second, because, aside from one chapter, it does not address actual architectural works and projects.

The central importance of the revival of classical rhetoric for the discussion of the figural arts in the Early Renaissance has been acknowledged for decades, notably in several studies by Michael Baxandall, particularly *Giotto and the Orators* (New York: Oxford University Press, 1971), and a number of essays by E. H. Gombrich. Ancient writers didn't offer much art criticism for Renaissance writers to lean on. Pliny the Elder devoted a lengthy portion of his *Natural History* to the history of art from the ancient Greeks to his own time, employing an elementary and unsophisticated foundation for his critical discourse. Vitruvius, to whom almost all recent study of the formation of architectural ideas in the Early Renaissance has been devoted, was helpful in many ways, but offered little assistance to anyone wanting to convey the experience of a building. Humanists turned to rhetoric to find a rich and highly articulated system of rules, vocabulary, and organizational guidelines well suited to formulating principles and making evaluations of painting, sculpture, and architecture as well as literature (though the architectural theorists of the Renaissance rarely

described or judged an actual building or designer). The rhetorical writers most often cited as sources for 15th-century discussions of the arts have been—besides Pliny—Aristotle, Cicero, and Quintilian. Smith brings into the discussion a number of new sources that open further paths of interpretation.

The Cathedral of Florence is the centerpiece of Smith's initial chapters. In the first, she discusses Alberti's introductory letter to *Della pittura* (1436), addressed to Brunelleschi, which praises the architect especially for the construction of the dome of the cathedral. Why, she asks, was an architectural work singled out to exemplify Florentine achievement in a treatise on painting, and why a structure still in the Gothic style, by an architect whose later designs had already been recognized as the foundation of Renaissance architecture? The answer is that Alberti was concerned not with design but with invention; in antiquity, Smith claims, architectural design was not considered a fine art. It was Brunelleschi's capacity to achieve an unprecedented engineering feat, one which not even the ancients had equaled, which gave hope for the future of Florence. Like the art of the medieval builders, Brunelleschi's achievement was based on *ingegno*, genius or innate skill, not on learning; but the introduction of Greek mechanics into Quattrocento Florence (i.e., the ideas of Pappus, Archimedes) made possible a new fusion of inspired practice and *scienza*. Smith's discussion would have been enhanced had she reproduced Alberti's letter and informed readers unfamiliar with the history of the cathedral that the essential form of Brunelleschi's dome (though with a less elevated profile) was determined in a model of the third quarter of the 14th century.

Alberti's description of the dome as casting its shadow over all of Tuscany prompts a chapter on the issue of size in building, and here enters Manuel Chrysoloras, the Byzantine scholar who came to Italy in the late 14th century and taught Greek and the tradition and practice of rhetoric to several of the early humanists. His *Comparison of Ancient and Modern Rome* (1411; translated in the appendix), with its description of Hagia Sophia in old Constantinople—its dome, in particular—became a model for Alberti's commentary and for many architectural and urban descriptions of the period. The "greatness" of Brunelleschi's structure refers to both the majesty of its conception and its unique size; the issue of whether such sizable buildings are morally proper pits Christian humility against the magnificence that celebrates the achievements of a mercantile society. Chrysoloras seems also to have inspired the keystone of Alberti's later aesthetics (articulated in *De re aedificatoria* but not in *Della pittura*). In *Giotto and the Orators*, Baxandall quotes a letter of his Chrysoloras' dating from the time of Alberti's childhood: "We admire not so much the beauties of the



Filippo Brunelleschi's dome rising above the earlier apse of the Florence Cathedral. (From *Architecture in the Culture of Early Humanism*.)

bodies in statues and paintings as the beauty of the mind of their maker. This, like well-molded wax, has reproduced in the stone, wood, bronze, or pigments an image which is grasped through the eyes to the soul's imagination."

The issue of the response to the Gothic style in Alberti's generation is taken up in the book's fourth and fifth chapters. Smith shakes our Burckhardian foundations with the thesis that not only did Alberti and his contemporaries not disapprove of medieval architecture, they had no means of distinguishing it from that of the ancients. (For example, it is well known that they

thought the Florence Baptistery was a Roman temple.) For them, there was only building *apud veteres* (old style) and *huius aetatis* (of their time). In discussions contrasting the ancient with the modern, they focused on whether to strive for a perfect classical style or to admit innovation and eclecticism. A generation later, Filarete and Giannozzo Manetti opened an attack on medieval architecture. A key document in the discussion is Alberti's description of the Florence Cathedral, drawn from his vernacular dialogue *Profugiorum ab aerumna* (1441 or 1442), a passage curiously overlooked by architectural historians. In it, he shows nothing but admiration and pride for the late-13th-century building in a description—virtually the only description of a modern building in his work—that is a model of the adaptation of rhetorical devices to criticism. The passage closes emphasizing the senses: "And if, as they say, delight is felt when our senses perceive what, and how much, they require by nature, who could hesitate to call this temple the nest of delights . . . and, that which I prize above all, here you listen to the voices during Mass, during that which the Ancients called the mysteries, with their marvelous beauty." Smith sees in this passage grounds for expanding our understanding of Alberti's concept of musical harmony; until now, the Platonic/Pythagorean aspect of his references to music, residing in perfect proportions that are the properties of objects, have been exclusively cited. Here, we see the Aristotelian principle that, as Alberti also states in *De re aedificatoria*, "whenever the soul is reached through visual or oral or any other kind of perception we immediately recognize harmony." In this tradition, it is the sensuous experience and not the abstract proportions of the object that stimulates the aesthetic response.

The chapter devoted to the planning and architecture of Pienza under Pius II stands apart from the rest of the book in its treatment of buildings and town planning. The remodeling of the center of this town in the late 1460s, with its trapezoidal square bordered by six official buildings, constitutes the first city plan

rendered completely in the Renaissance manner. So much has been written about it that the subject seems exhausted, but Smith, reexamining it from her rhetorical viewpoint, makes standard interpretations, my own included, seem myopic. She shows that the atypical lack of conformity in the style of the buildings exemplifies the rhetorical virtue of *varietas*, and, moreover, that it observes decorum (a major requirement of Vitruvius) in preserving traditional Tuscan building types for the several functions. She also questions the thesis proposed by Ludwig Heydenreich in the 1930s and repeated by subsequent observers, that the square is a three-dimensional perspective construction with a viewing point at the mouth of the winding alley opposite the Florence Cathedral. Instead, there is no fixed viewing point; the viewer was intended to enter the square along the town's main street, and to experience a variety of visual stimuli. This is not an ideal Platonic scheme but one that addresses the senses. Smith ingeniously suggests that the views from the square over the countryside afforded on either side of the cathedral represent the kind of association of city and extramural territory exemplified in the Chain Map of Florence, a bird's-eye view of the city at the end of the 15th century. In short, Pienza is an exercise in rhetoric in that it seeks to please and to persuade, and not an ideal plan with philosophical roots. This chapter is amply illustrated with photos that Oxford University Press has managed to flatten and fade by some cheap process unworthy of a publisher with any pretense of building a list of expensive books on the fine arts. The publisher has also made it as difficult as possible to find a particular endnote.

The last section of the book, comprised of three chapters, deals with the role of rhetoric in early humanism, especially in providing a vocabulary for the description of architecture and cities. Here, the author's particular contribution is the application of her impressive knowledge of Late Antique and Byzantine rhetoricians to an understanding of the ways in which the humanists of the first half of the 15th century differ from their followers and share an outlook that is more Aristotelian than Platonic.

Two of Smith's formulations may have been adumbrated before, but have not been so powerfully demonstrated, and they ought to color future views of the Quattrocento: first, that rhetoric (and its use in the visual arts) was both contingent, and quite opposed to, eternal truths and ideal forms because of its mission to entertain and to persuade the audience by whatever means; and second, that there was a shift of interest among humanists after the mid-15th century away from this kind of rhetorical tradition and toward a more Platonic and idealizing form of thinking. The proclivity of scholars to identify this later form with all Renaissance humanism and classicism and with the definition of the ideal city has obscured the contribution of the writings of the first half of the 15th-century and has skewed the reading of Alberti. I hope that Renaissance scholars will read this book and use its discoveries and interpretations to enrich our understanding of the Early Renaissance. *

RICHARD INGERSOLL

TAFURI'S ROME

RICERCA DEL RINASCIMENTO: PRINCIPI, CITTA, ARCHITETTI, Manfredo Tafuri, Giulio Einaudi (Turin), 1992, 384 pp., illus. English translation forthcoming from Yale University Press.

For most scholars, Manfredo Tafuri will be remembered as the restless critic of historical methodology and perhaps the most difficult to read of any author who has ever written on the subject of architectural history. He combined a polemical disposition with fabulously recondite knowledge, passing briskly from archival minutiae to arcane philosophical and literary citations and terminologies that sent readers scrambling for philosophical dictionaries and other bibliographical reinforcements. Tafuri, in the admired tradition of the Frankfurt School, liked to be difficult. His fluency with Marxism, structuralism, semiology, Michel Foucault, Jacques Lacan, Russian formalism, and the like, was perhaps normal for researchers in other areas of the humanities, but, until Tafuri, this body of 20th-century knowledge was foreign to the field of architectural history, whose practitioners were generally content to follow the earnest, positivist path of presenting empirically gathered data. More than any intellectual of the late 20th century, Tafuri forced those involved with the textual production of architecture to suffer a crisis of sensibility that threw into question the validity of the whole critical-historical apparatus of architecture. His constant kindling of conflictual positions and his recourse to questions of ideology, institutions, and mentalities made it apparent that architecture signified something other than what the connoisseur, the professional, or the amateur desired.

There was another side to Tafuri's production as a historian, however, that eluded this saturnine quest to unsettle the facile conventions of the field. As the director of the most influential Italian program in architectural history (at the University of Venice), he fostered a mission to install a new Italian tradition that would beat the German and Anglo-American positivists at their own game. In no other area of his wide-ranging research is this more apparent than in his work on Renaissance Rome. His last book, *Ricerca del Rinascimento* (scheduled for publication in English in 1995, with a translation by Daniel Sherer), is a fine example of his desire to force the conventional items of architectural history into polemical interpretations while cultivating the counteracting tendency to supply an exhaustive deposit of documentary evidence about the architectural object. The book remains a probated testament, as, on the one hand, it restores a sense of academic prowess to Italians, with its impressive armory of bibliographic and archival documentation, while on the other, it nudges foreign positivists (in particular Christoph Frommel, perhaps the greatest living authority on

the architecture of Renaissance Rome and certainly the one most revered by Tafuri) toward another level of understanding—which he Socratically describes as “the ‘weak power’ of analysis . . . proposed as a moment of a method that allows the unresolved problems of the past to live, disturbing our present.” This ambiguous legacy is embodied in the book's title, which means both “the research of” and “the search for” the Renaissance, implying a certain skepticism about the scheme of categorical knowledge known under that rubric.

Tafuri was born in Rome, where he trained as an architect. He did not demonstrate any new approach to architectural history until his definitive move to Venice in 1968. From there he launched the project for *Via Giulia: Una utopia urbanistica del 500*, which he cowrote with Luigi Spezzaferro and Luigi Salerno (Rome: A. Staderini, 1973). With a new sense of the ideological nature of architectural production, this seminal work upset the canonical method of observing the Renaissance adhered to by Paolo Portoghesi, and the formalist method pursued by Bruno Zevi. In Tafuri's essay, for example, the social conflicts among the Pope, the cardinalate, the local nobility, and Rome's significant foreign population became important clues to the design of “urban strategies.” This new analysis does not diminish the roles of protagonists Bramante and his patron, Julius I, but weaves them into a much more complex relationship than had been previously permitted by the aesthetic analysis of their architectural and urban choices.

A similar type of research was pursued in Tafuri's essay “Roma instaurata,” written for the catalog *Raffaello architetto* (Milan: Electa, 1984) which he edited with Frommel and Stefano Ray. This publication analyzes the urban projects of Pope Leo X Medici according to their ideological significance. The works of Raphael, Antonio da Sangallo the Younger, and other court artists were engaged in a complex game of representation that combined the intricacies of humanist research into the secrets of the past with the propagandistic and promotional demands of the present. The conventions of papal iconography and ritual, the political nature of great families, the local struggle for turf, and the international questions of religious reform and power all fed into the papal commissions and energized the search for the proper artistic language. One would not be wrong in assuming that this line of inquiry was inspired by the Marxist interest in the material and economic conditions surrounding historic phenomena. But Tafuri was never reductive or determinist in his presentations; while his illuminations revealed a more complex vision of the reality in which architecture was produced, they inevitably also made things more difficult to understand!

During the last fifteen years of his career, Tafuri shifted notably from a Marxist position (which gave

near-metaphysical value to such notions as class conflict), to the poststructuralist methods of Foucault and the neostructuralist approach of Carlo Ginzburg. His theoretical epiphany is stated as the *progetto storico*, the "historical project," in the introduction to his 1980 book *The Sphere and the Labyrinth* (published in English in 1987, by MIT Press). Although much of his late work emphasizes individual artists, such as Raphael, Giulio Romano, and Francesco di Giorgio, who are generally labeled geniuses, it does not necessarily signal a new effort at identification with the subject. "Our task," he states of the historic project, "is to reconstruct lucidly the road traversed by intellectual labor, thereby recognizing the contingent tasks to which a new organization of labor can respond." Thus his gaze into 18th-century Rome, for instance, does not rest on the significant background buildings produced for Clement XIV but, rather, on the intellectual dilemma of a mostly non-building Piranesi, who makes out of Rome and its archaeological past a graphic maze of unattainable grandeur—what Tafuri calls a "utopia of dissolved form." His Piranesi assumes the role of a critical architect, always wielding the negative potential of art to question the established practice. It is this moral function of the artist that Tafuri finds the most deserving of analysis.

The theme of *Ricerca del Rinascimento* is not specifically Rome, but a type of architectural language that was codified in the cultural environment of the Renaissance papacy, and could be applied in Rome, Florence, Mantua, Venice, or even as far away as Granada. Humanism, Tafuri reminds, in its concern for language, rhetoric, and the mastery of the past, produced a theory of architecture, most powerfully concentrated in the words of Leon Battista Alberti and occasionally put to test by important court artists such as Bramante, Antonio da Sangallo the Younger, Raphael, Giulio Romano, and Jacopo

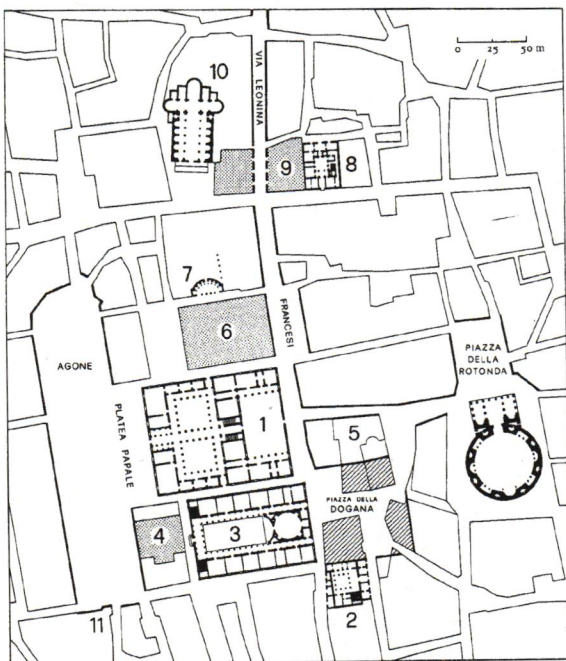
Sansovino. Tafuri's concern is not to prove the greatness of the works of these authors, but ultimately to link their representational nature, often painstakingly analyzed to the last triglyph, to the moral function of architecture. To do so he begins with the early-15th-century story of woodworker Grasso Legnaiolo, which serves as a metaphor for the artist's capacity to change reality. The incident is of more than passing interest as it features Filippo Brunelleschi, the inventor of modern perspective and the first architect associated

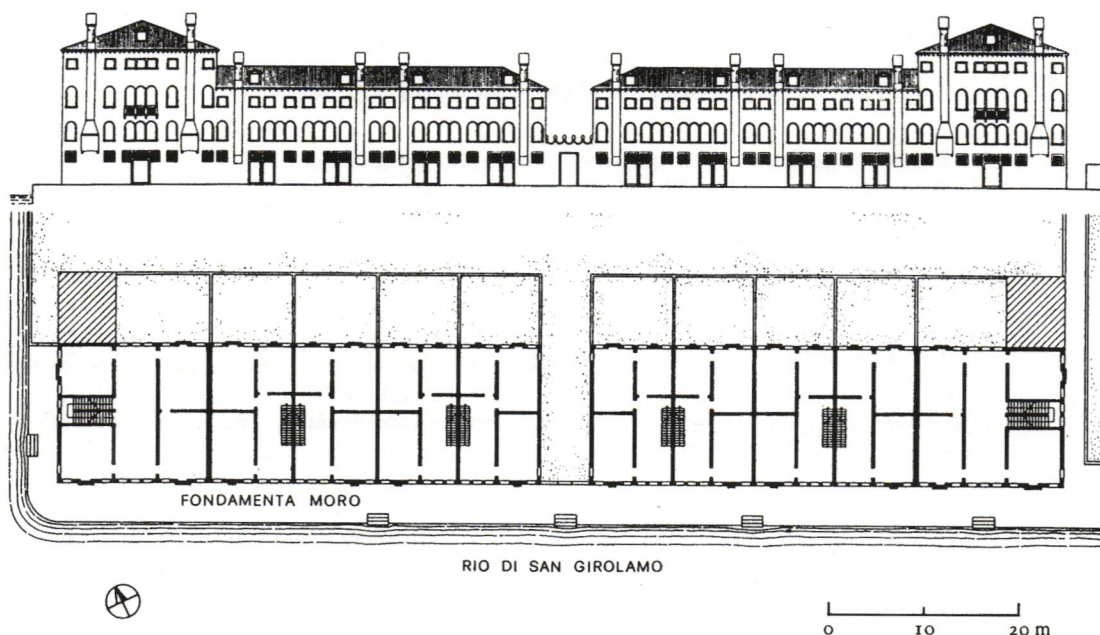
with the category of Renaissance architecture. To punish Grasso for missing an appointment, Brunelleschi organized all of his friends to call the poor man by another name and pretend that Grasso no longer existed. So thoroughly executed is their prank that Grasso begins to doubt his own identity and eventually goes along with the joke, assuming the new identity and eventually going into exile. Taking this cruel practical joke as a starting point, Tafuri criticizes the overemphasis on neoplatonic interpretations by historians of Renaissance architecture, such as Rudolf Wittkower, who tend to force the past into something coherent.

To make his point, Tafuri devotes a chapter to Alberti, resuscitating his dispute with Carroll William Westfall which served as the astoundingly antithetical preface to the Italian translation of his book *In This Most Perfect Paradise* (University Park: Pennsylvania State University Press, 1974). Tafuri asks the reader to look first beyond the narrow frame of the papacy of Nicholas V to consider the historical context of his patronage, and then deeper into the circumstances surrounding the lives of those involved in the artistic activity in the mid-15th century. Using literary and building documents, he shows how unlikely it would have been that Alberti collaborated on the projects of Nicholas V. In fact, the only documented connection is Alberti's advice to the Pope *not* to build a new St. Peter's but to repair the dilapidated old basilica out of respect for its traditional function. Tafuri's subsequent examination of Alberti's theories, which races with great fluency through *I libri della famiglia*, *Momus*, and *Intercoenales* in search of intertextual connections to ideas in *De re aedificatoria*, is nearly delirious in its erudition and perhaps the greatest contribution in the book. He finds Alberti rife with paradoxical complexity, an intellectual who is at once able to conceive of architecture as an offense to nature in the Promethean sense, and to propose it as a manifestation of ethics. In Alberti Tafuri finds the skeptical quest for a rational culture of limits and *mediocritas* that was at odds with the goals of Renaissance patrons and successive artists, most of whom were incapable of reading the Latin text.

This revision of Alberti, in which the work of architects becomes a point of division rather than congruency, sets up the next five chapters which examines specific acts of architecture. The grandeur of the new spatial and iconographic language of Giuliano da Sangallo, Bramante, and Raphael corresponded to a political shift to princely authority and served as a redefinition of the power in the city. Pope Leo X's unrealized plan to build the family palace using Piazza Navona as a forecourt was a reevocation of the imperial model recently completed at Vigevano and harked back to the imperial palaces of Constantinople, as well as the hippodrome and the Palatine in Rome which overlooked the Circus Maximus. The proposal to place a palace in the heart of the city's republican district was a test of the Pope's desire to integrate his family's ambitions into the fabric of the city. Venice, which maintained republi-

Manfredo Tafuri's reconstruction of the Campo Marzio as planned by Leon Battista Alberti for Leo X, ca. 1515. Among the sites pictured: project for the Medici Palace by Antonio the Younger (1), Palazzo Medici Lante (2), San Giacomo degli Spagnoli (4), and Sant'Agostino (10). The shaded areas in the Piazza Dogana (now the Piazza di Sant'Eustachio) are those that should have been demolished according to Antonio the Younger's original plan. (From *Ricerca del Rinascimento*.)





Case Moro in Venice by
Jacopo Sansovino, 1540s.
(From *Ricerca del Rinascimento*.)

can liberties during this period, remains throughout *Ricerca del Rinascimento* the control against the advance of the triumphal Roman manner of architecture and urbanism, rejecting, for instance, the overly grand and imperial designs for the rebuilding of the Rialto.

After the Sack of Rome in 1527, the political use of space by Paul III Farnese was much less refined than that proposed under the Medici popes, but eminently more successful in "affirming a primacy that Rome had actually lost." Rather than identifying him as the last pope of the Renaissance, Tafuri sees Paul III as the first, in a line concluded by Alexander VII, the great patron of Gianlorenzo Bernini's urban works. The central chapter of the book is concerned with the detailed analysis and description of two competitions ordered by Leo X: the design of a church for Florentine nationals living in Rome, San Giovanni dei Fiorentini, and the facade for the Medici-sponsored church of San Lorenzo in Florence. It is in the thoroughness of his descriptions that Tafuri speculates about a new architectural language capable of conveying clear meanings. The chapter devoted to the transmission of this Roman language of architecture to the palace for Emperor Charles V in Granada is somewhat of a digression within this narrative. Tafuri's point is that, despite the documented participation of Spanish architect Pedro Machuca, it is adviser Baldassare Castiglione, subject of one of Raphael's most famous portraits and friend of Giulio Romano, who insured this radical insertion of Roman architectural language as a symbol of imperium. Tafuri on occasion likes to flirt with the art historian's game of attributions, but in every instance he is more interested in arriving at a more accurate reconstruction of the context than in naming the artist.

The final chapter of *Ricerca del Rinascimento* considers the assimilation of this Roman architectural language in the republican stronghold of Venice

through an examination of Jacopo Sansovino. Sansovino, a Florentine who was trained in Rome and fled to Venice during the Sack, designed a remarkable set of public and private buildings during the mid-16th century using a discrete vocabulary of classical pilasters alternated with rounded arches. In probing four of Sansovino's projects, Tafuri reveals how the prerogatives of his Venetian clients altered the architect's approach. In the case of the Palazzo Dolfin, for example, the design is brought closer to the local typologies, while in the case of Ca' Corner, the Roman style was specifically ordered to associate this family of papists with Rome. Tafuri ends his inquiry with the humble houses Sansovino built for Leonardo Moro, which he sees as a rare case of restraint exercised by client and architect, deliberately "anti-aulic" in their stripped-down and rational demeanor, yet possessing the proportionality and typological sophistication of the more contemporary Ca' Corner. Tafuri concludes: "Only someone who for quite some time carried doubts about the universalism of the 'reborn' forms could have formulated such a radical critique. This homage to Venetian melancholy, deposited in the silent periphery of Cannaregio, is not as innocent as it would have us believe."

That Tafuri has devoted most of his attention in this book to famous buildings and famous architects instead of looking outside of the canonical frame should not be understood as a return to a history of victors. Nor is it necessarily "a retreat into the utopia of the past," as Pier Luigi Nicolini has accused. It represents a final attempt on Tafuri's part, one that he mentions at the end of every chapter, to locate in the documentary material most familiar to him those areas of doubt that indicate the intellectual struggle surrounding the world of form-making, which has continued to the present day. *

ALEXANDER TZONIS

POWER AND REPRESENTATION

THE HERITAGE OF GIOTTO'S GEOMETRY, Samuel Y. Edgerton, Jr., Cornell University Press, 1991, 320 pp., illus., \$49.50 (cloth); \$27.50 (paper).

FRANCESCO DI GIORGIO ARCHITETTO, Francesco Paolo Fiore and Manfredo Tafuri, editors, Electa (Milan), 1993, 426 pp., illus., \$132.50.

LA GLOIRE DES INGENIEURS, Hélène Vérin, Albin Michel (Paris), 1993, 452 pp., illus.

VILLARD DE HONNECOURT: LA PENSEE TECHNIQUE DUE XIII^e SIECLE, Roland Bechmann, Picard (Paris), 1991, 384 pp., illus., \$86.00.

THE ARCHITECTURAL DRAWINGS OF ANTONIO DA SANGALLO THE YOUNGER AND HIS CIRCLE, Christoph L. Frommel and Nicholas Adams, editors, MIT Press, 1994, 522 pp., illus., \$95.00.

MILITARY ARCHITECTURE, CARTOGRAPHY AND THE REPRESENTATION OF THE EARLY MODERN EUROPEAN CITY, Martha Pollak, University of Chicago Press, 1991, 120 pp., illus., \$15.00.

PAPIERE BOLWERCKEN, Charles van den Heuvel, Canaletto (Alphen aan den Rijn), 1991, 248 pp., illus.

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hat is it that has made Western humanistic culture so "superior" to the other cultures of the world? This question has been asked repeatedly since the 19th century, when the domination of the globe by Western nations became indisputable, through the 1960s, when this domination was finally cast into doubt, up until today, although in a somewhat modified form: what is it that has made Western, male-dominant, ruling-class culture so successful in controlling the world?

The two questions are similar but fundamentally different. The first presupposes a "progress" model of history (Whig, Marxian, Deweyian) and implies the justification of the Western humanistic culture's triumph. The second (post-Marxist, Heideggerian, "Frankfurtian") departs from a belief, summarized by Paolo Rossi in *I filosofi e le macchine* (Milan: Feltrinelli, 1962), that Western culture's attachment to the "material world" gave it a "diabolical character," associating it with "enslavement, oppression, exploitation."

Despite this disagreement, both approaches view the "success" of Western culture as a result of some basic agent, although there are different notions as to what that agent is. The possibilities may be divided into four major clusters: the "hardware"-based explanation, which assigns the causes of success to specific gadgets, such as the stirrup, or labor-saving machines; the so-called "constrained resources" explanation, referring, for instance, to the scarcity of labor; the "ideology" explanation, which suggests the emergence of certain strains of thought, such as the

Protestant ethic; and, finally, the "software" approach, which focuses on the new cognition, mental instruments, and conceptual systems associated with humanism.

For decades, major academic battles have been fought over which of these theories was correct. During the last twenty years, however, a more inclusive approach has been favored, indicating a more complex and flexible model of historical explanation. If any preference currently exists, it is for the cognitive, "software" approach, which analyzes the role of mental instruments and conceptual systems, and, in particular, systems of representing knowledge.

There are many reasons for this shift in thinking. Without a doubt, the relatively underexamined state of this area of study makes it attractive from the academic point of view. But there is also enormous interest in developing computer-based knowledge systems where understanding means of representation is fundamental. In a manner of thinking that is typical of Western culture, researchers are turning to knowledge self-reflectively, in hopes of acquiring means for effective production.

Systems of representation, which enable us to describe the world (including the worlds of the past and, possibly, of the future), is the stuff of theory or, to use the medieval and Renaissance term, of science. Through these descriptions, we acquire knowledge of how worlds work, were made to work or might be made to work, and subsequently, of how worlds ought to be made if we would like them to work in a manner we desire.

This latter point has been most characteristic of Western culture. Thus, Western culture appears to have seen representation systems as tied to making and to controlling. Moreover, in developing systems of representation, Western culture appears to have opted repeatedly for those that contribute to making and controlling. This explains the fascination of humanists with perspective and of Western thinkers in general with "realistic," applied systems of representation, including the contemporary preoccupation with pattern-recognition machine vision, CAD, and virtual reality. All these systems capture knowledge in a way in which it can be translated into action directed toward desired targets.

Samuel Edgerton's book, *The Heritage of Giotto's Geometry: Art and Science on the Eve of the Scientific Revolution*, is a rare example of a study of spatial representations with this particular kind of comparativist agenda. It examines the nature of the perspectival revolution in the West with the emergence of humanism, and juxtaposes it with the system of representation used at the same time in the Far East. The emergence and evolution of perspective was not the clear, goal-oriented search that it has been perceived to be.¹ With few exceptions, it was more accurately a fuzzy, chaotic movement, which produced several solutions

to local problems, many of which were soon forgotten but some of which persisted, to be later "recruited" to solve new problems. This is the picture that Edgerton vividly paints. Apparently, no similar movement occurred anywhere else.

Edgerton shows that this system of representation branches into at least two completely different kinds of major applications: illusionism and realistic documentation. China at the time of humanism did not have such a system of representation, according to Edgerton, and that is why its history followed a different path.² The author no doubt exaggerates, slightly polemically, the importance of conceptual factors at the expense of social and economic ones. His work engages in a dialogue with the recent relativist, multiculturalist, and politically correct arguments that claim "during the Renaissance, upper-class patrons championed linear perspective because it affirmed their exclusive political power." Single viewpoint perspective, after all, encourages the "male gaze," hence voyeurism and the denigration of women, police-state surveillance, and the imperialist "marginalization of other." These contentions, which he sees as naively reductive and easily dismissed, do not take into consideration the catalytic role that other social and economic factors could have played in the invention of perspective or in the direction of its applications, such as fortifications and *scia-graphia*, and in the way it combined with other fields of knowledge, such as algebra.

Edgerton asserts that perspective was not appealing merely because it was an "ideology," because it expressed the repressive "gaze" of the humanists. But neither was its appeal the result of being "natural," following from the "actual and physiological process of human vision." Other systems of representation were equally natural. A stick chart from the Marshall Islands, for example, like perspective, reflected cognitive constraints of topological intelligence. It yielded explanations, predictions, and, ultimately, designs of its own. Yet it did not have the same universal success as perspective. Edgerton acknowledges the more social, contextual factors that contributed to the rise of perspective, particularly in his discussion of Western Europeans' acceptance of the Ptolemaic grid, taking into account the factors of the "opportune moment," the "mental set," the rationalization of capitalism, and the Florentine interest in Ptolemaic cartography.³

The achievement of Edgerton's book is its admirable reconstruction of the critical moments of the process through which perspective was put together as a construct, a conceptual artifact in the midst of the needs and aspirations of an evolving society. The emergence of perspective is one of the most fascinating events in human history, and Edgerton succeeds in explaining it in a compelling manner.

Perspective satisfied four major clusters of needs and aspirations: illusionism, the conception of utilitarian artifacts, their efficient production, and a well-formed symbolic image of the world. The protagonists of its invention exploited earlier theories that were explicitly stated in areas of knowledge such as

Euclidean geometry and optics and Ptolemaic cartography, or implicitly embedded in artifacts and objects of antiquity or later works such as Cimabue's 13th-century frescoes in the basilica of San Francisco in Assisi.

For this reason, the development of perspective has been frequently referred to as a rediscovery rather than an invention. In fact, characteristic of the humanists was the intensity and openness with which they accumulated, incorporated, and cannibalized heterogeneous precedents and ways of thinking—which they in turn applied to a wide range of creative fields. Any major invention of an intellectual system, such as mechanics, Newtonian physics, and the theory of evolution, if investigated with the same kind of analytical rigor Edgerton employs in this study of perspective, would result in a similar characterization.

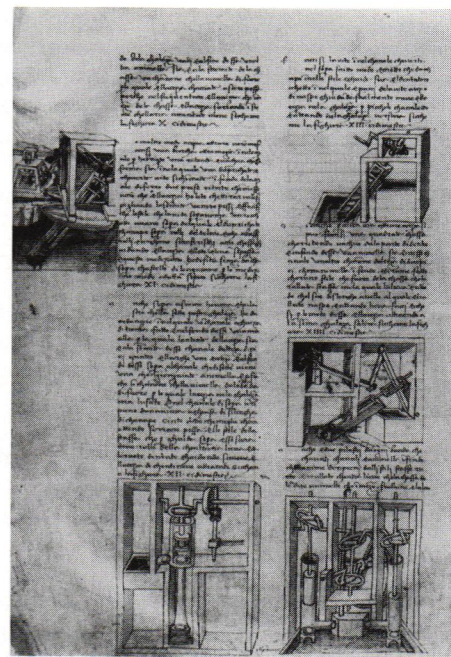
The most exciting instance of this process of transference, recombination, and reuse of knowledge has been the creative readaptation of the gridded charts of Ptolemy's *mappamundi*, out of which emerged the visual pyramid, and by extension, the *pavimento*, or checkerboard pavement. Edgerton shows that neither Filippo Brunelleschi nor Leon Battista Alberti could have drawn their "unprecedented maps of ancient Roman buildings" without the precedent of the Ptolemaic cartographic method.

The uniqueness of Alberti's contribution, on the other hand, and of this particular moment of humanistic activity is the production of his books—in particular, *De pictura*. This is where the creation of a consistent system of representation and an algorithm of its possible applications occurs. The book's highly abstract, generalized, explicit language would permit a vast number of instantiations on specific domains and in particular uses, from painting to projective geometry to CAD and CAM.

The protagonists of the invention of the new system were involved in satisfying all four clusters of the needs and aspirations of their time. Brunelleschi, Alberti, Francesco di Giorgio, and Leonardo da Vinci all worked on illusionistic, iconic descriptions, such as painting, as well as in map-making, the design of utilitarian artifacts and their production, and the conception of symbolic objects.

Extending the graphic experiments of Jacopo Mariano Taccola, Francesco di Giorgio advanced cutaway views of artifacts in his 1443 treatise *De machina*. Architects today would call them perspective sections. He also developed transparent views. Both techniques, as Edgerton remarks, "permit us to understand how internal structures look, without the need to build three-dimensional models," facilitating the production of several alternative design solutions.

Nicole d'Oresme, in his 14th-century text *Tracta-*



This page is taken from one of Francesco di Giorgio Martini's many notebooks, in which he recorded hundreds of engineering ideas. It shows several screw- and crank-driven pump devices, employing Jacopo Mariano Taccola's cutaway view, precursor to today's perspective section; ca. 1470s. (From The Heritage of Giotto's Geometry.)

Roberto Valturio's *De re militari* is illustrated with machines that are a curious combination of antique and modern ideas. This drawing shows a cannon coupled with a fanciful assault tower designed to look like a giant dragon; 1472. (From *The Heritage of Giotto's Geometry*.)

tus de latitudine formarum, had already seen the potential of "more clear and easy examination" of problems through the use of "drawn planar figures," which were grasped "rapidly and perfectly through the imagination of the figures . . . help[ing] greatly the knowledge of the thing itself," as Hélène Vérin observes in her book, *La gloire des ingénieurs*. Francesco di Giorgio makes the same point in his *Quinto trattato*, which includes thirty-eight concrete proposals for fortifications described in enough detail to make possible their testing, certainly at least through the "mind's eye." To build as many scaled mock-ups would have been prohibitively costly and time-consuming.

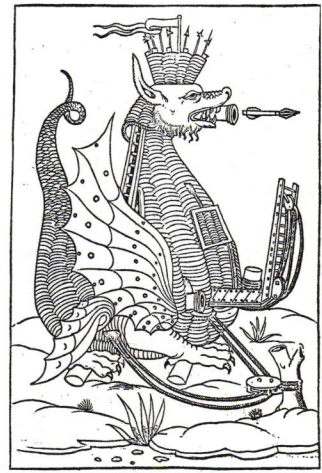
Francesco di Giorgio *architetto*, the impressive two-volume catalog for the 1993 exhibition in Siena, features not only his architectural works but his great technical achievements as well, including experiments with the still-emerging perspective in both illusionistic painting and designing artifacts. The experiments seem disparate at first, but on closer inspection they are in fact extremely mutually reinforcing. The corpus of the catalog, which was edited by Manfredo Tafuri and Francesco Paolo Fiore, consists of illustrations from Francesco di Giorgio's *Trattati*, in which he continues the medieval tradition of superimposing images of heterogeneous objects to demonstrate symbolic analogies between the human body and the building. Accordingly, he does not take into account the three-dimensionality of the corresponding objects, despite the fact that perspective would have served that purpose. There is only one drawing, of a head, that points to the possibility of using more modern techniques to express an archaic idea. More exploratory and more modern are the perspective/section drawings of buildings, which place the viewer's eye higher than Alberti's recommendations, thus defeating Alberti's illusionistic aims though permitting a better

testing of the relation between plan and interior elevations.

The most exciting application of the new system of representation by Francesco di Giorgio is in his drawings of machines. Unfortunately, this otherwise inclusive catalog contains very little of this system of representation in terms of both illustrations and analysis. It does include, however, a major essay by Nicholas Adams on the military architecture of Francesco di Giorgio, illustrated with excellent photographs of fortresses and several examples of drawings from *De machina*. Here, we see many of his prolific attempts to reach the optimal triangular bastion solution, none of which succeeded. This is because his system of representation, which could so efficiently and effectively map the spatial form of the fortifications, was not suited to

capturing the key function contained in the form—namely, the offensive-defensive, or "lines of fire," representing the function of shooting.

Francesco di Giorgio *architetto* presents a sketch of a villa with angular bastions and *orecchioni* (trunnions) depicting "lines of fire." The drawing, which has been



attributed to Francesco di Giorgio, is classified in the catalog as anonymous and, in my view, rightly so. The significance of this depiction is more than philological. It involves the role of representation systems in the invention of one of the most revolutionary building types of the Renaissance and one of the key instruments of Western power: the bastion.

If this drawing was by Francesco di Giorgio, it would have been the only exception out of dozens in which the function of shooting is explicitly described. Could he have been responsible for such an invention, and could he have presented it only once, in an isolated drawing from the corpus of his treatises? It is doubtful. Furthermore, what makes it most improbable epistemologically is that nowhere in his work is there a trace of any preliminary studies that could have led to the discovery of the "lines of fire" representation.

Who, then, was responsible for this new representation system that proved to be so significant to Western power? The representation of process through a line drawing was and still is a difficult task because drawings are by nature static. They lend themselves better—that is, more directly—to mapping space. It is a fact that Francesco di Giorgio drew so-called exploded views of artifacts. This new kind of representation of parts of objects was instructive about how objects could be taken apart and put together. Yet process is only suggested here, not depicted.

To my knowledge, the earliest explicit representation of assembling and disassembling an object is an anatomical drawing by Leonardo da Vinci, which, with the aid of dotted lines, shows "the exploded view of the three upper cervical vertebrae." The dotted lines represent the process of fitting of parts. The idea is that the line on the paper is like the trace left behind on the ground by a moving object. Leonardo was obsessed with the representation of processes, which Kenneth D. Keele's clearly explicates in his monumental *Leonardo da Vinci's Elements of the Science of Man* (New York: Academic Press, 1983). The book documents various problems involving process and function, showing Leonardo's struggle to describe various states of objects over time. Most often he used multiple pictures or overlaps of images,

A page from *Manuel d'un ingénieur-architecte* du début de XVII^e siècle, labeled, from top to bottom, "ichnographie, orthographie, scénographie." (From *La gloire des ingénieurs*.)

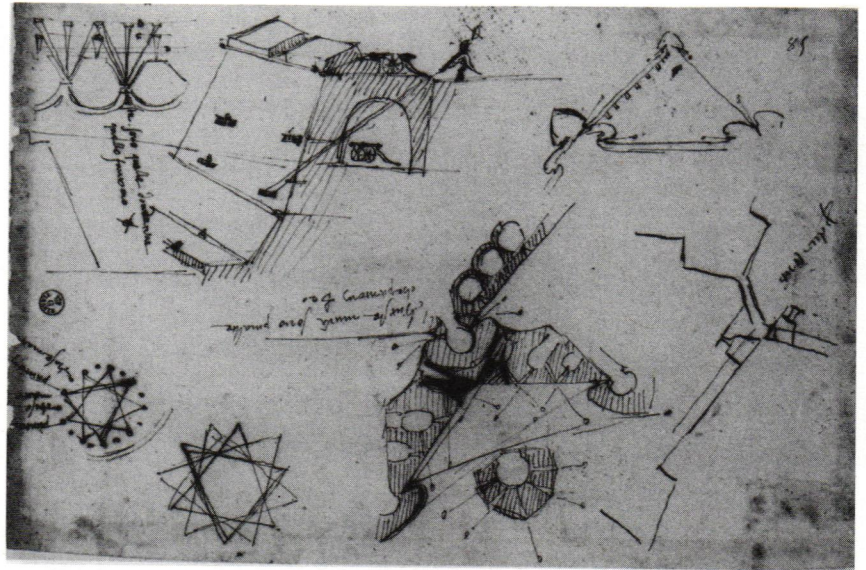


as in his depictions of the variations in the distribution of weight of a human body during movement, of a bird in gliding flight, or, in a famous example, of a horse bucking and rearing.

Leonardo was preoccupied with the representation of shadows, an art known as *sciagraphia*, where-in perspective was applied in order to trace lighted versus non-lighted regions on a plane given an object and a source of light. It was this expertise that led him to invent a system of representation appropriate for the design of fortifications.⁴ At first, *sciagraphia* had little to do with the representation of process. But given the fact that the theory of light was based on a ballistic paradigm, one can imagine how a line tracing light could be seen as representing process. It also makes it easier to understand how it was ultimately Leonardo, an expert on *sciagraphia*, who finally succeeded in constructing a system for representing lines of fire by analogy to the system for representing lines of light and of vision. Thus, the new system for designing fortifications combined two systems of representation—perspective, or simply planar projections, with a system for representing lines of fire. It made possible the development of an algorithm of optimal design of fortifications, the triangular bastion system, and precipitated unprecedented military know-how in the West.

The notion that optimal fortification design methods were invented during the Renaissance is challenged by Roland Bechmann in his book *Villard de Honnecourt: La pensée technique au XIII^e siècle et sa communication*. With extensive commentary, this interesting book republishes the well-known 13th-century manuscript by Villard of thirty-three double-sided parchment folios. Using advanced ultraviolet techniques, Bechmann has revealed some interesting figures which had been hidden in the drawings until now. He focuses on Villard's descriptions of utilitarian artifacts, among them a curious pentagon (from Folio 21) annotated by Villard as a five-sided tower. Backed by the ghost image of the manuscript, Bechmann returns to Eugène Viollet-le-Duc's theory that this drawing describes not simply a tower but a tower flanked by triangular bastions. He goes on to argue that certain obscure lines on the drawing are nothing but lines of fire, and concludes that the "principles systematized and applied by Vauban existed before him"—in other words, they already existed in the time of Villard. This is a forced conclusion in a book filled with otherwise very interesting discussions and illustrations. Unfortunately, inventions, including new systems of representation, do not emerge in sudden bursts of intuition *ex nihilo*.

In *La gloire des ingénieurs*, an insightful study on technology, Vérin discusses in great detail the complexities of the evolution of engineering and the decisive role of drawing in its formation, and, ultimately, in bringing about the power and world-wide control of the West. Once the system of representation was invented, fortification problem-solving required neither a major explosion of intelligence nor routine work. Vérin's rich study, which pays much attention to problems of representation and



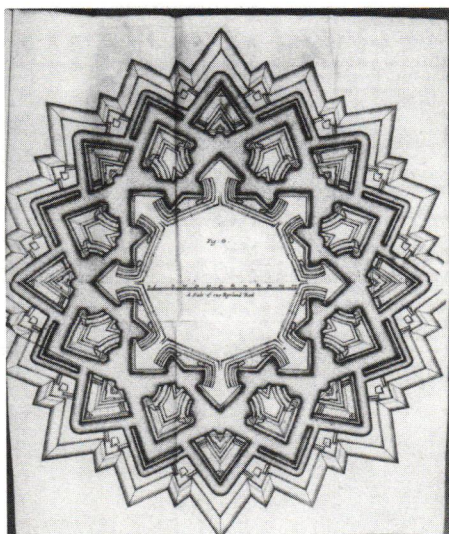
epistemology, opens with an institutional analysis of the emergence of the engineer. The discussion reminds that engineering, like architecture and painting, is not comprised of abstract ideas which find their manifestation in specific practices; it is the other way around. Particular social practices, born in certain contexts, together with knowledge, are formed at particular moments in time and are given specific labels to distinguish them from other practices and ways of thinking.

Vérin's book is a macroscopic account of the evolution of technical intelligence from the 16th to the 18th century, which appeared as a rather coherent development of engineering methods and techniques. Despite progress made during this period, however, designers were forced to grapple with numerous, complex local problems that were not solved by major innovations and inventions. For example, a new method of fortification could be applied to a site once the basic concept of the fortress was established, but it could not inform decisions about whether to make a fortress octagonal or decagonal, for example. Moreover, the method could not stipulate whether the polygon should have sides of equal length, or what the lengths should be. Landscape irregularities, existing buildings, and older fortifications were constraints that demanded great inventiveness from the designer, who had to struggle through several revisions of the basic concept.

This is precisely the kind of problem that is illuminated by the superb publication *The Drawings of Antonio da Sangallo the Younger and His Circle*, which contains examples of fortification designs taken from the Sangallo archive in the Uffizi in Florence. Edited by Christoph L. Frommel, codirector of the Biblioteca Herziana in Rome, and Nicholas Adams, professor in the department of architectural history at Vassar College, the book includes an introduction by Frommel, and essays on the fortification drawings by Adams and Simon Pepper, on the fortified cities Castro and Nepi by Hildegard Giess, and on the drawings of machines, instruments, and tools by Gustina Scaglia.

This publication of the Sangallo archive allows

Theoretical studies of, among other things, stellar and bastioned traces and caponiers in ditches; Giovan Francesco da Sangallo with Antonio da Sangallo the Younger, before 1530. (From The Drawings of Antonio da Sangallo the Younger and His Circle.)



This fortification, by Baron van Minno Coehoorn, the "Dutch Vauban," is taken from his 1685 treatise, *Nieuwe Vestingbouw*, which is devoted to "the method of strengthening the interior space of the Royal French Hexagon." (From *Military Architecture, Cartography and the Representation of the Early Modern European City*.)

readers to observe a designer's struggle to conceive, with the aid of the drawing, function-driven objects, as once was only possible with the works of painters and, more recently, architects whose works have been archived. Subtitled *Fortifications, Machines, and Festival Architecture*, this is the first volume of a projected multivolume set which will include almost all the drawings in the Uffizi by Antonio the Younger and his workshop. This book is particularly interesting as a history of technology rather than of city planning. Moreover, the detailed commentaries on each drawing promise to be helpful for any interpretative work to fol-

low. The book also contains provocative material on architectural methodology, such as one study of the proportions of an atrium. The drawing shows Antonio the Younger's numerical proportioning, citing Vitruvius and disregarding Cesare Cesariano's translation. It is worth noting that this rather sophisticated investigation of proportioning is presented alongside a drawing for a combination grist-mill and pulverizer engine, an object that mixes utilitarian and aesthetic concerns, sketched by Antonio the Younger during his trip to Romagna in 1526 to inspect fortifications.

The initial diffusion of the representation system for designing optimal fortifications and military engines in general was made possible by manuscripts. Francesco di Giorgio's manuscript circulated widely, as did Leonardo's notes to a lesser degree. The first printed treatise using the new system of representation for military architecture, Pietro Cataneo's *I quattro primi libri di architettura*, is one of the seventy-three that comprise Martha Pollak's *Military Architecture, Cartography, and the Representation of the Early Modern European City*. This handsomely illustrated book contains a checklist of treatises on fortification in the Newberry Library in Chicago. The examples, published in Europe and England between 1554 and 1725, are each accompanied by a brief descriptive blurb. In contrast to Pollak's more global view of books on military architecture, Charles van der Heuvel's *Papier Bolwerken* (Paper bulwarks) concentrates on Italian town planning and fortification in the low countries between 1540 and 1609, with special attention paid to the role of drawing. Especially noteworthy is chapter six, which deals with the introduction and reception of Italian fortification and city planning in Dutch architectural theory. The author focuses particularly on the role of Simon Stevin, a true humanist with expertise and accomplishments in various disciplines, including mathematics, engineering, economics, linguistics, fortifications, and city planning.

For all the publishing activity that occurred in the 16th century, the publication of books disseminating knowledge developed by Francesco di Giorgio and Leonardo was curiously delayed for over half a centu-

ry. Edgerton offers a sociological and political explanation: the publication of another book with more archaic ideas, Roberto Valturio's *De re militari*. Edgerton argues convincingly that Valturio's thinking, notoriously out of step with the developments of his time, was basically aimed at legitimizing the authority of despotic lords such as Sigismondo Malatesta, lord of Rimini. This legitimation was carried out by what is called "antiquization," or giving to the ruling lord the aura of a despotic but legitimate ruler of the past. This practice, mainly a 16th-century one, was directed by classical scholars who knew antiquity well and could dress up current settings and rulers in bygone imperial clothes—an act for public consumption as well as for the rulers themselves, who fancied themselves, as Edgerton says, "as retired *legati legionum romanarum*."

Valturio, in contrast to Brunelleschi, Francesco di Giorgio, and Leonardo, was not an artificer. He was a distinguished classical scholar of his time. According to Edgerton, Valturio instructed his illustrator to purposely archaize the images in the book. These anachronistic images were extremely popular and discouraged for almost half a century the publication of books containing images executed through the new representation techniques.

In discussing the invention of the new system of representation, Edgerton shows how its emergence depended on conditions of pre-existing knowledge, such as Euclidean geometry and cartography. In the case of Valturio, he demonstrates that, even when a new invention has been carried out conceptually, its reception is not guaranteed. The Valturio incident embodies a paradox: while the new system of representation may have been driven by the desire for ever more power and control, the social and political complexities that accompany such power and control can cause exactly the opposite effect. In other words, the turnings of history, even for those who believe in the existence of "progress" and "reality," are in the end completely unpredictable. *

NOTES

1. For more, see A. Tzonis and L. Lefaivre, "The Two New Sciences of Representations," *DBR* 27 (Spring 1992): 11–15.
2. For insight into the means of representation of architectural space in China, see *Zhai pu zhi yao* (Essentials of house manual), a 420-page manual published in 1741, esp. volume three; also Yu Li, "Comparing and Controlling Number-Based Design Reasoning Systems," Ph.D. diss., Design Knowledge Systems Group, TUEdelft, Netherlands, 1994. The main preoccupation of the 16th-century Chinese text is to control through a symbolic measurement system the distances between the standard components of a building. The famous *feng-shui* manuals are also relevant. Once more, the representation system chooses, abstracts, and controls aspects of site related to a complex system of prohibitions and permissions. The system is also made to accommodate complex combinatorial aspects, out of which a variety of land forms may be categorized and identified. See Xiao Dong Li, "Meaning of the Site," Ph.D. diss., Design Knowledge Systems Group, TUEindhoven, Netherlands, 1993.
3. S. Edgerton, *Journal of the Society of Architectural Historians* 33 (December 1974).
4. Leonardo da Vinci is attributed with the invention of the bastion in A. Tzonis, "The Bastion as a Mentality," in C. de Seta, ed., *La città e le mura* (Rome: Laterza, 1989).

DANIEL SHERER

VASARI AS ARCHITECT: URBAN STRATEGIES, ARTISTIC THEORY, AND THE LANGUAGE OF *DISEGNO*

GIORGIO VASARI ARCHITETTO, Claudia Conforti, Electa (Milan), 1993, 277 pp., illus., \$160.00.

GIORGIO VASARI: ARCHITECT AND COURTIER, Leon Satkowski, photographs by Ralph Lieberman, Princeton University Press, 1994, 276 pp., illus., \$75.00.

Giorgio Vasari has left an indelible mark on art history, not so much as a painter or architect, but as the author of *Le Vite* which, in the words of Michael Baxandall, is art history's "crowning *tour de force* of descriptive criticism."¹ It is his texts, not his images or edifices, that continue to shape our tastes, our stance towards the artist's work as seen through the detour of his life, and the entire critical framework of our preferences. Michel Foucault was not exaggerating when, in *Language, Counter-Memory, Practice* (Ithaca: Cornell University Press, 1977), he pointed out that with Vasari the heroic dimension passed from the medieval hero to the Renaissance artist at a time when Western culture itself became a world of representations. In this world, specific artists assume extraordinary importance, to be sure, but what is really crucial is the symbolic figure of the heroic master as such—as one who is able to overcome all odds and (with Michelangelo as exemplar) to surpass nature and the antique. Inasmuch as these ideals still inform our cultural assumptions concerning art and artists, Vasari still holds sway over us, setting limits and boundaries, creating moments of privilege and of exclusion. Yet it is ironic that Vasari, who fixed our canon of artistic representation with an almost imperious self-assurance, has been effectively excluded from it. This curious situation is most evident in the case of his architecture, which, with the signal exception of the Uffizi, has endured the most neglect—with the least justification—of all his artistic accomplishments.

Claudia Conforti's *Giorgio Vasari architetto* (published in Italian by Electa) is perhaps the single most important assessment to date of Vasari's achievements as an architect. Focusing on the development of Vasari's artistic theory and his achievements as a court architect, Conforti explains Vasari's perception of his own place in architectural history with constant and illuminating recourse to the play of ideas in his writings and the roles he assumed in the service of Cosimo I, Grand Duke of Tuscany. Her study, which combines the monographic approach with the critical apparatus of an exhaustive and copiously illustrated catalog, is an exemplum of scholarship, remarkable in many respects. Like Vasari, Conforti attempts to do everything, and, as in Vasari's case, what is most impressive is that, for the most part, she succeeds. She takes on the interpretation of Vasari's

architecture in terms of his art theory, while also managing to deal with the history of the magical properties attributed to various colored stones employed in his edifices. She is as conversant with the propagandistic apparatus of Medicean art and statecraft as with the *lingua franca* of vernacular architecture of 16th-century Arezzo. The author has undertaken a broad sociopolitical analysis of the relationship between urban strategies and the imperatives of rule at mid-Cinquecento, without ignoring the particular stylistic and personal affiliations between Vasari and such contemporaries as Jacopo Sansovino, Michelangelo, Giulio Romano, Giacomo Barozzi da Vignola, and Bartolomeo Ammanati. As chapter five, "In the Service of the Duke," demonstrates, she is at her best when exposing the ideological pressures implicit in the orchestration of a new Florentine "urban scenography" under Cosimo, a project that enlisted Vasari's extraordinary organizational talents to distribute the signs of burgeoning absolutist power throughout the cities and territories of the Medicean Grand Duchy.²

Giorgio Vasari architetto is not simply a repository of articulate formal analysis, informed by an attention to artistic theory and to the history of political practices and ideologies. It is also an ambitious attempt at synthesis, in which Conforti repositions Vasari's architecture critically and historically, so that it speaks eloquently about the culture and politics it helped to shape. The text brims with facts and ideas. If it might be said to betray a drawback, it is in the very profusion of details, which are not always placed at the disposal of a linear argument. But this is not a serious flaw. Particular analyses are always insightful, and most of the hypotheses convincing—as, for instance, when Conforti suggests that the brilliant urbanist solution of the Uffizi was probably partially due to Michelangelo's advice. Indeed, her sound ideas are clearly expressed and display a real



The testata of the Uffizi, facing the Arno, Florence; Giorgio Vasari, begun 1561. (From Giorgio Vasari architetto.)

Effigy of Antonio del Monte
below the figure of Religion,
Del Monte Chapel, San
Pietro in Montorio, Rome;
Giorgio Vasari, begun 1550.
(From Giorgio Vasari
architetto.)



flair for what Lucien Febvre has called "*l'histoire à part entière*." Conforti proves to be acutely aware of the intellectual and sociopolitical sensitivities of the late Manfredo Tafuri, himself a great reader of Febvre. With considerable aplomb, she captures the Tafurian tension between erudition, breadth of formal and social analysis, and attention to the speculative intensities of philosophy and aesthetics. Because her work substantially reorients our approach to one of the mid-Cinquecento's most neglected practitioners, this book is an impressive achievement and will do much to change our understanding of the architecture of the period.

Conforti's interlocking analyses of the Cappella del Monte and Vasari's restorations of the monastery refectory of the Olivetani at Naples provide an excellent example of the way Vasari's theory depended (at an early phase in his architectural development) on the formal articulation of design. In both the chapel and the refectory, the overarching conception of *disegno*, which subsumed the different arts within its purview, was implied by Vasari's interventions within a previously existing ecclesiastical scenography. Conforti examines Michelangelo's role in directing Vasari and his coworker Ammanati (who executed the sculptures) to orchestrate a harmonious interrelationship between the arts. She also stresses the multifaceted talents of the "court artist" *par excellence* of the period, Giulio Romano, the gifted disciple of Raphael and a figure who played a crucial role in shaping Vasari's perception of himself as the polytropic executor of the wishes of his aristocratic patrons. In fact, for Vasari, Giulio served as a decisive

professional model ever since the younger architect met him in Mantua in 1541. Conforti places special emphasis on Vasari's encounter with Giulio's dissimulation of Gothic structure in the abbey church of San Benedetto in Polirone. In a specific architectural sense, without this precedent, Vasari's stucco work, arranged in elaborate geometrical patterns on the vault of the Olivetani monastery, would have been unthinkable. In a broader, more theoretical sense, the contrast Vasari encountered in Naples between the *maniera tedesca*, that is, the "German" or Gothic manner, and the *maniera moderna*, which refers to the Italian art of the first half of the 16th century, implied a concept of artistic progress that linked the two according to a scale of aesthetic values.³

Citing Erwin Panofsky's seminal essay, "The first Page of Giorgio Vasari's *Libro*," Conforti situates Vasari's first experience of the Gothic by stressing its implicit relationship with Giulio's example. For both artists the crucial problem was *conformità*, an ideal of synthesis that presupposed the effective suppression of the historical achievement and aesthetic validity of the Gothic. Panofsky outlined three possibilities for the Renaissance architect confronted by the

Gothic: complete reformulation of the existing parts, continuity with the earlier monument, or the articulation of a middle way between the two. By resolutely choosing the first of these, Vasari placed what he learned from Giulio's intervention at San Benedetto to good practical use, even as he anticipated his own sharp theoretical pronouncements on the Gothic in *Le Vite*. Conforti persuasively demonstrates that Vasari's first major engagements with architecture, in active collaboration with the other arts of *disegno*, lay the groundwork for the elaboration of a concept of artistic progress that privileged the achievements of the Renaissance over earlier periods in the history of art. (Perhaps the best example of this aesthetic attitude is found in the *Life of Michelangelo*, where Vasari states that this artist attained perfection not in one or two of the arts, but in all of them, once having mastered the true principles of design.)

The progression from the *concerto delle arti* under the aegis of *disegno* to the "ideogram of power" under the gaze of the princely patron describes Conforti's approach to the unity of urban strategy, artistic language, and art theory embodied in the design of the Uffizi. Here, Tafuri's work on the political and ideological uses of urban space in the Rome of Leo X is put to excellent use. As in the case of Tafuri's approach to the Renaissance—and to the entire history and theory of architecture, which he conceived as a representation of a culture and its politics—for Conforti, language provides a cogent critical model capable of situating the ways in which architecture transmits power. For example, the Uffizi complex, conceived around 1560 as an official seat for the

growing bureaucracy that came to control virtually all aspects of the Tuscan economy, is not merely a static showpiece of the urban renovation proposed by an *arriviste* hungering for political legitimacy. According to Conforti, it also “reorganizes . . . the area between the Palazzo Vecchio and the Palazzo Pitti, transforming it into a center of civil power in miniature, which spreads through street axes and discrete moments of monumental character throughout the urban system as a whole.”

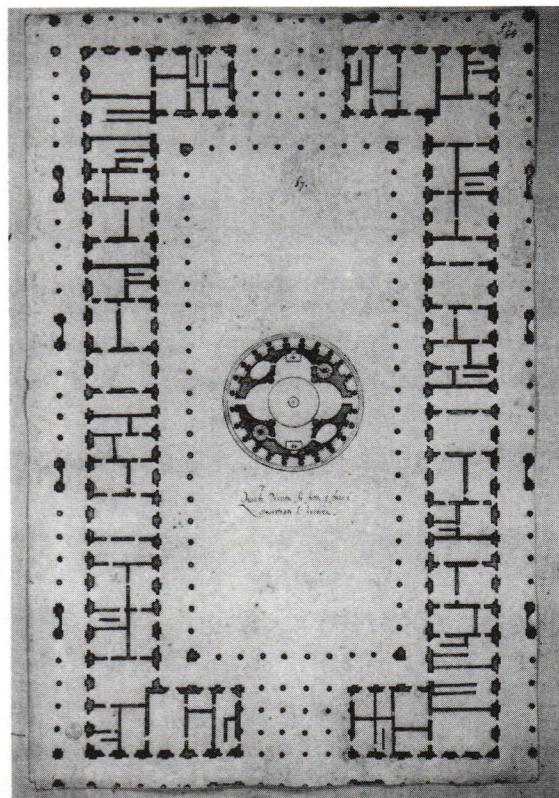
In this capacity, the Uffizi maximizes the expressive potential of an architectonic “vocabulary reduced to the point of being an ideogram, able to unleash monumental effects of enormous efficacy, and destined to become the official idiom of Medicean Florence,” as Conforti puts it. The Uffizi becomes the nodal point of the “urban strategy” of Cosimo’s Florence, employing, in its vigorous Doric colonnade, the language of *disegno* as if it were the official speech of ducal authority. Leon Satkowski, for his part, analyzes the same political process in his study *Giorgio Vasari: Architect and Courtier*, which, like Conforti’s work, focuses on the intersection of art theory, ideology, and the rise of the courtly artist in Medicean Florence. For Satkowski, however, the Uffizi colonnade expresses, above all, the peculiar constitution of the building as a unique type in the history of architecture. He writes, “The component parts are familiar, but their combination is unprecedented.” He also stresses the complex’s intrinsic character as an urban connector or street, something Conforti does not dwell upon.

The strength of Satkowski’s monograph lies in its

differences from Conforti’s interests. (He could not have known of her work because it was published after his own.) In Satkowski’s view, Vasari’s single greatest challenge in the commission for the Uffizi was to create a coherent plan for the diverse needs of the magistracies, a task he executed admirably. Unlike Conforti, Satkowski is quite precise about the political inspiration of the Uffizi, linking it to the Florentine victory over Siena, which aided and abetted the aspirations of the Duke to become King of Tuscany. He senses in the project imperial overtones and Roman reminiscences that are as intriguing as they are plausible: “The Palazzo Vecchio, with its Republican associations, was not a palace fit for a king; one proposal [for the renewal of the Piazza della Signoria] emulating the forms of the imperial residence on the Palatine was to have occupied the full area between the Piazza della Signoria and the Arno.” Something of this grandiose ideal is also contained in the initial idea for the Uffizi laid out by Vasari for the Duke, which is preserved in a drawing by his nephew, Giorgio Vasari the Younger. Though Conforti does mention this plan, she does not, like Satkowski, analyze it in depth. On this point the two books neatly complement each other.

However, neither provides, as one might expect, a detailed analysis of the interior of the Uffizi. Both address it as pure exterior—as political representation *par excellence*. Satkowski even speaks of its facade as a “mask for a variety of interior space laid out according to a clever and accommodating plan.” Although this plan is never explained at length, it is the merit of Satkowski’s treatment of Vasari’s single most important architectural accomplishment to have placed its “masking function” within precise political parameters.

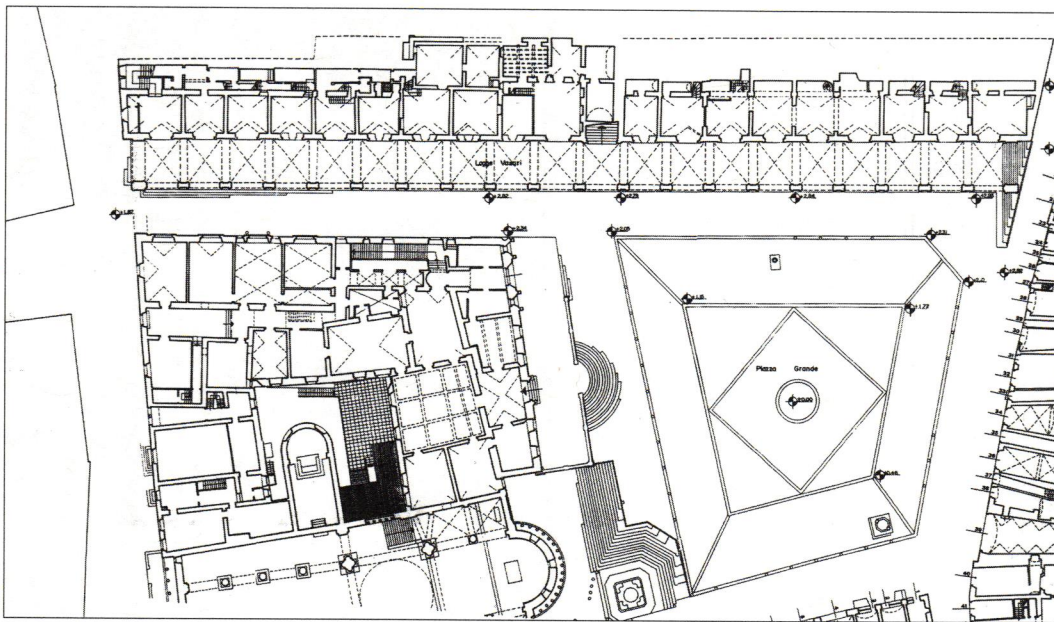
Like Conforti, Satkowski acknowledges the importance of Michelangelo and especially of Giulio Romano in forming Vasari’s self-perception as a court artist and architect. But unlike Conforti, he underscores the surprisingly casual and unprofessional character of Vasari’s architectural training. He also analyzes the formal links between Giulio Romano’s Mantuan residence and Vasari’s design for his own house in Arezzo, which indicated his attempt to emulate Giulio’s artistic taste and social standing. His treatment of the Loggia at Arezzo, too, is in keeping with what he sees as Vasari’s obsession with social



Giorgio Vasari's initial plan of the Uffizi (which was rejected), drawn by his nephew, Giorgio Vasari the Younger. (From Giorgio Vasari: Architect and Courtier.)



Detail of the bridge linking the Palazzo della Misericordia with the Loggia that faces Arezzo's Piazza Grande (now Piazza Vasari). Vasari's design for the Loggia was executed from 1570 to 1596. (From Giorgio Vasari architetto.)



General planimetric view of the Piazza Grande, Arezzo. (From Giorgio Vasari architetto.)

status. Here, he integrates a purely functional analysis of the Loggia's bureaucratic and economic dimensions with a discussion of Vasari's desire to leave an indelible mark on his native city, one that nevertheless underscores its ties to its Florentine overlords. Satkowski guides the reader through every imaginable aspect of the Loggia, from its responses to the particular demands set by its sharply sloping site to its effective establishment of a new Florentine administrative center for Arezzo. Given Arezzo's history of defiant resistance to Florentine domination, the Loggia becomes for Satkowski the "ideogram" of Ducal power which Conforti captured in her felicitous phrase. Indeed, it instigated a process that modified the social geography of Arezzo by installing at its center the apparatus of Florentine control which the town had managed for centuries to elude.

Satkowski's approach is more literal than Conforti's when he attempts to articulate parallel readings of the language of Vasarian art theory and that of his architecture. He focuses not on the tensions between Vasari's architectural judgments and the wider theoretical concerns implied by his concept of *disegno*, but on more circumscribed and incidental aspects of his architectural thinking. He correctly points out that Vasari's architectural criticism is antitheoretical, as it entertains the anecdotal and technical aspects of architectural practice, even as he avers (in a contradiction he does not note) that Vasari was not all that well informed about the practical aspects of architecture. (A case in point is the cupola of the Madonna dell'Umiltà in Pistoia, whose nagging technical problems have been blamed, justifiably or not, on its architect.) The scarcity of architectural drawings by Vasari's own hand may also testify to his lack of practical expertise. Significantly, besides a presentation drawing for the Cappella del Monte, the initial plan for the Uffizi has survived only in the version executed by the architect's nephew. (Moreover, it is well known that Vasari was an avid collector of architectural drawings, a fact that neither Conforti

nor Satkowski mentions much less fits into their respective analyses.)⁴

Where Conforti uses the Tafurian critical model of language to express the political purposes of integrating design concepts into the more ideological aims of collective representation, Satkowski remains on the level of the protobourgeois psychology of Vasari himself, portraying him as an architect continually aspiring to a higher social station. It is ironic—even paradoxical—that Vasari, who has been virtually rescued from undeserved oblivion as an architect by these excellent studies, is portrayed in the closing pages of Satkowski's book as an avid detractor of Leon Battista Alberti,

probably the most illustrious of all Quattrocento architects and theorists. We can only smile (or grimace) as Vasari proves jealously vindictive when confronted by what he saw as discrepancies between Alberti's theory and practice. As Satkowski points out, when Vasari referred to the vaulting of the Rucellai Loggia, he used the term *goffo*, which implies not only awkwardness, but also an intolerable appearance, lacking in good *disegno*. "The penalty for this transgression was the removal of the epitaph [from the second edition of *Le Vite*] that referred to Alberti as a Florentine Vitruvius," writes Satkowski. This deletion did not, however, prevent Vasari from designing a magnificent frontispiece for Alberti's *De re aedificatoria*. And though it is scarcely appropriate to grant the title of the new Vitruvius to Vasari, it is now at least possible—thanks to these two recent publications—to reach a comprehensive critical judgment of his architecture. *

NOTES

1. M. Baxandall, "Doing Justice to Vasari," *Times Literary Supplement* (1980): 111.
2. G. Spini, introduction to *Architettura e politica da Cosimo I a Ferdinando I*, G. Spini, ed. (Florence: L. S. Olschki, 1976).
3. G. Previtali, "Presentazione," in G. Vasari, *Le Vite*, L. Bellosi and A. Rossi, eds. (Turin: Einaudi, 1986).
4. A. Nesselrath, "I libri di disegni di antichità: Tentativo di una tipologia," in S. Settis, ed., *Memoria dell'antico nell'arte italiana*, vol. 3 (Turin: Einaudi, 1984–86), p. 120.

MYRA NAN ROSENFELD

THE MASK AND THE MODEL

LA MASCHERA E IL MODELLO: TEORIA ARCHITETTONICA ED EVANGELISMO NELL'EXTRAORDINARIO LIBRO DI SEBASTIANO SERLIO, Mario Carpo, preface by Joseph Rykwert, Jaca Books (Milan), 1993, 139 pp., illus., L 28,000.00.

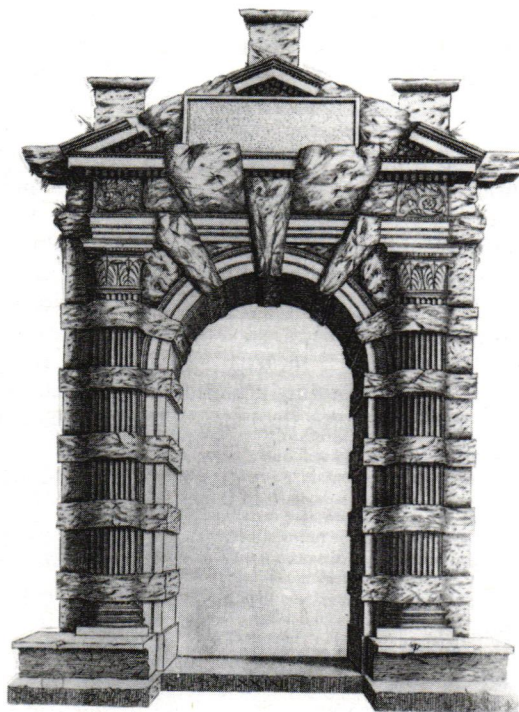
Sebastiano Serlio's *Extraordinario libro* was one of the first architectural publications printed with engraved illustrations in the 16th century. Originally published in a bilingual French and Italian edition, the book contains the briefest of texts. In addition to the dedication and preface, there are terse descriptions of the fifty portals printed on separate folios from the engravings. In the preface, Serlio describes the portals, which are divided into two series, as "bizarre," "licentious," and "bestial." The first thirty are rusticated; the second twenty are described as "delicate." They do not follow the orders as instructed by Vitruvius in his *Ten Books on Architecture*, which Serlio himself points out in his preface. His attitude toward Vitruvius appears ambiguous at first. For example, in the third portal of the first series, Serlio actually states that the architect who wished to follow the precepts of Vitruvius could remove the tablet that interrupted the center of the entablature and pediment to unveil a portal that followed Vitruvius' principles. He describes the sixth portal of the first series as "completely Doric, but disguised with a mask."

In Mario Carpo's masterfully written book, whose Italian title translates to *The Mask and the Model: Architectural Theory and Evangelism in Sebastiano Serlio's Extraordinario Libro*, he interprets Serlio's descriptions to mean that the rusticated decoration is similar to a mask that may be removed to reveal a portal of correct Vitruvian proportions. Thus, everyone who looks at these "licentious" portals, represented in the *Extraordinario libri* in engravings believed to have been executed by Serlio himself, can admire their outward appearance. However, according to Carpo, the properly designed Vitruvian portals are perceptible only to "initiates"—architects and readers who are able to understand the descriptions, to imagine the portals without their decoration, and to accept the authority of Vitruvius.

The Mask and the Model stems from research Carpo conducted for his 1990 doctoral thesis at the Istituto Universitario Europeo under the direction of Umberto Eco and Joseph Rykwert. In this slim volume, he states that it is important to understand the specific meanings Serlio assigns to the words "simplicity" (*semplicità*), "honesty" (*modestia*), and "necessity" (*necessità*), which are the opposites of "licentiousness" (*licenza*), "superfluity" (*superfluo*), and "extravagance" (*spese veramente inutili*). In Books III and IV, Serlio states that the syntax of the orders must visually reflect the system of support and load (*solidità*). Here, Serlio followed Vitruvius' definition of the mimetic nature of architectural ornament.

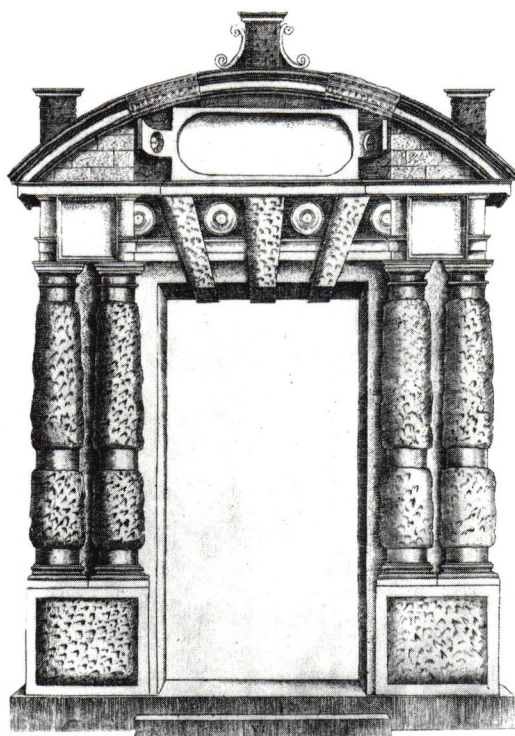
Ornament that does not follow this principle of verisimilitude was "licentious" according to the precepts of Vitruvius. For Carpo, Serlio's thought evolved from a relaxed attitude toward Vitruvius' teachings at the beginning of his publishing career to a more doctrinaire approach in his later books. Thus, Carpo notes that in Book I, Serlio allows the modern architect to depart from Vitruvius' teachings in his designs as long as his use of ornament does not contradict the principles of *solidità* or verisimilitude. In Book IV, Serlio also notes that many of the ancient ruins did not follow the precepts of Vitruvius. In Book III, published three years after Book IV, Serlio condemns all "licentious" architecture, both ancient and modern, and exhorts the architect to follow Vitruvius' teachings strictly.

Carpo believes that Serlio retained this doctrinaire approach to Vitruvius' precepts, even while he was writing Books VI, VII, and the *Extraordinario libro* in France. At the same time, he also developed a new concept of *semplicità* for decoration which had a moral and ethical meaning not found in Vitruvius, thus condemning ornament that was used only for the glorification of the owner of the building and that did not express the system of the orders. Carpo quotes Serlio's call (in Book VII) for an architecture that was "strong" (*soda*), "simple" (*semplice*), "sincere" (*schietta*), "graceful" (*dolce*), and "delicate" (*morbida*), and concludes that this notion of simplicity can be related to Reformist ideals. The relationship between Serlio's inclusion of houses for the poor,



Sebastiano Serlio's 16th-century text *Extraordinario libro* contained etchings (believed to have been executed by Serlio himself) depicting various portals intended as alternatives for the modern architect. (From *Il maschera e il modello*.)

Arch by Sebastiano Serlio,
from his *Extraordinario*
libro. (From *Il maschera e*
il modello.)



which had with little or no decoration, and the concerns of Venetian and Paduan proponents of social reform, such as Gaspare Contarini and Alvise Cornaro who were influenced by ideas of the Reformatio, is not a novel observation.¹ Erasmus had arrived in Venice in 1508 or 1509 as the guest of the publisher Aldus Manutius. Manfredo Tafuri and Loredana Olivato have pursued this argument further, connecting Serlio to several Italian proponents of nicodemical and reformist spiritual doctrines.² For Tafuri, Serlio's dedication of his Book V, *On Churches* (Paris, 1547), to Marguerite de Navarre, Francis I's sister and a Protestant sympathizer, and its citation from the epistle of St. Paul (Corinthians 16:6) are indications of his Protestant sympathies.³

Carpo further strengthens this argument by linking Serlio with the Protestant milieu of Lyons. He considers the choice of Jean I de Tournes as the publisher of his *Extraordinario libro* extremely significant, because de Tournes, a practicing Protestant, was also the publisher of such authors as Étienne Dolet and Erasmus, both protagonists of the Reformation. Carpo intimates that de Tournes may have been attracted to architectural publications because of their seemingly noncontroversial character, as way of avoiding the index of books banned by the Sorbonne.

In *The Mask and the Model*, Carpo goes beyond Tafuri in finding a direct connection between Serlio's protoprotestant, nicodemical, and reformist sympathies and his didactic method in the *Extraordinario libro*. The title of Carpo's book summarizes his proposal that the *Extraordinario libro* is a book with several layers of meaning, one hidden from the ordinary reader by the mask of "licentious" decoration, and the true one apparent only to those initiated in the

principles of architecture as formulated by Vitruvius. He makes an analogy between the "initiated" architect and the true, sincere believer who reveals his faith in his inner soul, such as in Erasmus' *Enchiridion*, for example.

The theoretical significance of Serlio's books on architecture has long been a subject of disagreement among scholars. Rudolf Wittkower, in his *Architectural Principles in the Age of Humanism*, first published in 1949, dismissed Serlio as a theoretician, characterizing his books as "pedestrian and pragmatic, consisting of a collection of models rather than expressions of principle." It must be remembered that Serlio's books on architecture were revolutionary within the context of the development of the illustrated architectural treatise in Europe. Postdating Albrecht Dürer's book, *On Fortifications* (1528), Serlio's seven books were the first illustrated manuals in Europe written in a vernacular language to comprehensively treat the problems and tasks encountered by the modern architect. Up until 1537, when he published Book IV, the only illustrated books on architecture were those by Vitruvius. Serlio's approach was novel, as he stated in the dedication of Book III (1540) that he wished to convey his message in images because they were more truthful than written descriptions.

Serlio presents not only visual images, *invenzioni*, intended as proposals for the architect to transform and adapt in his own modern buildings, but also, as Christoph Theones has perceptively suggested, a literary discourse on different theoretical approaches to architecture, including that of Vitruvius. In the final analysis, Theones' characterization of Serlio as a pragmatic theoretician is perhaps closer to Serlio's own intentions and self-perception than Carpo's description of him as a dogmatic Vitruvian. Serlio's constant references to Vitruvius were often rhetorical because, at the time of his writing, the *Ten Books on Architecture* was the primary illustrated source on architecture. Serlio did indeed need to pay homage to Vitruvius' authority.⁴

In the preface of the *Extraordinario libro*, Serlio states that if readers found his designs very far from the precepts of Vitruvius, they had to take into account the fact that he was writing in a country where such "licentious" architectural decoration was accepted. He made a similar comment in the conclusion to the Munich version of Book VI, *On Domestic Architecture*.⁵

Serlio's inclusion of images of rusticated portals in the *Extraordinario libro*, offered to architects for use either with or without their "licentious" decoration, is analogous to the images in Book VI which present various solutions for the design of palaces, with alternative ground plans, facades, and cross-sections.⁶ Thus I believe that Serlio was not making a value judgment about the superiority of Vitruvian principles in the *Extraordinario libro*, but merely offering alternatives to the modern architect.

While Serlio sympathized with the Reformation, I agree with Tafuri's assertion that reformist and nicodemical philosophical concerns do not explain his

didactic method in his later books on architecture. Carpo's thesis, that the architect who accepts Vitruvian doctrine is akin to the true believer who espouses the spiritual ideals of the Reformation, is less convincing. One must also take into account the fact that Serlio's ideas evolved while he was in France in the 1540s and 1550s. His exposure to French architecture caused him to reevaluate his earlier doctrinaire attitude toward Vitruvius in Book III, which was written in the 1520s and 1530s. It is likely that Serlio actually realized while he was in France—while he was working on Books VI, VII and the *Extraordinario libro* in particular—that Vitruvius' theories could not always be adapted to the needs of the modern architect. Serlio's objectivity with regard to Vitruvius reveals that he had a true sense of the historic distance between his own and Roman times.

Carpo presents Serlio as an elitist whose books could only be understood by "initiates," yet his main contribution was that he made the principles of architecture understandable to people of different social strata. It was Serlio's pragmatism, his belief in the architect's power of innovation, and the fact that he offered visual and theoretical alternatives to the practicing architect, mason, patron, and lover of architecture that made his books so influential in both northern and southern Europe from the 16th to the 19th century.

While I do not agree with all of his conclusions, Carpo's *Il maschera e il modello* is an important contribution to our understanding of Serlio's treatise on architecture. He brings attention to the many layers of meaning in Serlio's work, and reveals him to have been at the forefront not only of innovative trends in architecture but of progressive religious and social philosophies of the 16th century. *

NOTES

1. M. N. Rosenfeld, *Sebastiano Serlio: On Domestic Architecture* (Cambridge, Mass.: Architectural History Foundation, 1978), p. 44.
2. M. Tafuri, "Religious Anxieties and Architecture from Venice to the Court of Marguerite de Navarre," *Venice and the Renaissance* (Cambridge, Mass.: MIT Press, 1989), pp. 51–80, and L. Olivato, "Per Il Serlio a Venezia: Documenti nuovi e documenti rivisitati," *Arte Veneta* 25 (1971): 284–91.
3. M. Tafuri, "Ipotesi sulla religiosità di Sebastiano Serlio," in *Sebastiano Serlio: Sesto Seminario Internazionale* (Centro Internazionale di Studi di Architettura Andrea Palladio di Vicenza, 1989), pp. 57–66.
4. C. Theones, "Prolusione: Serlio e la trattatistica," *Sebastiano Serlio: Sesto Seminario Internazionale*, pp. 9–18.
5. Quoted in Rosenfeld, *Sebastiano Serlio: On Domestic Architecture*, pp. 66, 65.
6. Illustrated in Rosenfeld, "Sebastiano Serlio's Contribution to the Creation of the Modern Illustrated Architectural Manual," in *Sebastiano Serlio: Sesto Seminario Internazionale*, pp. 107–8.
7. Tafuri, "Religious Anxieties," pp. 77–78.

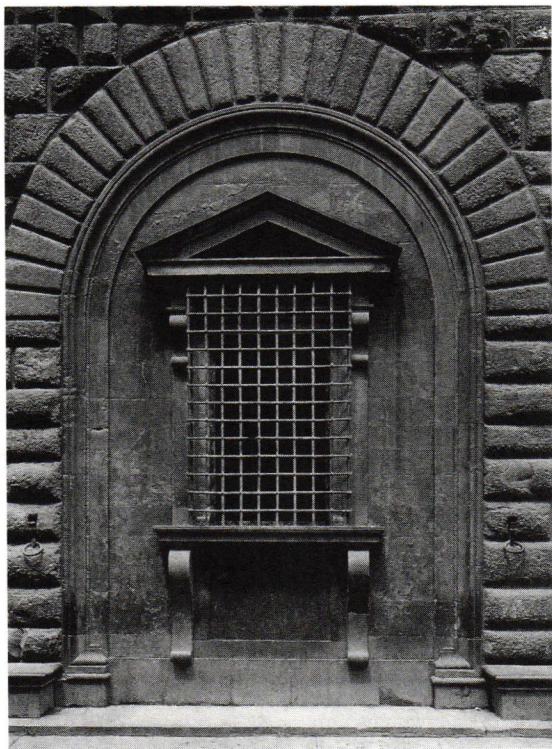
PAOLO BERDINI

EXPERIENCING (MICHELANGELO'S) ARCHITECTURE

MICHELANGELO ARCHITECT, Giulio Carlo Argan and Bruno Contardi, translated from the Italian by Marion L. Grayson, Harry N. Abrams, 1993, 388 pp., illus., \$125.00.

In the late Giulio Carlo Argan's last publication, *Michelangelo Architect*, coauthored with his pupil Bruno Contardi, he offers a critical definition of Michelangelo's architecture centered on what in hermeneutic terms is called the trajectory of beholding. An example of his typically condensed prose reads: "[Michelangelo's] architecture would no longer be a representation for contemplation but almost a traumatic experience which passed through the eyes directly to the consciousness and urged one to action." What does Argan mean by architecture being "no longer representation"? And what is the traumatic experience that, via the eyes, awakens consciousness so that the beholder feels compelled to take action? And what kind of action, then? Accounting for the trajectory from representation to action by means of critical tools that monitor the phenomenology of its experience—including why and how Michelangelo's architecture would be responsible for such "rupture"—is the underlying motif of Argan's essay on Michelangelo. His abstract proposition tackles central problems of Michelangelo scholarship, and one merit of *Michelangelo Architect* is that it reactualizes them.

Argan was an art historian *sui generis*. More at ease with philosophical arguments than with philological data, and better disposed to speculation than reconstruction, he was at home in the realm of ideas and only occasionally frequented the rooms of archives. Unanchored to any specific field, he applied his rigorous attention to diverse subjects, mastering the short essay, a genre that valorized his concise, intuitive, and assertive logic. It was the logic of the essay, with its internal equilibrium and critical economy, rather than a commitment to an external and field-oriented critical agenda, that shaped Argan's work. Unsurprisingly, the virtues and vices of the genre are inevitably amplified in translation (the book was originally published in Italian, by Electa). In English, Argan's cohesive logic acquires an unnatural syntactic gravity that makes his prose somewhat too assertive and exceedingly professorial. The reading of *Michelangelo Architect* is further complicated by the book's format, which combines Argan's essay and Contardi's catalog, presumably in order to conform with Electa's Complete Works series under which the book was issued. While Argan's arguments do not contradict the analytical material diligently surveyed and assembled by Contardi, neither do they clearly rely upon it. The effect is slightly distracting and eventually does a disservice to both authors, and



Detail of "kneeling" window, Medici Palace, Florence; Michelangelo, c. 1517. (From Michelangelo Architect.)

to the reader. As it gradually becomes clear that Argan's thought develops not out of reflection on facts but from internal logic, the Hegelian assumptions of his proceedings also emerge.

Hegel theorized a disruption between form and content in postclassical (read: post-Greek) art. In Hegel's terms, "idea" gradually gained independence from the forms it was reluctantly forced to assume and which it struggled to overcome. Discomfort and inadequacy—the symptoms of a negative relationship between "idea" and form—were, however, instrumental in Hegel's system to making art intelligible only in conceptual,

that is, philosophical terms. Disruption became strategically congenial to the model because it could help to certify the supremacy of spirit over matter, of concept over appearances, of transcendental values over sensible ones. The logical and inevitable resolution of art into consciousness, the final reabsorption of art into philosophy—the so-called death of art—is what Michelangelo's architecture is seen to represent in the history of art. In Argan's view, Michelangelo's architecture, by embodying the postclassical schism between form and content, could present the observer with an object or condition no longer comprehensible in sensible terms alone. The trajectory from representation to action acknowledges this basically Hegelian construction.

As in any Hegelian system, the historicity of this phenomenon is twofold, because its occurrence is grounded in both the artist's intention and the internal development of "idea." Thus, the work of art belongs both to the artist's time and to all times. The problem of reconciling them is common to any historical enterprise and it could be argued that, though to varying degrees, a dual temporality is inherent in any work of art. What is it, then, that makes Michelangelo's art so special in this respect? Is it really arguable, as Argan claims, that in the case of Michelangelo this duality becomes a constitutive element of his work? Or is this just another way to account for the quality of Michelangelo's art?

For Argan, the dual historicity of the work of art renders explanations centered on the dialectic between challenge and accomplishment critically insufficient; consequently, he refrains from resorting to notions such as genius, artistic creativity, and the like, to account for Michelangelo's alterity. Leaving behind forms of subjective emotionalism that presumably attune the experience of the observer with

that of the artist, Argan offers a model for understanding Michelangelo's architecture in terms of the progressive stages of the liberation of "idea" from content and forms of completion. This model privileges potentiality over realization, tendency over accomplishment, *in motu* over completion. Logically and historically, Michelangelo's *non finito* endorses, in his view, the notion of a liminal status of art, of an art that stimulates consciousness rather than contemplation. Yet, when we think of Michelangelo's *non finito*, we tend to think of his sculpture, his incomplete carving, and not of his architecture. Argan, however, does not confine *non finito* to a condition of actual incompleteness of the artistic object, but proposes it as an aesthetic proposition. And in fact, in order to be acknowledged theoretically in Michelangelo's architecture, *non finito* must first be emancipated (just like Hegel's "idea") from its objects, the unfinished sculptures. It is true that *non finito* finds its initial phenomenology in the objects left unfinished (though it does so only in order to transcend it in a condition that typifies the making of art at large), and that it displays a consciousness of what art is in relation to its making. And, according to Argan, this is what Michelangelo's *non finito* enacts historically: consciousness of what art is in relation to its making. But if, in order to be understood as an affirmation of consciousness, *non finito* must be logically emancipated from its accidents, it must also be emancipated from unconscious explanations concerning its maker. Unconscious definitions inevitably exclude history from explanation, and, in fact, attempts at making *non finito* the symptom of a lack of consciousness have often resulted in irrationalizing Michelangelo's architectural style. The most spectacular example of this is Herbert von Einem's association of "transgressive originality" to a psychology of guilty indecision between Christian and classical values. Paradoxically, *non finito* has also contributed to the ideology of the synchronic operation between mind and hand, and in this respect, John Ruskin's rhetoric ("Half his touches are not to realize, but to put power into the form") still stands for everything one wishes to avoid.¹ But the historicity of *non finito* has also a history of its own, to which Argan's Hegelian model makes ample reference. Commenting on Leonardo da Vinci, Giorgio Vasari reported that the artist's hands, however uniquely skillful, could not meet the *difficoltà* of his idea. Later, in *Le Vite*, in which he addresses Michelangelo's *non finito*, Vasari, discontent with accidental causes, subscribes to Ascanio Condivi's notion of Michelangelo's prolonged dissatisfaction with his art, his proverbial *incontentabilità*. Ultimately, Vasari termed this quality *consapevolezza dell'errore*, by which he meant a consciousness that was operative in the imagination though clearly detached from any experimentalism. An explanation for Michelangelo's *errore* had to be sought beyond the artist's awareness of his subjective limits and his struggle to overcome them, so that it could be reclaimed as a manifestation of creative freedom, of *licenza*. (Vasari, too, took *non finito* to be unconditioned by medium; in fact, its first occur-

rence is documented in relation not to sculpture but to the Sistine vault. In replying to Julius II's remarks about the state of "finishedness" of the work, Michelangelo said that "what was missing was not important.")

In Vasari's *Le Vite*, the term *licenza* recurs in relation to *non finito*, and, separately, to architecture; Argan, elaborating on Vasari, employs *licenza* as the logical link connecting the two. As an aesthetic proposition, *non finito* explains the incongruities between architectural orders and their transgression, although Argan avoids the risk of interpreting Michelangelo's architecture simply in light of the rules that it transgresses, preferring to unveil the logic that it sustains. In this respect, *non finito* is seen as indicative not of a revision of the canon, but as "a withdrawal from the classicizing equilibrium of weights and corresponding propositions." Already, Argan argues, the early Florentine works did not subscribe to the classical distinction between construction and decoration, and he openly states that the relationship between "the dynamism of the load-bearing forces and that of the visible elements" could not be normalized according to external rules. On the contrary, it would only be based on an internally generated alternation of continuity and rupture. Rejecting external rules of proportion and replacing them with the logic of internal rhythm, Michelangelo was able to emancipate architecture from the lexicon of typology dear to the Roman School of Antonio da Sangallo, Raphael, and Baldassarre Peruzzi, and to replace it with what Argan terms an "iconological criterion."

Hence, what we experience in Michelangelo's *non finito* is a "resignification" or "resemantization" of architecture involving a critique of the logic of architectural ordering, of typological conventions, and of accepted modes of representation. Yet, as Manfredo Tafuri has observed in his review of this same book, the deconstruction and "defunctionalization" of architecture that Argan attributes to Michelangelo, historically argued in terms of the artist's highly moral and religious stance, is ultimately based on a series of hardly verifiable propositions.² In brief, while highlighting theoretical "symptoms" in the work of art, the employment of *non finito* as a critical proposition at the same time makes their historical verification elusive, and promotes the risk of having to resort to the ideological constructions that have conditioned Michelangelo's studies thus far. Michelangelo's well-known political ambiguities, for example, makes it difficult to maintain, as Argan does, that his drawings for the Florentine fortifications constitute a tribute to republicanism. Or, given the Early Christian revival under Paul IV and Pius IV that elaborated on the evangelism of the circle of Viterbo, in which Michelangelo was active, it is difficult to subscribe to an interpretation of Santa Maria degli Angeli as a tragic architecture in which Christian and pagan aspirations confront each other without possible resolution. The logic of bourgeois values that impose a political idealism on Michelangelo and attempt to clear his religiosity of Tridentine



New Sacristy, east wall above the funerary monument of Giuliano de' Medici, San Lorenzo, Florence; Michelangelo. (From Michelangelo Architect.)

contamination, leaving the artist isolated in a titanic solitude (the ideal art historical artist more than the idealist artist) is to some extent, regrettably, still at work. Argan, however, rescues his notion of *non finito* from operating as a transcendental justification for artistic drama. This is possible because *non finito* is conceived in hermeneutic terms, as the historical agency that secures the separation between creative and receptive activity. In Argan's model, *non finito* signals a stage in the development of "idea" that overcomes the classical principle of the adequacy of form and content to signal the historical appearance of a work of art that can attain closure only within the receiver's participation. In Eugène Delacroix's perceptive formulation—"la fin d'un travail impossible à compléter"—"idea" succeeds in asserting its supremacy by depriving the work of art of closure.³ But the play of "idea," of course, is nothing but making room for discourse. There is nothing metaphysical in the claim that a work of art could be finished in its unfinishedness, that art makes the penultimate the ultimate, and that "the last brush-stroke is the one before last." Whether we like it or not, Michelangelo has given the beholder the prerogative of a last (though inconclusive) word. Argan's argument for the ways in which Michelangelo's architecture signals a shift from representation to action constitutes a critical reminder that making a case for the artist should never supplant the experience of his art. *

NOTES

1. J. Ruskin, *The Seven Lamps of Architecture* (New York, 1852), p. 142.
2. M. Tafuri, *L'Indice* 8, no. 4 (1991): 28–29.
3. E. Delacroix, *Journals* 2 (Paris, 1932): 42.

KURT W. FORSTER

"LA PIÙ BELLA CAMERA DEL MONDO"

One of the dilemmas facing Renaissance artistic practice was the necessity to negotiate between revered—but fragmentary—models of a distant past and the conjectural ideals of the time. In some areas, such as sculpture, the gap between the qualities of ancient examples and those of modern works could be narrowed, even closed; in fact, modern works might ultimately be seen to surpass their ancient counterparts. In other categories, such as fully decorated rooms, the sources were more diverse and the effects more attuned to contemporary expectations. If Renaissance historians already advanced claims to these novel accomplishments, they had as evidence art of enormous variety and intelligence, squarely within the secular realm and of no less a learned kind than that employed for church and cult. The now-hackneyed interpretation of the period as one marked by secularization might still be validated by an impressive series of decorated state rooms in public and private buildings.

From the Sala dei Nove in the Sienese Town Hall, with its unscrolled vistas of town and countryside, to the Vatican *stanze*, the ceiling frescoes of the Roman Palazzo Barberini and Giovanni Battista Tiepolo's seemingly boundless vaults in the *Schloß* at Würzburg, *camere pictae* open up panoramas that mirror the political realm in the world at large. Next to Rome, no Italian city possesses a more varied and coherent series of Renaissance *camere pictae* than Mantua, where major works by some of the most imaginative painters, from Antonio Pisanello to Giulio Pippi de'Gianuzzi, known as Giulio Romano, adorn the residences of the local *signori*. Spread like tapestries or framed within fictive architecture, these scenes of

courtly life assume the guise of fables or the character of political self-representation.

In the Castello di San Giorgio in Mantua, Andrea Mantegna's so-called Camera degli Sposi, known in its time simply as the *camera picta* or *camera dipinta*, suggests a stately loggia, where draperies have been pulled back to reveal scenes of the Gonzaga court. The scene is conveyed with such immediacy that it is perceived to represent events rather than ideas. But some of the historic figures who converse in groups just a few steps beyond and above the viewer may never have met each other in real life, or never have set foot in Mantua. Historian Rodolfo Signorini, who has ventured to identify them more assiduously than previous scholars, falls victim to their delusory powers when he speculates on the content of letters held by some of the protagonists. By pushing his method literally beyond legibility, he nonetheless pays tribute to one crucial aspect of Mantegna's work: the *camera picta* is above all a speculum of the court.

A surprising testimony to the power of this type of representation emerges from a letter about the Duke of Milan who, in 1475, protested his *absence* from the group of illustrious and, in his opinion, somewhat sordid characters whose likenesses were assembled in the painted room of "which everyone speaks and which is universally recognized as the most beautiful room in the world" (*"de la quale in vero ognuno di qua ne parla et universalmente dice chi l'ha vista quella essere la più bella camera del mondo"*). The Duke's envious reaction pays more than rhetorical tribute to Mantegna's achievement; it also acknowledges one of the main purposes of the work—namely, to affect those from near and far who came into contact with the *signori* in such pictorially charged quarters.

The Palazzo del Te, which dates to the 1520s, must be ranked among the most magnificent manifestations of princely display. It caused another admiring visitor, Ludwig of Bavaria, to erect a splendid building of his own in the town of Landshut. There, he hoped to overwhelm and impress to the extent that he himself had been by the Palazzo del Te during his Easter visit to Mantua in 1536. He described it to his brother in Munich on the first night of his stay: "We supped in Federico Gonzaga's new palace . . . and [I] believe that there is nowhere else a palace like this one with its rooms, apartments, and stupendous paintings." Ludwig had already sent his painter, Posthumus, to Mantua a few years earlier for further training with Giulio Romano. Under the fresh impression of Giulio's work, Ludwig decided to build an Italian palace in Bavaria, and thus create for himself a stage for courtly life as dependent on the sway of images as on the powers of his station.

The *camere* and *camerini* with their pictorial lining gathered the crafts into a kind of visual *Gesamtkunstwerk* and enabled them to engage the

View of the west and north walls and ceiling of the Camera degli Sposi in the Castello di Gogio, Mantua; Andrea Mantegna. It is believed that work commenced between 1465 and 1472, and was completed by 1474. (From Mantegna's Camera degli Sposi.)



many diverse interests of their patrons. Perhaps it was the sumptuous wall hangings and tapestries of late-medieval *chateaux*—prized Flemish examples which had come into the possession of Italian patri- cians and princes—that created the sense that the rooms were lined with images. Such uninterrupted pictorial surfaces, which made the walls seem to brim with stories of military exploits or of seasonal chores and pleasures, must be counted among the most sought-after artifacts of foreign manufacture in Renaissance Italy. Little wonder then, that the earliest surviving examples of painted halls, such as the Man- tuan Sala del Pisanello (over nine meters wide and almost twice as long), were filled with episodes drawn from courtly French romance. Only a few decades later, Mantegna's Camera degli Sposi shifts the focus to a distinctly different world: its painted and carved architectural framework and its sharply portrayed personalities found their models in ancient buildings, busts, and reliefs. Mantegna's art created a cultural setting within which the ancient and the modern worlds became fused, and it was in this third realm that he was able to make palpable what had previously been rendered only symbolically.

Another example of a completely frescoed *camera*, the Room of the Zodiac in the Palazzo D'Arco (attributed to Giovanni Maria Falconetto and proba- bly painted around 1520), is so laden with erudite images of ancient architecture and sculpture that its appearance verges on encrustation. A tenacious inter- est in antiquities and appreciation for the pictorial fiction of relief sculpture characterized the local taste for learned images prior to Giulio Romano's arrival in 1524. Giulio brought with him a more *saftig*, luscious approach to art and a much more daring search for visual effects on a grand scale.

Where Mantegna had labored for years in his quest for a seamless pictorial surface (even to the point of including virtually carved details) in his *camera picta*, Giulio dazzled with a series of large interiors at the Palazzo del Te, among which the Sala di Psiche and the Sala dei Giganti have never ceased to attract attention. Under a kind of artificial arbor, the Sala di Psiche fuses dozens of individual scenes into a panopticon in which the episodes of this Hel- lenistic fable embrace the times and locales of psy- che's travails and the celebration of eroticism. In the compartments of the vault, Giulio applied himself to the construction of extremely foreshortened figures, as Mantegna had already done in the *oculus* of his *camera*. But instead of the clear azure of the sky, Giulio rendered the turbulent atmosphere of night, of shady bowers and stormy cloudscares that locate the story's origin in the realm of dreams.

What chivalrous romance provided for Pisanello, psychological fables delivered for Giulio. From refined literary sources of an ancient as well as more recent kind, Giulio drew the motifs of a fabulous mythology that left ample room for private insinua- tion. He did not labor to fill the cracks between mythology and its representation in pictorial fantasy. Bette Talvacchia documents how such discrepancies could become embarrassing in her doctoral thesis on



Detail of the fresco on the north wall of the Camera degli Sposi, where a drapery is pulled back to reveal scenes of the Gonzaga court. (From Mantegna's Camera degli Sposi.)

Giulio's last great frescoed hall, the Sala di Troia in the Palazzo Ducale at Mantua, a project which occu- pied Giulio during the last years of Federico Gonza- ga's life (1536–40).¹ The painter complained about the unpredictable and unreliable progress of the poet Lampridio's "program"—a program whose shortcom- ings compelled Giulio to create his own cunningly syncretic vision of the ancient story within its con- temporary political context. The Sala di Troia extends the unified visual field (embracing the entire undivid- ed vault) of the Sala dei Giganti at the Palazzo del Te to the dimensions of a stately hall. The narrative action rushes around the ceiling's panoramic vista and extends into celestial depth. Giulio advanced the possibility of unbounded—and hence immense— depth beyond anything previously attempted in Renaissance painting. He raised the surface of the earth to the top of the walls, warping every limb of the gods and mortals struggling with one another above the room's cornice. This radical *sotto in sù* does more than extend perspective beyond measure. Where no framework exists to lend scale and focus, it simulates something like the experience of battle of a horseman fallen to the ground, and under the weight of action and the rush of events, the perspectival order collapses into chaos.

Mantegna's famous suite of large canvasses at Hampton Court, representing the triumph of Caesar, also adopted a calculated view from below, so that no ground is visible beneath the feet of the *cortège*. These paintings had the curious fate of not being giv- en a definitive installation before they were fitted into the newly built Palazzo di San Sebastiano a few years after Mantegna's death. The *trionfi* became, as it were, the lining of a *camera picta* in search of a room, much like the grand tapestries of the 14th and 15th centuries which were shipped around, loaned, and hung at state occasions in rooms of very different sizes and kinds.



The Sala di Psiche in the Palazzo del Te in Mantua demonstrates the scenographic grandeur of Giulio Romano's frescoes. The vaults depict Venus' fight against the love of Psyche for Eros. Eventually earning the forgiveness of the gods, Psyche and Eros are wed on Mount Olympus; the main walls depict the celebration of their marriage. The room was completed in 1530. (From *Il Palazzo Te di Mantua*.)

It may be difficult for us to understand how varying and indeterminate the uses of premodern residential spaces remained, but they correspondingly allowed for frequent changes and the easy removal of furnishings. If the Sala del Pisanello could be turned into the kitchen for a distinguished visitor, as it was for Niccolò d'Este in 1471, a bed could be moved into Mantegna's *camera picta* at a moment's notice for the convenience of the marquis of Mantua. Tapestries, of course, could be easily adjusted, hung around corners, folded over, or pulled back like draperies. In many cases it is difficult, if not impossible, to establish their intended location or their exact original size. In the manner of Mantegna's *trionfi*, which went begging for a permanent collocation, Giulio Romano designed a suite of splendid tapestries for the king of France (woven in Brussels in the early 1530s) illustrating the story of another triumphant Roman hero, Scipio Africanus.

The conception of a complete figural lining for interior spaces allowed for widely varying pictorial means and technical methods of execution. Mantegna and Falconetto simulated, in part, architecture, revetments, and sculptural decor by pictorial means; Giulio Romano made extensive use of actual relief sculpture, both in stone and stucco. As Jacqueline Burckhardt shows in her thorough study of the *loggia dei marmi* (the processional and visual conclusion of Federico Gonzaga's *Apartamenti di Troia* in the *palazzo ducale*), Giulio excelled at work that embraced all categories of figuration.² The *loggia dei marmi* is nothing less than the physical assembly and aesthetic integration of ancient and modern sculpture within a tightly constructed framework, as if it had to bear out the flattering opinions of Pietro Aretino and Giorgio Vasari, who both recognized the distinctive quality of Giulio's work as being at once "*anticamente moderno e modernamente antico*."

A century of *camere pictae* in Mantua attests to the persistent goal of creating splendor in a manner where pictorial invention matches the artifice of its

poetic sources. Yet the lavishness of these images also called for an astounding investment of significance in each individual element. These images are woven of many strands, heightened by threads of exotic origin but lined with the sturdy fabric of literary conventions. The images of the *camere pictae* called for a rare combination of talents on the part of their painters: a sense of grand *régie* for sweeping masses of figures must not neglect the details and features of individual characters; at the same time, bifocal attention secured the narrative progress amidst rapidly shifting highlights. Whereas Mantegna required a decade for the execution of a work covering two walls of a fair-sized room, Giulio deployed an *équipe* of collaborators and orchestrated the execution of a series of major decorative ensembles in only a fraction of the time. This, to be sure, is no judgment of either artist or their work; it is merely a recognition of the changes that occurred in the nature of the artifact and its public. With his images, Mantegna simulated their status as *manufatti* (hand-made), whereas Giulio contrasted the creation of *sembianza*, a semblance less of its object than of the way the imagery was to be perceived—that is, in spurts of attention, in grand lines, and, intermittently, in salient features. *

NOTES

1. B. L. Talvacchia, "Giulio Romano's Sala di Troia: A Synthesis of Epic Narrative and Emblematic Imagery," Ph.D. diss., Stanford University, 1981.
2. J. Burckhardt, "Giulio Romano: Regisseur einer Verlebendigten antike, die loggia dei marmi im Palazzo Ducale von Mantua," Ph.D. diss., Zurich University, 1994.

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ALBERTO PEREZ-GOMEZ

THE ARCHITECTURE OF GOD

DIOS ARQUITECTO: JUAN BAUTISTA VILLALPANDO Y EL TEMPLO DE SALOMON, Ediciones Siruela (Madrid), 1991. Volume 1: *First unabridged Spanish translation of Villalpando's In Ezechielem explanationes et apparatus urbi ac templi hierosolymitani* (Rome, 1596 and 1604), by José Luis Oliver Domingo, 596 pp. Volume 2: *Jerónimo de Prado's unpublished manuscript, Compendio de la segunda parte de los comentarios del profeta Ezequiel* (ca. 1593), 154 pp. Volume 3: *Essays by Juan Antonio Ramírez, André Corboz, René Taylor, Antonio Martínez Ripoll, and Robert Jan Van Pelt, edited by Ramírez*. All volumes are illustrated. Two indices (by author and topic) on diskette. Limited edition of 2,000 copies; approximately \$800.00.

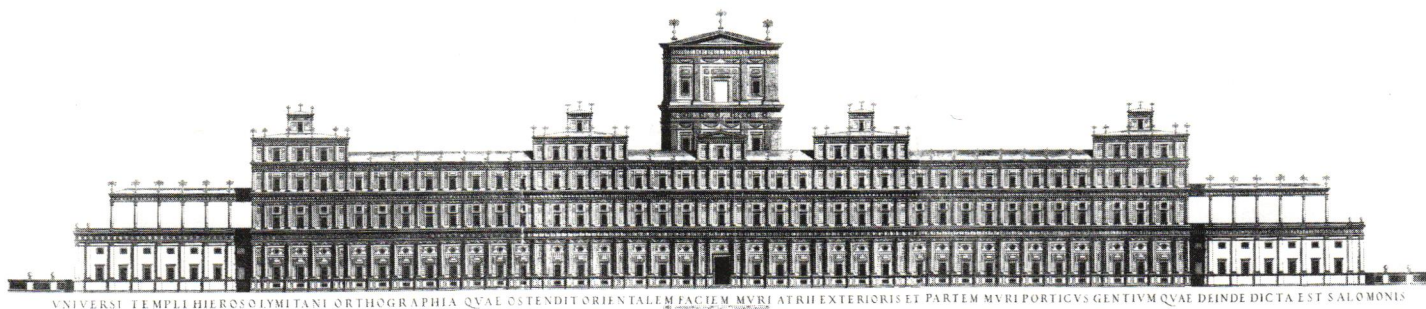
This lavish work, the result of a major scholarly collaboration coordinated by Juan Antonio Ramírez, examines the relevance of the Temple of Solomon in Jerusalem to the history of Western architecture. The importance given in the Bible to the description of the temple has, over time, generated numerous and widely diverging architectural speculations. According to tradition, the temple followed the designs of God, and could therefore be interpreted as the archetypal work of architecture, capable of revealing a true order beyond the whimsical tastes of man and any temporal expressions of political power. Mythical accounts of technological making and building from the most diverse times and cultures demonstrate humankind's keen awareness of the problems of transforming a given, "sacred" world in the interest of survival or improvement. Following in the Judeo-Christian tradition, the Temple of Jerusalem is "the image of production as a path to salvation," in Joseph Rykwert's words, lying at the opposite end of the spectrum from the Tower of Babel, or even the worldly city, regarded in the Scriptures as the necessary (and potentially evil) product of Cain's toil.

After the Renaissance and the Reformation, architects' interest in embodying a mathematical cosmic order in their buildings led to a passionate concern for the proportions and details that could be gleaned from Ezechiel's description of the temple in the Bible. These rules, partaking from the divine *logos*, would constitute a solid ground for good architecture, particularly if they could be aligned with the theory of classical architecture. Juan Bautista Villalpando's three-volume *In Ezechielem explanationes et apparatus urbi ac templi hierosolymitani*, published in Rome in 1596 and 1604, is the most important work establishing this tradition and has become the point of departure for later speculations. While shifting the discourse away from a divine or astrological cosmology, 17th-century writers and architects, interested in a divine genealogy of buildings, focused on the qualitative aspects of the temple (such as its Roman magnificence, as in Johann Bernard Fischer von Erlach's 1725 work, *Entwurf einer historischen Architektur*) or on significant fragments revealing

guidelines for contemporary architectural practice. The hermetic tradition, surviving after the Renaissance through the Rosicrucian movement of the 17th and 18th centuries and Freemasonry in 18th and 19th, also showed great interest in the temple. Conceived as the most important work of divine geometry, the temple was regarded as the origin of the Masonic tradition and as the embodiment of a reconciliatory *techne*. This sacred order, stemming from a coincidence between natural philosophy (science) and revealed religion, could be "put to work" for the benefit of an enlightened humankind through the geometrical know-how of the architect.

The reconstruction of the temple was a subject pursued not only by theologians and architects, but by scientists such as Sir Isaac Newton. The nature of their interpretations is often a key to grasping the broad epistemological implications of a particular author's work, and often reveals important assumptions operating in a given cultural context. In short, the history of the temple constitutes a crucial chapter in the history of Western architectural tradition, particularly after classical culture became syncretically connected with the Judeo-Christian tradition. While today it is mostly historians who take interest in the temple, the issues that fueled the obsession to disclose the temple's architecture in the early modern era are still relevant: in a technological world, driven by secularized dreams of eternal life in paradise, is it possible to build in such a way that our actions become more than a mere solipsistic expression of a will to power?

The focus of *Dios arquitecto* is the translation from Latin into Spanish of Villalpando's *In Ezechielem explanationes*, which is a thorough literary and visual reconstruction of the Temple of Solomon. Although the first volume was signed by Jerónimo de Prado (1547–1595), the other two are unquestionably the work of Villalpando (1552–1608). An architect and Jesuit priest, Villalpando was the disciple of Juan de Herrera, the well-known architect of the Escorial (begun 1563), a project driven by similar motivations. King Philip II's new Catholic seat of government, a college/monastery/palace/sanctuary, was conceived as a new embodiment of Solomon's Temple, and inaugurated a typology that was widely emulated in the subsequent two centuries. Herrera and King Philip shared a passion for the occult disciplines, and it was probably through Herrera that Villalpando secured the support of the king for the production and printing of his monumental work. The engravings for *In Ezechielem explanationes* are superb by 16th-century standards. The thoroughness of the reconstruction, unmatched by any other imaginary or real building of that period, is itself a clear demonstration of the status ascribed to the temple, particularly in the context of the renewed spirituality expected of architecture after the Council of Trent



Eastern elevation of the Temple of Solomon, as reconstructed by Juan Bautista Villalpando; ca. 1594–95. Etching by C. de Mallery, lettering by Bianchi. (From *Dios arquitecto*.)

and its program for the Counter-Reformation.

Villalpando was convinced that Ezechiel's temple was a divine design, the knowledge of which would allow humankind to deduce the rules of a perfect architecture, an architecture with the same status as the divine word revealed by God. Furthermore, Villalpando sought to demonstrate the coincidence between this "revealed" architecture and the cosmological order present in philosophical and occult speculations, particularly the then self-evident astrological order. He also identified the details of the temple's architecture to be classical, putting forward a thesis that located the origins of the classical orders of columns in the Temple of Solomon, rather than in Greek or Roman traditions. This was evidently a convenient argument in the context of the Counter-Reformation, with its deep-seated suspicions of pagan classical themes. Thus Villalpando's work must be understood as an architectural treatise in the traditional sense, bent on revealing the metaphysical dimension that inhabits the order of architecture through the example of all examples, disclosing the way in which architecture may be capable of revealing a transcendental order for humanity. The questions raised by this treatise remained the crucial issues in the history of European architectural theory throughout the 18th century. *Dios arquitecto* is the first modern edition of this significant work, finally providing access to Villalpando's work with an excellent Spanish translation.

As a counterpoint to the first volume, which consists of Villalpando's text, the second volume of *Dios arquitecto* contains a facsimile of the "dissenting" manuscript of Jerónimo de Prado on the same topic,

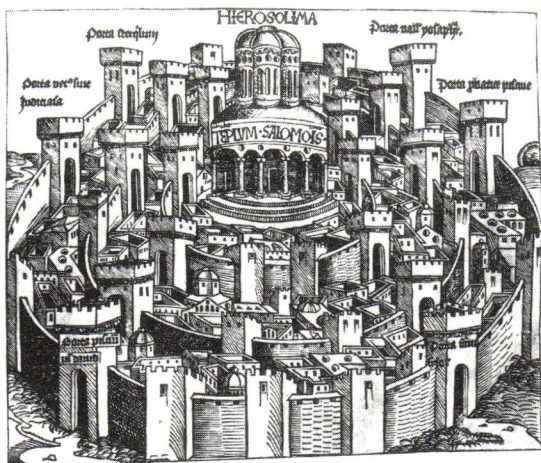
recently located in the Houghton Library at Harvard University. The Jesuit reconstruction of the temple as a manifestation of "legitimate" power had obvious political implications. At stake was the possibility of a Christian architecture in the context of a "modern" world and its living classical tradition. It is not surprising that Villalpando's enterprise in Rome had to overcome all sorts of difficulties, particularly theologi-

cal objections and serious financial limitations. Villalpando arrived in Rome in 1590 and Prado was appointed to collaborate with him in 1592. One can only speculate whether the appointment was motivated by the enormity of the task, or by the alarm of the religious hierarchy concerning some of Villalpando's conclusions. The two men had previously collaborated in a preliminary interpretation of Ezechiel's text, but while in Rome they had serious disagreements. Prado wanted to change the designs of the publication that had already been approved by Philip II, and they could never agree on a definition of their specific writing assignments. Prado died in 1595, signing only the first volume of the *Commentaries*, which is of little interest beyond strictly theological matters. Thus Villalpando was free to write the second volume and the speculative appendices in volume three on his own.

The publication of Prado's manuscript, prepared for the King of Spain in 1593 or 1594, allows a comparison between his ideas and Villalpando's. While there are some differences of detail and emphasis, it is clear that the two Jesuits assumed the fundamental identity between the temple described by Ezechiel and the Temple of Solomon and, perhaps more importantly for architecture, both emphasized the coincidence between the temple and the Vitruvian classical tradition.

While the original works by Prado and Villalpando are obviously the centerpiece of this massive work, the collection of critical essays, independently bound as a third volume, displays an ambition to embrace the whole series of questions surrounding the temple in the history of architecture. The first two essays survey the influence of the temple on architecture and urbanism. Ramírez discusses the medieval identification of the temple with the Dome of the Rock (a centralized archetype), speculating (often without documentary evidence) on the influence of this identification on centralized church design during the Renaissance. He concludes with a concise discussion of Villalpando's reconstruction of the temple. The second essay, by André Corboz, entitled "The City as Temple," examines the manner in which Judeo-Christian cities from the Middle Ages to the end of the *ancien régime* were construed as an anticipation of Heavenly Jerusalem. Corboz brilliantly surveys the different modalities in which the "City of God" affected urban form in this period. While in medieval instances the physical interventions were minimal and effective, by virtue of analogy with the

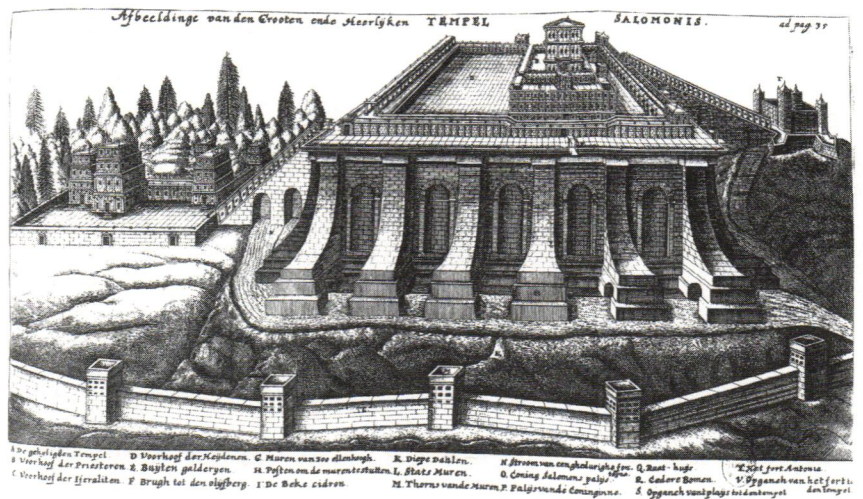
Etching of Jerusalem, from Hartmann Schedel's *Liber Chronicarum*. (From *Dios arquitecto*.)



mythical geography and topography of Jerusalem, the Renaissance (after Maimonides) initiated the tradition of orthogonal reconstructions. First, there appeared a layered, syncretic symbolization: the Renaissance city as both cosmic order (Greco-Roman) and temple (Judeo-Christian). Later, urban extrapolations were less frequent but more literal. Corboz concludes that Castel Clementino (today Servigliano, in Eastern Italy), commissioned by Pope Clement XIV in 1772 as a reaction to Enlightenment urban life and the most literal large-scale materialization of the temple in European urban history, was paradoxically no longer a true architecture for a society that was obviously losing its faith in the Temple of Jerusalem as an archetype of order.

This essay is followed by a section that surveys, in chronological order, a selection of traditional reconstructions of the Temple of Jerusalem. With short yet comprehensive illustrated entries, this section provides a wealth of information. While all the reconstructions are based on a handful of ancient texts, a few archaeological remains, and the topography of Jerusalem, the results are amazingly (if not surprisingly) diverse, depending on each author's cultural context, theological presuppositions, and personal imagination. The reconstructions are always, with perhaps the sole exception of Claude Perrault's, imagined in the "style" of the authors' preferences in contemporary architecture. Thus, "original Truth" could be embodied in a living architectural practice. The selection starts with Maimonides, who initiated the Jewish genealogy of reconstructions in the 12th century, and ends with the truly "archaeological" project of André Perrot and Charles Chipiez, published between 1882 and 1914.

This compilation includes the first Christian reconstruction by the Franciscan Nicolás de Lyre (c. 1270–1349), and the important Renaissance works of François Vatable and Benito Arias Montano (1527–98). Montano was an important opponent of Villalpando's reconstruction and the controversy between them is examined more closely by René Taylor in the fourth essay of this collection. Montano questioned Villalpando's cosmological and magical framework, insisting instead on a more careful consideration of other Biblical buildings, such as Noah's Ark and the Tabernacle of Moses, which he saw as archetypes in a genealogy culminating in the temple. Although Montano's own reconstruction is hardly archaeological and draws heavily from Spanish mannerist architecture, his more "historical" attitude toward the problem is indeed different from Villalpando's and became normative for 17th-century authors. Particularly poignant is Montano's drawing of the plan of Noah's Ark, the first building in the sacred genealogy, in the form of a coffin containing the dead body of Christ as the generator of the sacred proportions. This is radically different from Villalpando's Vitruvian man and his syncretic Renaissance vision. Like Hans Holbein's painting on the subject, Montano emphasizes God's mortality. The authority associated with the proportions of a mortal Christ is not the same as the absolute harmony and numerolo-



gy dictated by the remote and arcane eternal Creator. Montano is already "weakening" the absolute cosmological picture that grounded traditional architecture. His temple does not follow a perfect geometry, and this profoundly disturbed Villalpando. One could speculate that Montano's proto-baroque project, once secularized, weakens the technological imperative that drives our incomplete post-urban "paradise," itself a projection of the messianic expectations associated with the Heavenly Jerusalem.

Juan Caramuel de Lobkowitz (1606–1682), the most distinguished Spanish successor of Villalpando, also engaged in a polemic about the temple. He was a polymath and prolific writer whose *Arquitectura civil recta y oblicua* (1678) was the only architectural treatise to include the temple as a model (usually the reconstructions were autonomous or remained in the context of theological writings). His openness to invention and questioning of Vitruvius' authority were legitimized by a genealogical understanding of architecture originating with the temple. Caramuel used Jacob Jude Leon's reconstruction as a point of departure (a "Jewish," asymmetrical variation on Villalpando's), while adopting Arias Montano's premises. Ramírez, the author of this entry on Caramuel, emphasizes the lack of a complete vision of the temple in Caramuel's work, and qualifies his fragmented use of the Temple of Solomon as "deconstructive." The use of this loaded adjective could easily lead to a major misunderstanding of the baroque mind and the beginnings of a historical consideration of precedent in architecture. The dispersion of Babel, represented by the fragmentation of artifacts (and languages) in our tradition, was recognized as a fundamental problem in the 17th century, particularly after the Reformation. A way out of the dilemma, i.e., the reconstitution of a *lingua universalis*, was nevertheless perceived as possible. The vehicle was a genealogical enterprise, with an allegorical dimension rather than a belief in a directly accessible cosmological unity. If, according to Caramuel, "oblique" architecture was arguably superior to "straight" (Vitruvian) architecture, this was because God had created the world obliquely (the mountains, the orbits of the planets, and so on). In the details of the temple, such as its

Reconstruction of the Temple of Solomon, by J. J. León, 1665. (From Dios arquitecto.)

windows and columns, Caramuel finds evidence of this obliquity. Like René Descartes and Perrault, he rejects the absolute value of authority and even recognizes that the architecture of the temple, “from a different time and place,” cannot be directly applied in the present. Yet, his confidence in the theological guarantee of purpose and in the possible recovery of a cabalistic mathematical discipline is still very distant from post-Nietzschean nihilism.

Perrault’s reconstruction, based on Maimonides, is the first with elevations that tried to reproduce a Jewish “style,” rather than simply referring to contemporary traditions of design. Essayist René Taylor points out that Perrault’s attitude is motivated by his dislike of Villalpando’s reconstruction, and is related to the French architect’s Jansenist leanings, which brought him closer to Protestantism than to Catholicism. While these connections are well known, Perrault never reneged his Catholic background. In my view, Perrault’s proposal involves a much larger issue. This first archaeological attempt at reconstructing the temple is explicitly *independent* of theological preferences, in line with Perrault’s proto-positivistic understanding of science and architecture. We should not forget that Perrault was the first architectural writer to question the inveterate relationship between macrocosmos and microcosmos represented by architectural proportions, and to transform theory into a book of recipes whose sole purpose was to foster efficient practice. It is significant in this regard that the Protestant reconstructions of Coccejus and Johannes Lund (examined by Robert Jan Van Pelt), who, like Perrault, started from a similar disagreement with Villalpando and from an examination of alternative Jewish sources, do result in familiar visions for Protestant spaces of worship.

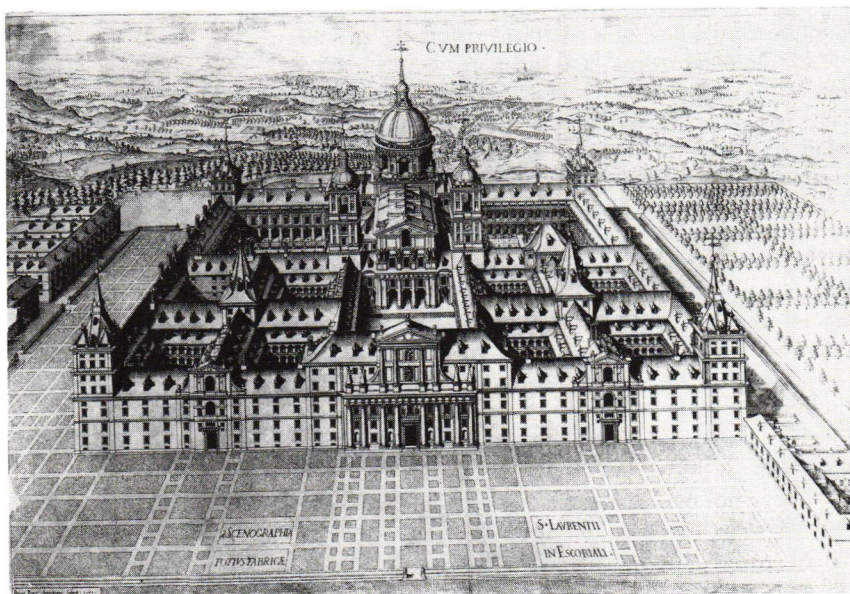
Taylor also analyzes Isaac Newton’s reconstruction of the temple. The physicist’s interest in the temple, driven by mystic and religious speculations, aims to show the coherence between the Old and the New Testaments. Newton disagrees with Villalpando and ignores Vitruvius. He believes that the tradition of the

temple is exclusively Judeo-Christian. Nevertheless, his reconstruction coincides with a cosmological order that would not have displeased Villalpando. This “conservative” aspect of Newton’s epistemology is coherent with the implicit metaphysics and theology that underlie his natural philosophy. Newton’s obsession with singular and self-evident explanations is particularly explicit in his physics. Unfortunately, Taylor doesn’t place Newton’s reconstruction in the larger context of his scientific work. We may recall that the postulation of the absolute space of universal gravitation and its identification with God probably derived from Jewish medieval sources. The unity of historical traditions, consistent with the unity of a rational nature, was crucial for Newton and for 18th-century art and architectural theory. More explicitly, it plays an important role in the historical legitimization of Freemasonry. The affinity of Newton’s deism with Freemasonry has often been observed, and the survival of the temple archetype in the rituals of initiation of the secret society is well documented, as is the association of many 18th- and 19th-century European architects with the lodges. It is regrettable that treatment of this question is absent from this otherwise extraordinary collection of essays.

Following the survey of “scientific” reconstructions are three chapters specifically on Prado and Villalpando’s work. Ramírez discusses Philip II’s financing of both the Escorial and Villalpando’s project, the nature of economic power as symbolic power, and the use of the projects to legitimize colonial exploitation and to demonstrate the sovereign’s Solomonic wisdom. Antonio Martínez Ripoll provides a careful art historical and bibliographical account of *De Ezechielem explanationes* as an artifact, discussing the team of engravers and draftsmen involved in the project and adding precise information to contextualize the publication of the work. The pivotal essay from an architectural point of view is by Taylor. He places the Jesuits’ work in the context of all known prior reconstructions of Solomon’s Temple and sketches a detailed biography of both authors, including their architectural practice (particularly Villalpando’s). He traces the origins of the project to Villalpando’s relationship with Herrera, emphasizing the architect’s interests in occult mathematics, alchemy, magic, and the Lullian arts (Ramon Lull’s medieval Christian interpretation of the Jewish Cabala). Villalpando’s treatise, in fact, can be regarded as Herrera’s theoretical justification. Suffice it to recall that the reconstruction was originally visual, the text having been completed much later. Furthermore, as Ramírez points out in his first essay, there are close parallels between the drawings prepared for the Escorial and those of the temple. On the other hand, we know that Prado was a conservative scholar; at his request, the General of the Jesuits had already decided to censor Villalpando’s astrological and Pythagorean speculations. Had it not been for Prado’s early death, the work probably would have been a more sober example of Counter-Reformation exegesis.

Villalpando discusses vision extensively, including perspective (*perspectiva artificialis*). The assertion

Monastery of the Escorial, begun in 1563, seventh drawing from the set of plates by Juan de Herrera. (From Dios arquitecto.)



that perspective is important as a generative device for architecture is itself exceptional in a Renaissance commentary about the traditional Vitruvian recommendations, as is Villalpando's insistence on architecture as an intellectual, explicitly nonpractical discipline (usually, a balance between *fabrica* and *ratiotinctio* was the expressed ideal in treatises). One might speculate that Villalpando's depiction of the temple, a true "visual theology," is imagined in the context of Jesuit practices of visualization as God's own vision—a projective vision which is nevertheless absolutely precise (appearing exclusively through plans and elevations), which the architect might share as a point of departure for his own ideas. This amounted to a "divinization" of the architect, founded on the model of the medieval Augustinian Creator. At the same time, this signaled a potentially modern intentionality once this status was accepted but secularized, leading to a qualitative transformation of the very nature of architectural theory and practice, and the traditional relationship between them.

The symbolism of Villalpando's temple and its relationship to the Escorial are described extensively by Taylor (this material is partially familiar to English readers from his essay "Architecture and Magic," in the *festchrift* collection for Rudolf Wittkower [London: Phaidon, 1973]). The temple is a microcosmos: musical and Pythagorean harmonies, astrology, Biblical symbolism and numerology, the theory of the Aristotelian elements and the bodily humors are all related by analogy in this divine cubic architecture. Taylor demonstrates Villalpando's thorough incorporation of Vitruvian theory and its astrobiological framework, leading to an understanding of the classical style of the temple as type (a prefiguration in the Biblical sense), repeated in ancient classical architecture and its five orders, all synthesized in view of the ultimate task of man: to build an architecture as the mystical body of Christ.

The final essay by Robert Jan Van Pelt goes beyond the traditional reconstructions and offers a modern account of the "real" Temple of Solomon, explaining the differences between the historical biblical buildings. Today we know much more about the archaeological reality of biblical buildings, and Van Pelt does an admirable job of discussing the first temple (by Solomon), the legitimizing role of the Tabernacle of Moses, the particularities and specificity of Ezechiel's vision, the less important second temple (after the Babylonian exile), and Herod's modification—all this in the context of the social and political reality of ancient Judea and Israel. He examines the most reliable 20th-century reconstructions of the temple and offers his own version.

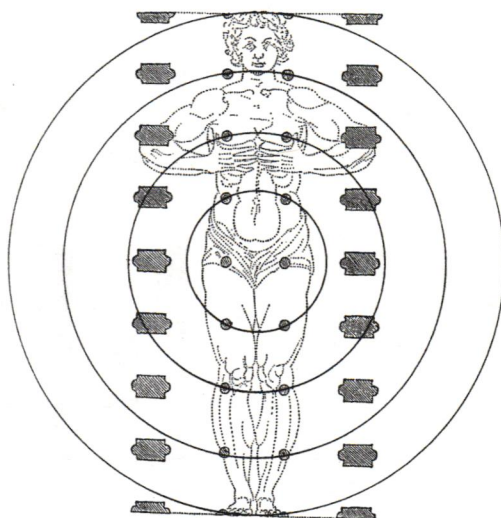
Starting with the premise that a building becomes Architecture only when it embodies the political and social reality of a nation and "clarifies" the ideals of its institutions, Van Pelt purports to offer the historical truth about the subject, in contrast to traditional works that self-consciously reconciled cultural differences and contradictions "in order to hide the real under a veil of idealities." Implicitly questioning the importance of the "world of the work," so meticu-

lously reconstructed by his colleagues Taylor and Ramírez, he believes Villalpando's version is "arrogant," an imaginary deception aimed at demonstrating the absolute Catholic truth in the polemic context of the Counter-Reformation. It must be pointed out, nevertheless, that Van Pelt's pragmatic historicist discourse is also fraught with dangers. The supposedly self-evident premise that architecture is an act of political "clarification" for a social "reality" begs the question of what role is played by the personal imagination of the author or architect—something crucial to those traditional works perceived by

Van Pelt as fraudulent. Isn't this imaginative faculty the very vehicle by which an ethical dimension might occupy an intersubjective (political) space in architectural practice? Van Pelt's deterministic premise seems to negate the importance of this dimension, which is where, in my opinion, the specificity of architecture is located. In other words, for a historicist reading, the distinction between the Temple of Jerusalem (as the archetype of a *techne* of reconciliation) and the Tower of Babel (as a *techne* of arrogance and domination) is a mere delusion: both have the same status as architecture as long as they embody the "real" order of society. Despite, or rather, *because* of the cultural abominations issued from technology during the 20th century, cultivating our ability to perceive such differences is paramount. While redemption, as promised by the vision of the temple, is an unfashionable word and perhaps an impossibility, practicing architecture in view of this distinction may still allow contemporary culture to survive the present epoch of nihilism.

This enormous work possesses both academic rigor and clarity of exposition. Despite some inconsistencies, often dangerously tacit, the critical papers are of high quality. Most of the contributors are experts on the Renaissance, and, in general, the essays devoted to the 16th-century material are more insightful than those dealing with 17th- and 18th-century reconstructions. Most striking, however, is the stunning quality, iconographic richness, and rhetorical power of the document itself. In *Ezechielem explanationes*, now made more accessible by *Dios arquitecto* through the enlightened patronage of Madrid-based publishing house Ediciones Siruela, is indeed a crucial primary source for anyone interested in the history of Western architecture and in the proper interpretation of our tradition as a point of departure for scholarship and practice. *

SINGVLARVM
PORTICVVM, ET HV-
MANAE STATVRAE SIMILIS
DISTRIBVTIO.



Equation of human and
classical proportions.
(From Dios arquitecto.)

DENIS BILODEAU

BOOKS AND BUILDINGS

THE MARK J. MILLARD ARCHITECTURAL COLLECTION, VOLUME I: FRENCH BOOKS, SIXTEENTH THROUGH NINETEENTH CENTURIES, introduction and catalog by Dora Wiebenson, bibliographic descriptions by Claire Baines, National Gallery of Art and George Braziller Press, 1993, 502 pp., illus., \$90.00.

Mark J. Millard had a successful career in the world of finance before becoming one of the most distinguished private collectors of architectural books in America. Long a dedicated photographer, his interest in rare books and prints developed at the end of the 1950s when he began to purchase series of views and cityscapes. In the 1960s he bought a large part of the Mewes collection of architectural books in Paris and continued to build on this solid base until his death in 1985, when his collection went to the National Gallery in Washington.

The Millard collection of approximately 560 architectural titles published from the 16th through the 19th centuries includes mainly French and Italian publications. British works and German-language publications are also well represented, and there is interesting material from the Netherlands, Spain, Scandinavia, the Czech Republic, and Russia. The National Gallery plans to publish a series of catalogs documenting the entire collection. The first volume of the series, reviewed here, covers French books from the 16th through the 19th centuries.

The volume contains some of the most significant treatises on architecture published during this period, such as Philibert de l'Orme's *Premier tome d'architecture* (1567–68), Jacques-François Blondel's *Cours d'architecture* (1675–83), Germain Boffrand's *Livre d'architecture* (1745), as well as works on perspective and stereotomy by Jean Cousin, Jean-François Niceron, François Derand, Edme Sébastien Jéaurat, and others. The collection is primarily comprised of luxuriously illustrated books and bound series of engravings of ornaments, buildings, gardens, topographic surveys, and royal ceremonies. It includes, for instance, several volumes of prints and engravings of royal estates and views of conquered cities from the king's collection by Jean Marot, Israël Silvestre, and Perelle, as well as fully illustrated monographs on architects and individual buildings such as François Mansart's *Hôtel des Invalides* and Victor Louis' theater in Bordeaux. The ornamental works and designs for interior and exterior decoration by Jacques Androuet Du Cerceau, Antoine Le Pautre, Jean Berain, Juste-Aurèle Meissonnier, Gilles-Marie Oppenordt, Jean-Pierre Mariette, Jacques-François Blondel, Jean-François de Neufforge, Jean-Charles Delafosse, and many other distinguished architects are also generously represented. Moreover, Millard owned copies of the most significant archae-

ological surveys of the period, including works by Antoine Desgodets, Charles-Louis Clérisseau, and Julien-David Le Roy, and some magnificent illustrated picturesque travel accounts by J. B. de Laborde, Count Choiseul-Gouffier, and Jean-Claude-Richard de Saint-Non. His collection culminates with the thirty-eight volumes of *Description de l'Égypte*, published between 1821 and 1830 as a result of the Napoleonic military and scientific campaigns. Finally, Millard's collection also has a fair representation of commemorative publications—notably, the work documenting the ceremony and mass for the coronation of Louis XIV in Rheims in 1654, engraved by Le Pautre; and Blondel's description of the marriage ceremonies of Louise Elizabeth and Infant Dom Philippe of Spain in 1739.

The 172 entries in this volume are well-documented bibliographic descriptions prepared by Claire Baines. They are precise and provide especially interesting information on the illustrations and their designers and engravers. The volume also includes excellent reproductions of selected illustrations from each book. The catalog was written by Dora Wiebenson, who is considered an authority on the history of architectural books. She has written on 18th-century archaeological publications, picturesque theory, and French garden books, and as the editor of *Architectural Theory and Practice from Alberti to Ledoux* (Chicago: University of Chicago Press, 1982). For each entry in the Millard collection, she provides a general biography of the author and documents the publication history, which is her most original contribution to this volume, in my opinion. Wiebenson was also responsible for the general introduction to the catalog. According to its typological and genealogical approach, the introduction highlights the importance of some key generic works in all the different categories of books represented: Leon Battista Alberti, Vitruvius, Sebastiano Serlio, Du Cerceau, de l'Orme, Roland Fréart de Chambray, Desargues, Blondel, Claude Perrault, Marot, Le Pautre to name only a few, hold a privileged place in the discussion as progenitors of subsequent publications in their respective domains. This emphasis is in fact extremely representative of the state of contemporary historiography on French architectural publications, which has concentrated on the content of individual treatises and chains of ideas.

According to Wiebenson, the Millard collection "must be considered a formal manifestation of architectural design and theory during almost four centuries of its development." It provides "evidence of changing attitudes and infinite adaptability to the needs and fashions of the time in which they appeared," and has enough scope and depth to tell the story of French architectural publishing. In fact, the quality and value of the collection are undeniable, but it would be more true to its particular merit

to describe it in the general context of the production of architectural publications in France rather than crediting it as a microcosmic representation of the history of its publishing.

Indeed, books on architecture published in France between 1525 and the beginning of the 1800s represent a vast collection of diverse documents. During these centuries, the term "architecture" encompassed much more than it does today. It referred not only to a large variety of building types, but also to infrastructure, city planning, fortifications, gardens, scenography, furniture, and machinery. Each field generated its own solid bibliography of books and prints. The period also produced a generous body of scientific and technical literature for architects and engineers. These included books on perspective, geometry, hydraulics, measurement, stereotomy, land surveying, topography, and construction techniques. Furthermore, in addition to specialized treatises, essays, model books, monographs, memoirs, and articles, other publications such as travel books, novels, philosophical essays, history and archaeological books formed significant sources of architectural ideas and images. Thousands of titles have been recorded in major library and museum catalogs. They form the context and background against which the Millard collection can be fully appreciated.

Unfortunately the catalog does not provide a complete portrait of the architectural production of the time, as it claims to. It contains almost nothing on military architecture and infrastructure. Crucial late-18th-century issues, such as the design of prisons, hospitals, and asylums, are not even hinted at. Building science and technology make only slight appearances and most polemical pamphlets and essays in architectural and urban criticism are significantly absent. This collection is clearly centered on civilian architecture—with a somewhat aristocratic character at that. Moreover, the catalog introduction does not do full justice to the particular strength and orientation of the collection. The unprecedented evolution of the culture of imagery in architecture during the 16th, 17th and 18th centuries has rarely been so well exemplified as in this group of publications. This quality merits attention. Furthermore, such a concentration of illustrations of ornaments, buildings, and landscapes points to an important early modern cultural phenomenon: the consolidation of architecture as an autonomous formal entity and the instrumental role of images in a gradual reification of the built environment. Surely these illustrations deserve to be treated as more than merely an expression of the styles and "fashions of the time."

On the whole, although the historical significance of Mark J. Millard collection remains to be assessed, Wiebenson and Baines have assembled an impressive amount of information on each individual book. This volume is an excellent sourcebook for bibliographers and architectural historians. *

RICHARD CLEARY

BEAUTY: ABSOLUTE OR ARBITRARY?

ORDONNANCE FOR THE FIVE KINDS OF COLUMNS AFTER THE METHOD OF THE ANCIENTS, Claude Perrault, introduction by Alberto Pérez-Gómez, translated by Indra Kagic McEwen, Getty Center for the History of Art and the Humanities, Texts & Documents series, 1993, 196 pp., illus., \$29.95 (cloth); \$19.95 (paper).

THE GENIUS OF ARCHITECTURE; OR, THE ANTHOLOGY OF THAT ART WITH OUR SENSATIONS, Nicolas Le Camus de Mézières, introduction by Robin Middleton, translated by David Britt, Getty Center for the History of Art and the Humanities, Texts & Documents series, 1992, 224 pp., illus., \$29.95 (cloth); \$19.95 (paper).

In the late 1670s and 1680s, Nicholas-François Blondel, professor at the Académie Royale de l'Architecture, and Claude Perrault, a member of the Académie Royale des Sciences and a distinguished amateur architect, engaged in a debate that resonated in the writings of architectural theorists for a century. At issue was the question of whether or not architectural beauty and meaning were subject to absolute principles. Blondel (1617–1686) argued the affirmative case and drew on the authority of ancient and Renaissance masters to support his position. Perrault (1613–1688) challenged this prevailing belief and cited the inconsistencies evident in the writings and works of the masters to demonstrate that beauty and meaning were the products of circumstance and social convention.

Blondel's position remained the official doctrine of the Académie Royale de l'Architecture in the 18th century, but Perrault's theses signaled the beginnings of wide-ranging inquiries into the fundamental nature of architecture that ultimately shattered the canon. Although excellent secondary accounts of this literature are available in English, few of the primary sources have been translated. A notable exception is Wolfgang Hermann's 1977 edition of Marc-Antoine Laugier's influential *Essay on Architecture* (1753).

The Getty Center for the History of Art and the Humanities has recently contributed translations of two other important treatises as part of its Texts & Documents series: Claude Perrault's *Ordonnance for the Five Kinds of Columns After the Method of the Ancients*, published in 1683, and Nicolas Le Camus de Mézières', *The Genius of Architecture; or, The Analogy of That Art with Our Sensations*, published in 1780. The Getty editions have been elegantly designed by Laurie Haycock Makela and Lorraine Wild. The translations are carefully considered and fluid, and the introductions and notes will be of interest to specialists and nonspecialists alike.

The books are fascinating to read as a pair, for they represent two poles of the discourse emanating from the Perrault/Blondel debate. Perrault's *Ordonnance* is the key text challenging the notion of abso-

lutes; Le Camus' *Genius of Architecture* seeks to redefine them a century later in terms of new theories of the senses.

Claude Perrault was a physician respected for his anatomic and other biological research. Through the agency of his brother, Charles, an author and courtier closely involved with the crown's artistic policies, he was allowed to pursue his interest in architecture in close proximity to influential figures who secured several important appointments and commissions for him. In 1667, for example, Claude Perrault was a member of the committee responsible for the design of the east facade of the Louvre and was commissioned to design the royal observatory in Paris. Two years later he was commissioned to design a colossal triumphal arch at the Porte Saint-Antoine, and in 1673, he published a scholarly translation of Vitruvius' *De architectura libri decem*.

Ordonnance for the Five Kinds of Columns, published a decade later, casts many of the conclusions he had reached in his study of Vitruvius into a prescriptive treatise addressing the composition of the five orders of columns—Tuscan, Doric, Ionic, Corinthian, and Composite. Perrault and his contemporaries regarded the architectural orders as the principal vehicles of architectural beauty and the settings in which theories of architecture were to be postulated.

Extended discussions of guttae and proportional modules can be difficult reading for those versed only in contemporary settings for architectural theory, but Alberto Pérez-Gómez's introduction offers an accessible approach to the critical assumptions and attitudes underlying Perrault's text, as well as ample reasons why they are of more than antiquarian interest to us. Readers familiar with Pérez-Gómez's *Architecture and the Crisis of Modern Science* (Cambridge, Mass.: MIT

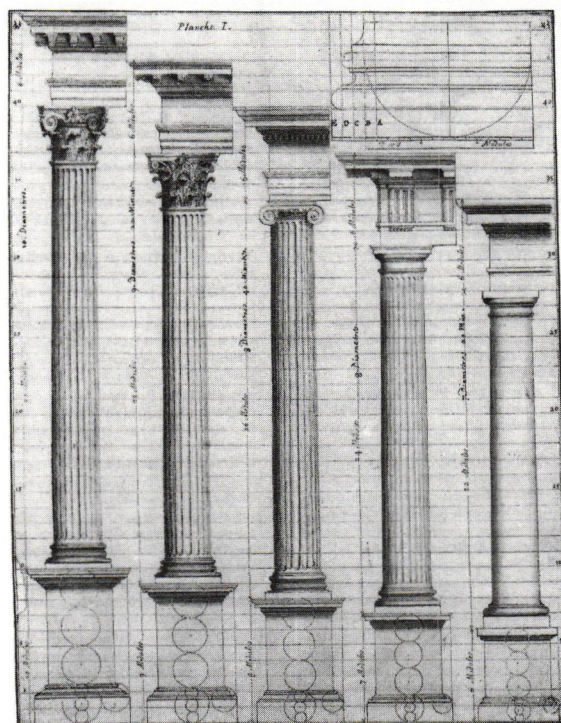
Press, 1983) will recognize his forcefully articulated thesis that architecture is in crisis today because, like Western society in general, it is no longer guided by enduring principles linking method and metaphysics. For him, Perrault is pivotal to this breakdown.

Pérez-Gómez explains that, although Perrault wasn't the first to recognize inconsistencies among the proportions assigned to the orders by Vitruvius, Palladio, and others, he rejected the analysis of his contemporaries, such as Blondel, that accounted for them as problems of interpretation of an universal ideal. In place of a single ideal, he postulated two kinds of beauty in architecture. The first, "positive" beauty, based on what he called convincing reason, he related to the "demonstrable" quality of materials and craftsmanship. The second, "arbitrary" beauty, including composition, he considered the result of social custom and, as such, can be expected to differ among various peoples. From this position, Perrault took the liberty of offering his own system for proportioning the orders, which he promoted as logical, easy to use, and compatible with historical precedents. Despite the relativism of his premise, Perrault was no advocate of "anything goes"; rather, he expected that others would recognize and embrace the perfection of his system. His expectation was not unrealistic, for at the same time, officials of the court of Louis XIV were seeking to institute binding systems in other areas of culture and governance.

Perrault's empirical and mechanistic epistemology led him to attack other venerable principles. Among these was the concept of optical adjustments, which allowed designers to "correct" the appearance of features viewed from unusual angles or distances by deviating from the normative proportions. He argued that, despite the recurrent appearance of the concept of optical adjustments in theoretical writings, architects throughout history rarely applied it in practice. This failure, he reasoned, represented an acknowledgment that such adjustments were unnecessary because the eye and brain automatically and perfectly resolve the unusual through comparison to previous experience.

Like Perrault, Le Camus de Mézières believed in the infallibility of the senses, but whereas Perrault addressed their ability to take measure of the world, Le Camus based his treatise on their role as conduits to the "affections of the soul." Little is known about Le Camus (1721–after 1793). He was a professional architect whose major buildings are the Halle au Blé (1763–67) and the Hôtel de Beauvau (1768–70), presently the Ministère de l'Intérieur, both in Paris. His publications include several technical books on architecture and construction, a romance novel, and a digest of almanacs, none of which anticipate the point of view and method of *The Genius of Architecture*.

As Robin Middleton explains in his introduction to the treatise, Le Camus was one of a number of authors in the 18th century who found the essence of architecture in the concept of character rather than in the proportions conveyed by the architectural orders. Character, for Le Camus, was the sum of the shapes,



The architectural orders, from Claude Perrault's *Ordonnance for the Five Kinds of Columns After the Method of the Ancients*, 1683.

colors, smells, and textures employed in the design of a building. Together, they acted upon the senses to induce certain predictable sensations in the observer.

Underlying this belief are the ideas that knowledge is a function of sensory perception and that the senses consistently respond to specific forms in specific ways, just as certain combinations of musical tones are associated with different moods. Middleton deftly sketches Le Camus' sources for this thesis, which include Etienne Bonnot de Condillac's theory of sensualism and theorists of the picturesque garden, notably Thomas Whately, Claude-Henri Watelet, and Jean-Marie Morel.

The Genius of Architecture begins with a relatively brief section on general architectural principles, presented more as aphorisms than as persuasive arguments. It acknowledges the importance of proportion in architectural design but subordinates it to character. It does not dwell on the orders, referring readers to a model book by Nicolas-Marie Potain, and recognizes the value of bold experimentation: "There are barriers that the mind cannot cross when following well-trodden paths. There are times when to stray is to make new discoveries." Throughout, Le Camus urges architects and clients to envision architecture in terms of unified effects, in the same way that stage designs are conceived for the theater. In this spirit, he accepted optical corrections because he believed that meaning was embedded in the object and not, as Perrault maintained, in the mind.

Among the elements that architects can manipulate to create expressive character are light and shadow. Although their importance is implicit in the classical language of entablatures and decorative moldings, Le Camus was among the first to address them in conceptual terms. "Like the skillful Painter," he wrote, "[the architect] must learn to take advantage of light and shade, to control his tints, his shadings, his nuances, and to impart a true harmony to the whole." These passages appear to have been among the most influential in the book. They inspired both Etienne-Louis Boullée, who drew on *The Genius of Architecture* for his own *Architecture: Essai sur l'art* (written between 1780 and 1795, but not published until 1968), and John Soane, who made a partial translation of the book in 1808.

Most of the text of *The Genius of Architecture* is devoted to an extended demonstration of how character is to be given to the programmatic and expressive requirements of a hypothetical Parisian townhouse. As an indication of how Le Camus attempted to deal with these issues in his own practice, Middleton has included the specifications for the Hôtel de Beauvau as an appendix. Le Camus presents his ideas room by room, proceeding from the vestibule to the stables. Middleton notes that this is the first time an analysis of a sequence of spaces was used as the setting for architectural theory. For Le Camus, this methodological device offered a way to demonstrate how architects might achieve effects similar to the chains of experiences created by picturesque landscape designers.

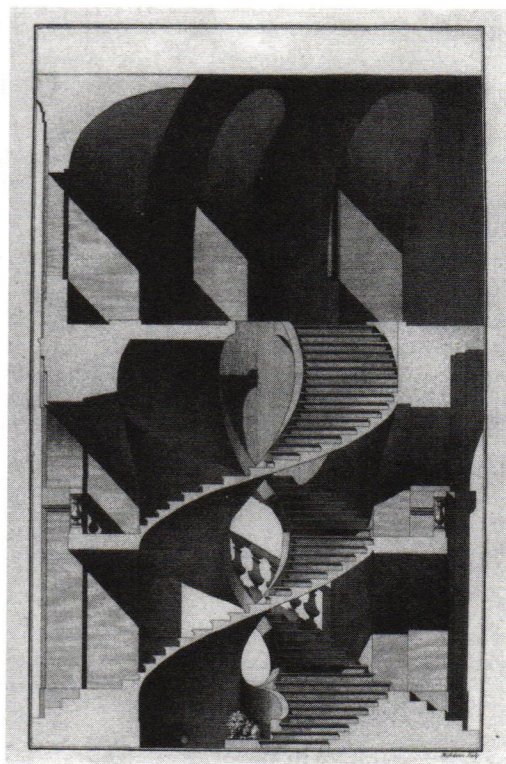
Everything that could be seen, touched, and

smelled was relevant to Le Camus' understanding of character. One dimension of the value of his treatise today is the information it offers historians about the use and detailing of the myriad spaces that comprise a Parisian townhouse. Among the subjects addressed, for example, are children's quarters, which, "cannot be too cheerful," because their character shapes that of the young inhabitants.

Le Camus did not elaborate this idea of architecture molding human character, and concentrated instead on the more familiar concept of architecture as a rhetorical vehicle expressing the social status and character of its inhabitants. In describing an anteroom, he wrote, "it is . . . a proscenium, and the utmost care must be lavished upon it to announce the character of the performers in the play." To fulfill this assignment, the architect was to translate social rank first into character traits and then into uniquely expressive forms. As a guide, Le Camus provided several pages of examples. For military men, "all must be abrupt and nothing mannered, with many square forms and few round ones." For magistrates, "the whole must be more connected, more harmonious; its character must breathe a noble simplicity."

Like the architects of the 19th and 20th centuries who would have similar notions of unifying use and form (Frank Lloyd Wright, for example), Le Camus was at odds with the anonymity of the marketplace. Paris was in the midst of a building boom in the 1780s. In the fashionable districts on the western edge of the city, speculators—whose ranks included architects—were erecting townhouses in anticipation of unknown buyers. "The sight of them amazes, but do they satisfy the soul?" Le Camus asked. For him the answer was no, but pained as he was by the casual mixing of genres and characters, he saw no easy solution to the dilemma.

Perrault's *Ordonnance for the Five Kinds of Columns* and Le Camus de Mézière's *The Genius of Architecture* are simultaneously removed from and connected to our own understanding of architecture. The settings of their arguments are sufficiently different from our own to require our full attention, and this distance highlights their fundamental assumptions which we can recognize embedded in our own thought. Neither treatise offers a *deus ex machina* for today's dilemmas in architectural theory, but both remain enriching to our discourse. *



Cross-section through the stair adjacent to the Rue de Grenelle at the Halle au Blé; from Nicholas Le Camus de Mézières' *The Genius of Architecture*; ca. 1769.

MARTHA POLLAK

ENGINEERING TRUTH AND BEAUTY

MEMOIRES DE MA VIE, Charles Perrault, with an introduction by Antoine Picon, Macula Editions (Paris), 1993, 276 pp., illus., Fr 150.00.

CLAUDE PERRAULT 1613–1688, OU LA CURIOSITÉ D'UN CLASSIQUE, Antoine Picon, Picard (Paris), 1988, 303 pp., illus., Fr 295.00.

FRENCH ARCHITECTS AND ENGINEERS IN THE AGE OF ENLIGHTENMENT, Antoine Picon, translated by Martin Thom, Cambridge University Press, 1992, 437 pp., illus., \$140.00.

L'INVENTION DE L'INGENIEUR MODERNE: L'ECOLE DES PONTS ET CHAUSSEES, 1747–1851, Antoine Picon, Presses de l'Ecole Nationale des Ponts et Chaussées (Paris), 1992, 768 pp., illus.

At the time of his death in 1688, from an infection he contracted during the dissection of a camel, Claude Perrault was notorious not only as a physician and founding member of the Parisian Académie des Sciences (1666) but also as the controversial translator of Vitruvius (1673), the architect of the new royal observatory, and a collaborator in the French design for the east facade of the Louvre following the rejection of Gianlorenzo Bernini's proposal (1666). Claude's nomination to the Académie—even though, at fifty-three, his reputation as a scientist was still to be established—and his involvement in the royal building projects were almost entirely due to the good offices of his brother Charles. Employed by Louis XIV's finance minister Jean-Baptiste Colbert as intendant of royal construction, Charles was also a member of the Petite Académie, which counseled the king's minister on all matters related to *belles-lettres*; indeed the king himself had entrusted the academy with his most precious possession, his glory. Charles, best remembered as the author of classic fairy tales (*Cinderella*, *Little Red Riding Hood*), insured his own and his brother's place in

history not only by procuring royal commissions for Claude, but also through his polemical *Parallèles des anciens et des modernes* (1697), and his gossipy, mythomaniacal *Mémoires de ma vie* (1702). Although Claude's publications on architecture have been closely scrutinized, a comprehensive study of the contributions of the Perrault brothers involves a fairly complete panorama of Louis XIV's cultural program, and of the connections between science and architecture in the 17th century.¹

The paradoxical approach to architecture exhibited by the Perrault brothers is illustrated by Claude's career. Associated with numerous studies in anatomy and applied science, among them the invention of a machine to weave stockings, he became a physician after long and costly studies—which excluded all but the sons of the well-to-do middle class—at the University of Paris. The official Parisian approach to medicine in the 17th century was characterized by indifference to research and avoidance of contact with the human body. For example, professors lectured without touching the cadaver, leaving to the barber-surgeon the task of actually illustrating the organs being discussed. The principles of the medical profession, seen as a liberal art and anchored in traditional practice, were to aid nature rather than perform violence against her. But since there were only a hundred doctors in Paris in the second half of the 17th century, Claude's prestige was assured despite his undistinguished record. (His own older brother died of a fever in just a few days, during which time his illness was not even momentarily held in check; the bloodletting which Claude prescribed to Nicholas Boileau for his asthma only provoked an infection and the philosopher's wrath.) But Claude's training served a strong medication for architecture's ailments, administered in the form of the 1683 *Ordonnance* ("prescription" in medicine, but also "order" and "disposition" in architectural discourse), where he proposed a strict reform for the five orders of columns, and introduced controversial new concepts

Etching by Sebastien Leclerc representing the dissection of a fox, from Claude Perrault's *Mémoires pour servir à l'histoire naturelle des animaux*; 1671–76. This idealized representation shows the collective nature of the procedure. (From Claude Perrault 1613–1688, *ou la curiosité d'un classique*.)





"L'Académie des Sciences et des Beaux-Arts," by Sebastien Leclerc, dedicated to King Louis XIV, shows that schools patronized by the king embraced a multitude of disciplines. This etching evokes astronomy, physics, mathematics, medicine, anatomy, botany, in addition to architecture, painting, sculpture, and the mechanical arts. (From Claude Perrault 1613–1688, ou la curiosité d'un classique.)

into the theory of beauty. This work offered architects emancipation from the authority of the ancients while simultaneously imposing new rules that were even more constraining. Claude had been commissioned by Colbert to translate Vitruvius' *Ten Books on Architecture*; published in 1673, this treatise was illustrated at great cost, with engravings by the artist Sebastien Leclerc who often drew up Claude's architectural ideas. This was followed in 1674 by an *Abrégé* (abridged version) where Perrault brutally affirmed the artificial character of the inherited architectural proportional system and provided the preliminary outline for his notion of two kinds of architectural beauty: positive beauty, which is pleasing in itself and based on symmetry, rich materials, and high-quality execution, and arbitrary beauty, produced by association of ideas and habit.

Although there is no direct evidence of his design and no extant drawings by him, Claude Perrault's architectural renown stems from his association with the realized design for the Louvre's east facade. His design, for which his brother Charles actually takes credit, was chosen largely through Charles' scheming after Bernini's project was jettisoned as too costly. However, Claude was not allowed by Colbert to work on it alone because it seemed peculiar to prefer the work of a physician over that of a celebrated architect. (In Paris word traveled that architecture must indeed be very sick if it was being put in the hands of doctors.) Both brothers excelled at appropriating ideas and good deeds in their elaborate self-fashioning. Thus, Claude told Gottfried Leibniz in 1676 that he alone was responsible for the Louvre facade; Charles claims not only the peristyle as his idea, but also Claude's less successful design for a triumphal arch, and also takes credit for regulating the meetings

of the French Academy and keeping the Tuileries gardens open to the public.

Ethical problems aside, the east facade together with the south and north elevations constitute a veritable system of representation of the three fundamental modes of construction: isolated columns, pilasters, and unadorned wall.² Furthermore, the east facade—as windowless peristyle—represented the king's ambivalence towards Paris; simultaneously rampart and facade, Claude's colonnade introduced an element of ancient temple architecture into the urban palace of the secular monarchy. The peristyle—French, scientific, and monarchical—influenced subsequent 18th-century design, notably in the use of freestanding columns in church interiors such as Jacques-Germain Soufflot's Saint-Genevieve (begun 1757). But here the linkages, as observed by Antoine Picon in *La curiosité d'un classique*, are somewhat limited, avoiding any suggestion of simultaneous trends elsewhere (such as Christopher Wren's churches in London).

Charles praised this work by Claude as stronger and more beautiful than anything produced in antiquity. The brothers were persuaded that their own and their contemporaries' work need not take second place to antiquity. Charles' poem on the century of Louis the Great (1687)—

Beautiful Antiquity was always revered
But I never believed she should be adored
The ancients I behold without bending my knee
They were great, it is true—but men such as we;
And I can, without fear of seeming unjust
Compare the age of Louis to that of Octavius
the August

—as well as his *Parallèles* and Claude's design for the French order constituted an ideological program intended to establish the supremacy of French contemporary design; its subtext was the intention to shed the continued influence of Italian designers.³ Charles declared his own era "the peak of perfection" and confidently predicted "that we need not envy those who will come after us"; Claude's "French order" (for a competition sponsored by Colbert in 1671) added a link in the fruitless search for a new column begun by Philibert de l'Orme in the 16th century and pursued eagerly at the Academy of Architecture in the early 18th century. Claude's provocative theories found an early respondent in Nicolas-François Blondel, whose 1675 *Cours d'architecture* provided the alternate view, praising both the moderns and the ancients while campaigning for an architecture that was hierarchical and articulated in the "French manner." Eighteenth-century architects such as Soufflot and Jacques-François Blondel appreciated greatly Perrault's taste and elegance in architecture, placing him on par with Vitruvius.

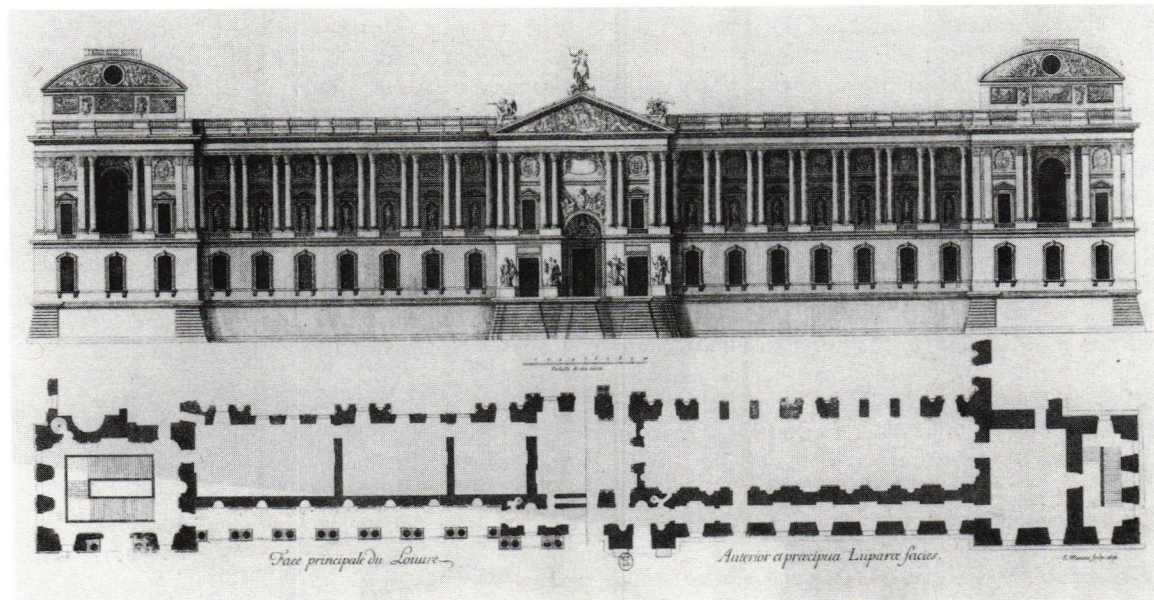
Sweeping aside musical, mechanical, and anthropomorphic analogies, the analogy with the original hut, and reason and common sense as the sources of architectural beauty, Claude eliminated in his writing the entire structure of explication that had previously dictated architectural proportions. Though he limited architecture's sources to association and habit, he nonetheless introduced a new module and systematized the progression used to proportion the orders of architecture. Like the engineers concerned only with efficiency, Perrault's approach was brutally reductive, eliminating the subtleties inherent in architectural design. While he and Blondel shared the desire to rationalize architectural production, Blondel attempted to work on the architectural object itself while Claude wanted to simplify the procedures of conception of architecture. His main contribution was, however, the scientific approach that he brought to architectural design, best seen in his

project for the royal observatory. An important French institution that linked astronomy and cartography, its users were crucial in establishing an accurate map of France—in the process, taking more land from the French crown than all of Louis' enemies, as the king himself wryly observed.

Unfortunately, the Perrault brothers did not live happily ever after. Asked to resign by the big bad Colbert, Charles survived his brother by nearly two decades and used his unemployment to set the record straight in writing. These writings form the basis for Picon's provocative monograph, *Claude Perrault 1613–1688, ou la curiosité d'un classique*, and richly documented edition of Perrault's memoirs.

The two other books by Picon, *French Architects and Engineers in the Age of Enlightenment* and *L'Invention de l'ingénieur moderne: L'Ecole des Ponts et Chaussées*, are closely interrelated. His substantial study of the relationship between French architects and engineers in the 18th century is bolstered by the biography of the engineering school. Picon raises some polemical questions (Did the renewal of architecture in the French Revolution constitute an attempt by architects to regain ground lost to engineers? Was there a link between the demise of classical theory and the separation of architects and engineers?) whose premise is his belief that the engineers were initially prevented by architects from building, and that eventually they displaced the architects in the construction of public buildings because the latter lacked a scientific method. The split between architects and engineers widened as the French state control over regional planning was consolidated, but the breach between the two professions did not occur until the end of the 18th century, with the emergence of an independent, but imaginary, technology employed by engineers.

The Ecole des Ponts et Chaussées was founded in 1747 and, although it was an independent institution, its students took courses at the Academy of Architecture and at the Ecole des Arts, following J.-F.



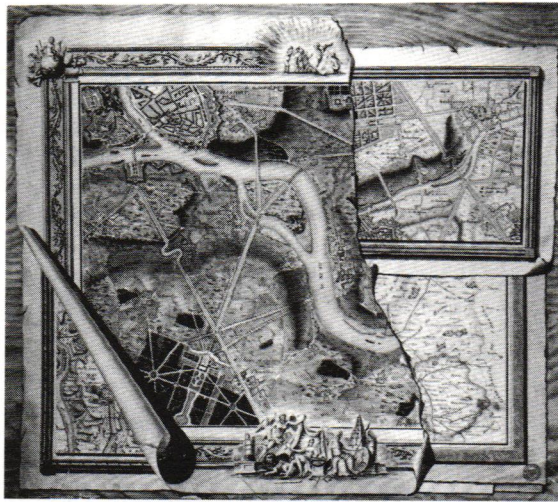
Principal facade of the Louvre; engraving by Jean Marot, 1676. (From Claude Perrault 1613–1688, *ou la curiosité d'un classique*.)

Blondel's courses at both schools. Blondel and Jean-Rodolphe Perronet, directors of the architecture and engineering schools respectively, are the main protagonists of *Architects and Engineers in the Age of Enlightenment*; both were prominent leaders of their profession and members of the Academy of Architecture. They were closely followed by their assistants and successors, Pierre Patte in architecture and Gaspard Riche de Prony in engineering, whose stated methods move along parallel lines of development. Picon analyzes their careers in order to illustrate the demise of classical theory and the emergence of an independent technological discourse. In evaluating the interdependence of architecture and engineering, Picon returns to Perrault, who, "like the engineers, and long before them, tried to assign exact values to what had formerly been the object of more or less protracted negotiation," in reaction to a perceived imprecision which "constituted one of the major shortcomings of the classical age" and seemed to be a way to keep interested amateurs away from the practice of architecture. Picon praises Antoine Desgodets, Perrault, and J.-F. Blondel because their "measuring, unifying, and ordering of knowledge" closely resembles the approach subsequently adapted by engineers, underlining the fact that only in the 18th century is there a real awareness of the rationalization of architectural production.

Blondel established the categories of external and internal planning, and external and internal decoration, and also definitively differentiated between public and private buildings, eliminating any continuity between them. The good architect was to be possessed of talent (the mastery of rules) and of taste (knowing how to blend style and appropriateness in building). The structure of architectural knowledge, formed like a pyramid, had principles at the top, followed by the art of planning or composition, the knowledge of various aspects of construction, and at its base, instrumental knowledge, such as drawing or model-making.

While Blondel attempted to reorganize architectural knowledge through his teaching and the publication of his treatise, *Cours d'architecture*, the state engineer made his appearance, armed with a technological state apparatus that challenged the assumptions of architectural theory and practice. According to Picon, the engineers can be characterized in terms of their collective attitude rather than any particular competence. Their structure of knowledge was not a conceptual pyramid but a horizontal system of individually taught sciences, such as geometry, mechanics, hydraulic architecture, fortification, and stone-cutting. The engineers were soon entrusted by the central government with equipping and managing the vaster territories of the entire country.

The contribution of the engineer, Picon argues, was the development of a state institution through which the government could exercise systematic control. They replaced architects by fulfilling their function for provision of utility and *convenance* (suitability or propriety), successfully displacing qualities of character and taste as no longer necessary. The



Map for a competition at the Ponts et Chaussées, end of the 18th century. (From French Architects and Engineers in the Age of Enlightenment.)

specific tasks of the engineers were to map the country in order to lay out roads, canals and bridges; to accomplish this they developed the art of cartography and a model of construction, heavily dependent on forced labor (*corvée*), which transcended the framework of architectural thinking. Engineers increasingly subordinated the practice of building to calculation, as form gave way to the process by which it was established and an aesthetic of form yielded an embryonic aesthetic of method.

The themes taken up by Picon in his chapters on the two architectural directors Blondel and Patte range from the planning of private residences to the planning and policing of towns. Since the two professions adopted virtually identical positions in relation to the town, what remained to distinguish their interests and actions? The engineers' initial aim was to link up town and country; their most important tool was the map, since the drawing of maps was indissolubly linked to the problems of road construction. In the annual cartographic competition at the Ecole des Ponts, ideal rather than actual territories were imagined and lovingly rendered, adorned with other subjects that would suggest maps by literary allusion (*cartes et plans* in French, which allowed the inclusion of all kinds of papers—playing cards, engravings, descriptions of journeys, as well as surveying instruments). These competitions fostered the nearly obsessive listing of the engineers' techniques and preoccupations: roads, canals, bridges, fortifications, extensions of old towns—carried out through abundant use of axes intended to illustrate authority.

In this process, the engineers appropriated the motif of the French garden, transforming it into a grammar of planning. They achieved their task of physical communication through a rational procedure which allowed them to claim that, unlike architects, they were avoiding arbitrariness. This method was best exemplified in the juxtaposition between an axial, French-style garden and a bastioned fortified town, which in some maps were shown pitted against one another, occupying the countryside.

The subordination of architecture to engineering (as the latter became a science that included the former) was accomplished during the French Revolu-

tion, in a chain of causes forcefully outlined by Picon. This subordination was expressed in material terms in the buildings and teachings of Jean-Nicholas-Louis Durand, who qualified the traditional distinction between decoration, planning, and construction as "vicious" and instead divided his course at the Ecole Polytechnique (the recruiting school for the Ecole des Ponts after 1794) into the elements of buildings, composition, and analysis of buildings. Drawing on the treatises of Claude Perrault, he then proceeded to a standardization based on the mathematical progression of proportions, believing that beauty arose in large part from habit, and thus teaching an architecture that was subordinated to the engineers' system of geometric rationality. Earlier, Claude-Nicolas Ledoux urged architects to seek the improvement of social relations through their buildings, and this wish to transform society became part of the engineers' mandate from the late 18th century on.

The ultimate intention of Picon's polemical analysis of relations between engineers and architects and the successful bid for power of the former is fully revealed in the hefty *L'Invention de l'ingénieur moderne*, a loving and internal biography of the Ecole des Ponts et Chaussées. Between 1747, its founding date, and 1851, when it was reformed, two thousand students were trained at the school, two-thirds of whom became engineers charged with the administration of France's roads, canals, and bridges. While their initial mandate was to provide the infrastructure for transportation, the engineers were also employed in building. The school aimed to be scientific and technological, providing the unified approach of a paramilitary, disciplined corps whose claim to power was based on high moral standing, given that its works were intended for the good of all, and thus skirting the elitism that stained architecture.

Rational methods of problem-solving, achieved through descriptive geometry and mathematical analysis, were intended to endow engineers with absolute

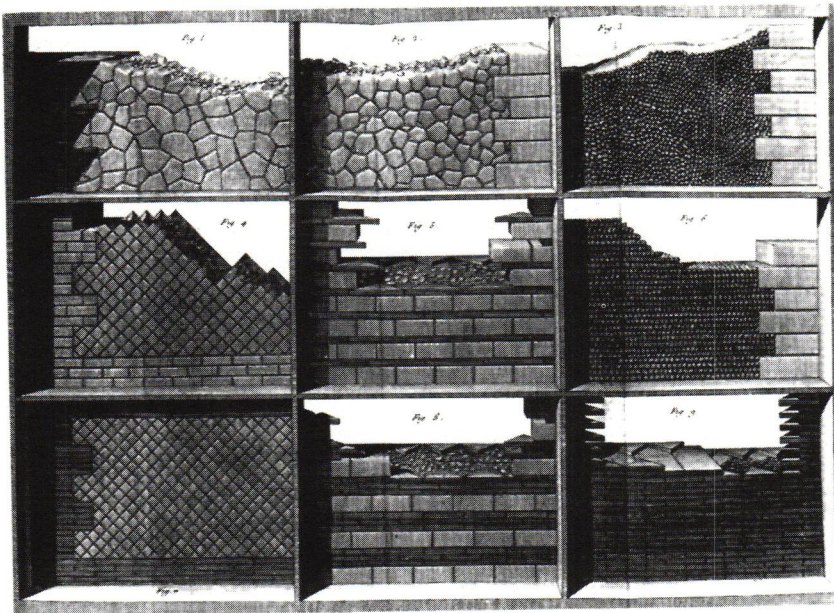
authority and confidence, while masking the fact that French engineering had not benefited from recent technical or structural innovations. (None were developed in France, and the French were slow in adopting English innovations, such as the steam engine or cast iron.) Associated with roadmaking, which had been linked to the development of a national identity since the 16th century, engineering developed in tandem with the state, gaining strength and legitimacy from the official services it rendered. Associated with the centralizing monarchy of the late 17th and 18th centuries, the engineers themselves survived the Revolution through their non-aristocratic social profile. They were not tied to the aristocracy in any direct manner: their students and teachers did not emerge from the noble classes (whose sons normally joined the true military engineering service of the Ecole de Génie), and their services were not directly linked to the landowning aristocracy of the *ancien régime*.

The future engineers were all recruited from the middle classes, though not from the lower middle classes which were associated with crafts or manual trades. Like Perrault's education a century earlier, their instruction was costly and they could not hope to earn very much as engineers in service of the state. Their families were thus expected to support them throughout their careers to enable them to maintain a standard of living expected of a state or crown official. Nonetheless, the intention of the school was to educate an elite, and it is this program that attracted the sons of well-to-do families and legitimized the social aspirations of the Corps de Ponts et Chaussées: "It seems that the criteria of selection adopted by the director of the Ecole des Ponts met the desire for social distinction felt by a large section of the prosperous bourgeoisie." In addition to geometry, mathematics, cartography, architectural principles and drawing, the would-be engineers were also taught subordination, a major element in their evaluation and their future value for the corps. Their collective ambition was founded on the good of the public utilities, which the engineers provide. The resemblance of their discourse to that of revolutionary elites made the transition easier for the school, which flourished during the 1790s.

Responsible only for public works, engineers were not haunted by the great questions of appropriateness, correctness, and the character of design that held architects in thrall because of their involvement with private building. In this sense, the work of the engineers was informed by rationality as they were always solving concrete problems with concrete tools (financial, material), rather than having to make a case for every design strategy they adopted, as architects were obliged to do. In addition, as Picon observes, their work was endowed with the high moral character that was the concomitant quality of territorial management. Their principal ambitions were to connect the city to the surrounding country and to reduce building problems to management operations.

The school of engineering was initially modeled

Engraving by A.-J.-B. Rondelet, *Traité théorique et pratique de l'art de bâtir* (1802–17), showing different kinds of masonry, ancient and modern. During the Enlightenment, there was a unanimous admiration for the strength of the mortar used by the ancients in their masonry. (From French Architects and Engineers in the Age of Enlightenment.)



on the corps of military engineers, which was formed by Sebastien de Prestre de Vauban in the 1690s to fulfill the fortification needs of the country. In the 18th century there were still many talented architects in the corps, such as Jacques Gabriel and Germain Boffrand, and its first director, Perronet, was a member of the Academy of Architecture. Simultaneously with instruction in road design and territorial mapping, students learned about the social conflicts that dominated the territory through their contact with the often hostile local population; in fact, the French road-building program was entirely dependent on forced labor, which nearly cost the institution its existence during the Revolution.

Throughout the 18th century, engineers continued to view themselves also as artists, with yearly drawing competitions (figure, ornament, and landscape) and the design of bridges as the most evident example of their artistic ambition. In these designs, they shed one of the more important properties of classical architecture—solidity—in their attempts to make bridges stronger by making them lighter. Eventually the imperatives of function, openly embraced by engineers, won over the requirements of classical monumentality. The engineers' influence grew in 1761 when they were assigned the management of the ports of France, until then held by the defense ministry. A 1780 edict (not enacted) even stipulated that all public buildings be designed by engineers.

The corps of Ponts et Chaussées also coopted the prerogatives of the military architects by insisting on the equivalence between fortification and regional planning, demoting fortifications to the rank of infrastructure, alongside roads and canals, rather than allowing fortification to organize the land as the military architects had done in their own earlier legitimization project. The military and civil engineers were to have been united into one school and administration, a notion that neither side relished, and eventually the Ecole Polytechnique was founded in 1794 to educate both groups.

The abolition of the Academy of Architecture in 1793 enhanced the prestige of engineers, who carried on their architectural research without competition, adopting neoclassicism directly from teachers such as Durand. By then they had also established a system of competitive fees, which made their services available at costs lower than that of architects. The collective and corporate approach of the engineers' ethic recognized no individual talents. Contrary to the pre-revolutionary architects whose assignment had been essentially reflective and evaluative—announcing through their design the social condition of the owner—as well as educational, engineers attempted to regenerate society through their interventions. Thus engineering did not have a rhetorical function like architecture did; it did not seek to persuade and seduce, but substituted instead an authoritarian attitude justified by the position of engineer as civil servant representing the state. Private interest was subsumed by the larger common interest, just as engineers were willing to subordinate interest in design to the functional aspects of a project, and function

eventually dominated their discourse. Their success over both military and civil architects came from their direct and large-scale social methods. This will to control the process of construction and planning was paired in engineering practice with a desire for social climbing.

This monograph on the Ecole des Ponts—while charting the unstoppable success of the engineer as public administrator by the early 19th century—is less polemical than Picon's earlier analysis of the contest between engineers and architects, in which the architects quickly lose ground, prestige, and eventually commissions, and engineers are shown to develop a rational educational system—something that escapes contentious architects to this day.

What, then, are the links between these four publications by Picon? The Perrault brothers are self-made men, intellectuals but also empirical scientists, men of rich and fantastical imagination, thoroughly committed to a French architecture and that French quest for power which seeks legitimacy through the building of institutions associated with the centralized government. The engineers of the Ecole des Ponts are similarly the offspring of a well-to-do middle class, the vaunted French bourgeoisie. They, too, like Claude, are committed to knowledge through description, through an observation of nature that would allow for an empirical understanding of the environment.

These studies illustrate the important French contribution to architecture and regional planning. Picon's four books are closely related to one another, with much overlap of text and illustrations. Despite repetition, the arguments advanced by the author in favor of the engineers—while presented almost wholly within a French *discours*—are developed further with each publication, softening eventually the polemical and celebratory tone that polarizes the French engineers' victory from the loss of direction experienced by their architectural counterparts. *

NOTES

1. Studies on Claude Perrault's architectural publications include W. Herrmann's *The Theory of Claude Perrault* (London: A. Zwemmer Ltd., 1973), G. Germann's *Vitruve et le Vitruvianisme: Introduction à l'histoire de la théorie architecturale* (Lausanne: Presses Polytechniques et Universitaires Romandes, 1991), pp. 163–75, 213–29, and D. Wiebenson's *The Mark J. Millard Collection: French Books, Sixteenth Through Nineteenth Centuries* (New York: George Braziller Press, 1993), pp. 398–400.
2. H. Damisch, "La colonnade de Perrault et les fonctions de l'ordre classique" (1969), quoted by A. Picon in *Claude Perrault, ou la curiosité d'un classique* (Paris: Picard, 1980), p. 181.
3. As rendered by J. Rykwert in *The First Moderns: The Architects of the Eighteenth Century* (Cambridge, Mass.: MIT Press, 1980), p. 49; see also chapter two, where he casts the Perrault-Boileau controversy in a comical light.

LILY H. CHI

THE ARTIFICE OF SPEAKING ARCHITECTURE: MODERNITY AND ITS LIMITS IN QUATREMÈRE DE QUINCY

QUATREMÈRE DE QUINCY AND THE INVENTION OF A
MODERN LANGUAGE OF ARCHITECTURE, Sylvia Lavin,
MIT Press, 1992, 334 pp., illus., \$39.95.

The idea that architecture is a form of language leads a curious double life in contemporary architectural practice. On the one hand, linguistic premises are often assumed in architectural criticism despite the fact that there seem to be as many positions on how to “read” built form as there are theories of meaning for cultural artifacts. On the other hand, many architects consider language to be antithetical to “authentic” creative architectural experience. For some, language about architecture is a reductive or linear logic imposed upon an imaginative, bodily experience of architecture. Others reject the assumption—and hence, imposition—of discursive or even narrative content. Still others maintain that “language” implies the repeated use of known conventions or signs and thus betrays the creative moment of architectural experience. The notion of architectural “language” is only superficially self-evident, and can have wildly dispersive meanings. If the idea of an architectural language can be “naturalized” into an unstated premise, the assumption of rational or discursive clarity is an untenable contrivance.

Sylvia Lavin’s *Quatremère de Quincy and the Invention of a Modern Language of Architecture* aims to clarify these discussions by offering an “intellectual history of the idea” as it emerged in the work of a single famous French theorist at the turn of the 19th century. Her subject is rich and topical, for the prodigious reflections of Antoine-Chrysostôme Quatremère de Quincy (1755–1849) on the relationship between architecture, history, language, and culture are indeed provocative. A leading public figure in the arts who lived and worked across the great divide of the French Revolution, Quatremère de Quincy’s exacting observations on the questions of his time are fascinating for their striking resonance with many issues being debated today. Most intriguing in this respect is his radical attempt to locate architecture’s meaning and relevance in artifice and conventionality—conditions which he develops in varying ways into the very lot of modern culture.

Lavin’s is the first extended English-language account of the thinking of an influential figure who has until now remained strangely neglected by modern scholars. Among his numerous political and artistic activities, Quatremère is perhaps best remembered for his supervision of the conversion of Jacques-Germain Soufflot’s Saint Geneviève into the Pantheon, and for his post as permanent secretary of the Académie des Beaux-Arts from 1816 to 1839. His voluminous literary production includes two dictio-

naries of architecture, a number of monographs and histories of architects, influential archaeological reconstructions and numerous essays on such diverse topics as opera, theater, art, and architecture.

With incisive economy, Lavin pinpoints one of the most remarkable and consistent themes in Quatremère’s architectural speculations, the idea that architecture, like language, has social—that is, conventional—origins. Lavin develops her own interpretation through a close reading of two of Quatremère’s relatively early writings, his essay on Egyptian architecture, which he wrote in 1785, launching his academic career, and its belated publication in 1803 as *De l’architecture égyptienne*. Significantly, both fell closely on either side of the French Revolution, while the bulk of Quatremère’s extensive writings on art and architecture were produced only in the years following the fall of Napoleon, from 1814 to the 1830s. The reader should thus be aware that the limited scope of Lavin’s exegesis, developed from a doctoral dissertation at Columbia University, privileges the French theorist’s early revolutionary thinking, and hence does not account for the changes in his theoretical formulation, or the increasing ambivalence that tempers his later writings.

Lavin’s choice of material seems aimed in part at revising the pervasive misrepresentation of Quatremère’s defense of Greek classicism as an example of uncritical academic conservatism. For Lavin, the two essays on Egyptian architecture exhibit the development of a radically new theory of the origins of architecture and its destiny in modern culture. In asking why Quatremère would want to publish a twenty-year-old essay on the relationship between Greek and Egyptian architecture when the Napoleonic expedition to Egypt would have made its archaeological suppositions obsolete, Lavin uncovers Quatremère’s bold departure from the prevailing conception of architecture’s origin and history. She suggests that the common 18th-century view of Egypt as “the cradle of civilization,” and hence, of the Egyptians as the cultural predecessors of the Greeks, reflected the still-vital biblical paradigm of history as a single, genealogical lineage. Quatremère’s speculations on Egypt made a radical break with this tradition by proposing not one but three possible first architectures, each relating to the beginnings of a different form of society. The cave, the tent, and the hut tell of the beginnings of Egyptians, Chinese, and Greek architecture respectively. This multicentered view of human origins, Lavin suggests, made Napoleon’s new archaeological chronology irrelevant to Quatremère in the discussion of architectural principles. The notion of origin was made both relative and immanent in the idea of genetic “types.”

In Lavin’s view, Quatremère’s illustration of “type” in this context reinforces a second important

feature of his conception of architecture's origins: its coincidence and intertwinement with the development of language and of civilized society. The genesis of both language and architecture resides in necessity—for communication and for shelter—but each matures in the direction of reason and beauty through human invention. In contrast to the scriptural notion of type, Quatremère's tent, cave, and hut arise not from God or from divine nature, but are instead produced by an interplay of natural and social forces. The timber hut, for instance, evolved in response to climate, geography (for materials), and also to the sedentary lifestyle and needs of an agrarian society. Similarly, the cave and the tent reflected the lifestyles of hunters and nomadic gatherers respectively. As Quatremère stressed throughout his writings, the wooden hut presented an image not of nature—as might be claimed by those who contend that the column is derived from a tree trunk—but the first attempts of human artifice. What Quatremère admired about ancient Greek architecture was the degree to which the hut served as a constructional or conventional model—artifice recognized, commemorated, and refined.

Drawing from his writings from the turn of the century, Lavin illustrates that, for Quatremère, architecture and language were not only coeval in origin and development but reciprocally intertwined in the life of civilizations as the very means by which social institutions arise and abide. It is this interplay between architecture, language, and sociopolitical culture that affirmed, in his view, the exemplary merit of Greek classical architecture. The Egyptians' monuments confirmed and entrenched the static and conservative tendencies of their religion, while the architecture and political institutions of ancient Greece collectively reflected and nurtured the moral liberty to which her democratic institutions aspired. Lavin thus asserts that Quatremère promoted Greek classicism as a model for contemporary times not out of passive reverence for traditional authority or for its symbolic or iconic meaning, but because he perceived it to be an ideal universal language capable of expressing and inspiring the moral virtues and social order sought by France's brave new republic.

How, specifically, did Quatremère understand Greek classicism as a language? Why did he insist on recalling this tradition when contemporaries such as Etienne-Louis Boullée were already proposing that architecture could “speak” directly through “images” composed of platonic volumes, light, and shade? This is where Lavin's exposition may be found wanting by readers seeking closer scrutiny of Quatremère's thinking or of the complex dynamics involved in the emergence of a modern architectural language.

Throughout his writings, Quatremère insisted that authentic creative invention was an imitation of an “ideal” reality. While he never explicitly stated what this ideal reality might involve, he also referred to it as “moral” and “abstract,” as opposed to “positive” or physical. Lavin finds in Quatremère's early writings a very particular interpretation of this ideal. She proposes that Quatremère saw human history as having

a potential for progressive transcendence from a state of enslavement to nature. Architecture could aid the development of society toward higher forms of morality, justice, and equality by moving away from natural forms as models and referents (for example, the cave), and toward human-derived models (such as the hut) which, in embodying the sociopolitical circumstances of their realization, constitute a tectonic form of speech. Because his retelling of architecture's origins “abstracts” Greek classicism and sets the stage for their progressive manipulation as demythologized architectural forms, Lavin credits Quatremère with the “invention of a modern language of architecture.”

This thesis, laudable for its clarity, unfortunately sacrifices much of the rich ambiguity and instructive complexity of its subject. To begin with, Lavin greatly overstates Quatremère's singularity in positing architecture as human culture's first “book.” This was common *topos* in an era during which language was not only the site but the model for inquiries into the nature of the world and of humankind. In streamlining contextual material to privilege a single author, Lavin gives short shrift to the contribution of others toward the articulation of architecture as a sociopolitical language. On a general level, the reader misses out on the conflicting issues, dilemmas, and questions that ground this idea culturally. More specifically, the suggestion that the idea of an architectural language was unitary in concept and conception is problematic. A history of this idea might be better served if some difference were allowed between, say, a sensualist conception of architectural expression, such as that proposed by architects like Boullée, and the “anatomization” of architectural form arising out of specific compositional, constructional, or structural strategies, such as that posited by Jean-Nicolas-Louis Durand and sustained throughout the 19th century by Auguste Choisy. Quatremère's notion of the importance of the memory of a “type” to architectural legibility deserves further exploration.

As an interpretation of Quatremère's thinking on architecture and language, Lavin's account strains under this restrictive editing. The idea of a “universal grammar,” for instance, was made commonplace by the greatest metaphysical quest of the 17th century—the search by Gottfried Leibniz and others for the Adamic root of all languages, the key to reality. Lavin makes much of the appearance of the term “universal grammar” in Quatremère's *De l'architecture égyptienne*, even though it does not appear in his later writings. A more

Column bases and a capital with the head of Isis, from Quatremère De Quincy's *De l'architecture égyptienne*, 1803. (From Quatremère de Quincy.)



cursory treatment is given of Quatremère's enigmatic and repeated insistence on the fictional or metaphoric condition of all artistic work. "Language, even ordinary language, is filled with metaphors," he wrote in his 1804 *Dissertation sur la diversité du génie et des moyens poétiques des différens arts*. Given that authors as ancient as Aristotle have expounded upon metaphor, readers might want to know how Quatremère conceives of this trope and how it informs his conception of the "ideal."

The most problematic aspect of Lavin's interpretation, however, is her treatment of the word "abstract." Her presentation of a progressively rational notion of artifice and convention in Quatremère relies heavily on a term whose meaning she neither defines nor accounts for in the context of Quatremère's own universe of discourse. In distinguishing Quatremère's appropriation of Greek classicism from that of his European predecessors, she writes, "a fully composed and highly articulate Greek temple can be considered natural only given a particularly abstract view of nature, one based on ideas of order and principle rather than physical matter. For Quatremère, Greek architecture was parallel to nature not because it was naturalistic but because it was rational." A statement such as this is particularly troublesome for it communicates a rather reductive view of the meaning of both "imitation" and "nature" for the pre-19th-century imagination. The distinction between figural/physical and nonfigural/rational inferred in this passage does not adequately explain the mimetic intentions of classical architecture before Quatremère. If "abstract" were simply opposed to "physical," how are the sensual qualities—which, in Quatremère's view, convey architecture's capacity for expression—more "abstract" than, for instance, the invocation of cosmic geometries in Leon Battista Alberti's *lineamenti*? The vagueness of such a prominent term mars Lavin's efforts to distill Quatremère's specific contribution.

In assuming the self-evidence of "abstraction" and its "rationality," the author also unfortunately glosses over the profound ambivalence expressed by Quatremère and his contemporaries as they argued over the status of human artifice and contemplated their relation to past and future. This is a problem if Lavin's interpretation is taken as a pronouncement upon Quatremère's thinking as a whole, or as a representative account of the issues and stakes involved in that era's thinking about convention and language in architecture. It is possible to come away from Lavin's book with popular preconceptions intact about the "naïveté" of Enlightenment concepts of reason and nature, and about the "logocentrism" that is so often denounced in all language suppositions of architectural form. Unfortunately (or perhaps fortunately), these issues are currently debated with much less specificity than they were by writers of the 18th and 19th centuries. Jean-Jacques Rousseau was not the only one who, long before the French Revolution, agonized over the possibility that divine nature and reason could be *cultured* ideas. At the heart of this notion lay a very serious question for moral philoso-

phers, political theorists, as well as architects at the turn of the 19th century: to what authority is human creativity still subject once its revolutionary, world-raiding capacities had been realized?

Quatremère himself lucidly expressed his awareness of the "anarchic" potential of both architectural innovation and political revolutions. Significantly, his essays from the post-Napoleonic period are the most articulate on this matter. These writings, like those of many others who lived through the French Revolution, were marked by inner conflict and cautious weariness. The once-heroic image of human reason and action suddenly seemed irrevocably tarnished by the violence and irrationality of post-revolutionary politics, if not by the apparent relativism in all moral and artistic matters. The disillusionment with Napoleon, followed in close succession by his downfall, reopened debates about the monarchy, and revived the pre-revolutionary argument that constitutions, like language, were not human inventions—and hence, not subject to willful human intervention.

Quatremère's own post-revolutionary "turn" is well demonstrated in his writings after 1815, in which modern culture is increasingly depicted in terms of a loss. It is regrettable that, in a book that will serve for many as an introduction to the work of Quatremère, Lavin could not make room for these illuminating moments of doubt. Although they would complicate her revisionist portrait of Quatremère as a heroic revolutionary, a more complex conversation about the conditions and ramifications of modern architecture's "legibility" might have emerged. Quatremère's later thinking about Greek classicism—that is, about a shared but waning European tradition—may be more vulnerable to misrepresentation, but perhaps also more profound. The somber cast of such reflections upon social convention, human artifice, and architectural work may indeed be instructive as we contemplate the meanings of our own "post-culture."

Taken as a theoretical proposition in itself, Lavin's thesis—that modern architecture's "abstract" language is ultimately conventional in conception—has intriguing implications. First, somewhere along the way, that conventional basis must have been forgotten, for functionalism was clearly an attempt—even if self-deceptive—to make form a "natural" result of more determinate factors (such as material, program, construction, and so on). Second, forgotten or not, as "inventions," architectural propositions in the revolutionary and revolutionizing context of modern cultural production would seem to find public meaning most authentically as artifacts of human discourse, rather than by the grace of universally given "natures." The intelligibility of this tectonic speech would depend then, like modern political liberty, on the endurance of its contractual community. *

NANCY STIEBER

A NEW PERSPECTIVE ON THE HISTORY OF THE LOWLANDS

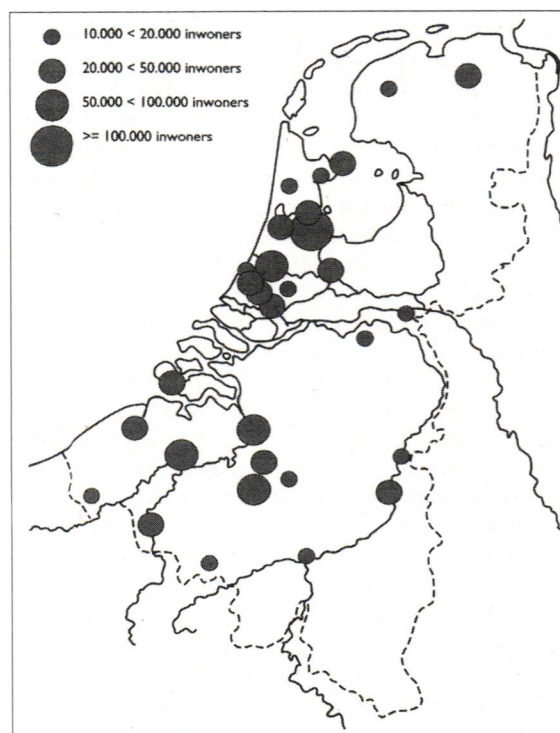
STEDENBOUW: DE GESCHIEDENIS VAN DE STAD IN DE NEDERLANDEN VAN 1500 TOT HEDEN, Ed Taverne and Irmin Visser, editors, Uitgeverij SUN (Nijmegen), 1993, 393 pp., illus., Fl 69.50.

In the introduction to this collection of brief articles on the Netherlands city, Ed Taverne, who coedited the book with Irmin Visser, notes that urban history is a field fragmented by disparate disciplinary perspectives. Urban sociology, economic, political, and legal histories, demographics, architectural history, urban archaeology, and the history of urban planning and preservation may have produced an impressive collective bibliography on the history of cities, but, as Taverne points out, the result of such specialized areas of study is a vision of the city that is as splintered and divided as the contemporary metropolis itself. Taverne problematizes urban historiography in terms of vision, implying that the fractured representation of the city produced by competing and partial disciplinary perceptions might be replaced by a view as comprehensible as the presumably lost cohesion of city centers. *Stedenbouw: De geschiedenis van de stad in de Nederlanden van 1500 tot heden* (Urban planning: The history of the city in the Lowlands from 1500 to the present) provides a provocative answer to the perplexing problem of urban historical perspective, view, and image. It suggests a strategy permitting historical analysis that synthesizes rather than scatters, while it nonetheless takes advantage of interdisciplinary insights.

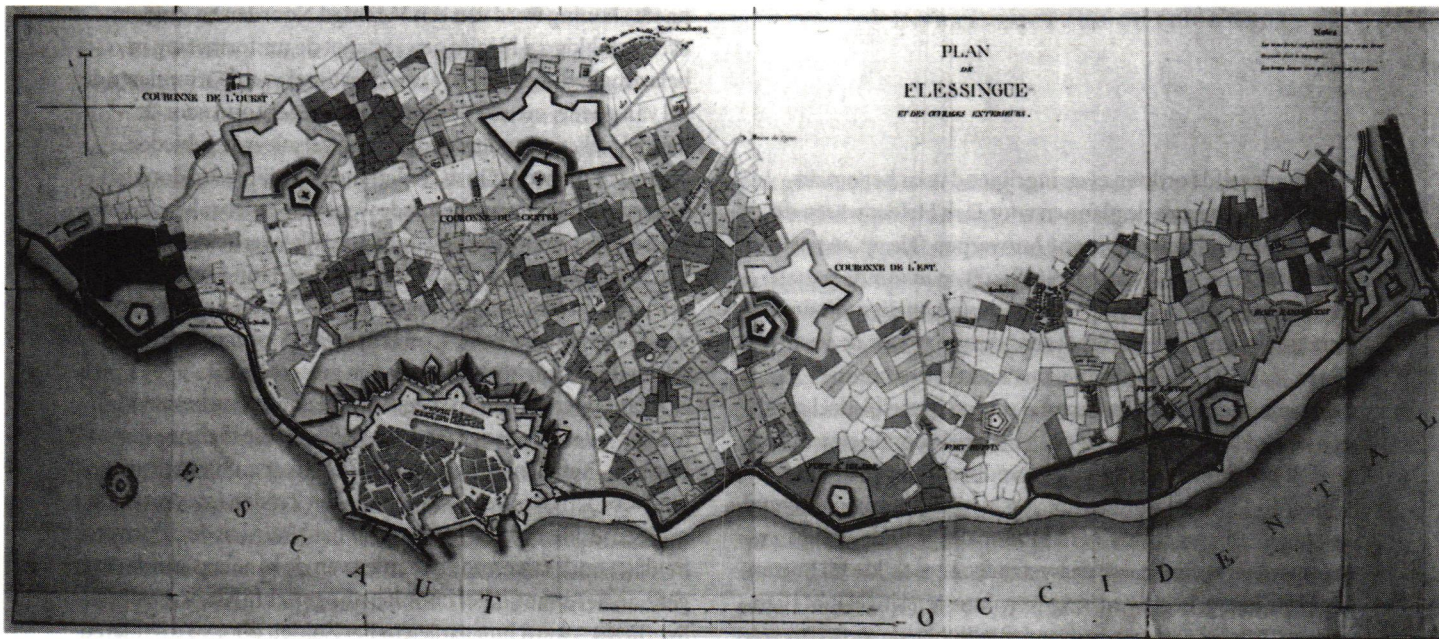
The metaphor of vision is apt given that Taverne and Visser particularly deplore history's neglect of the city as a spatial phenomenon. While they choose not to delve into the ideological issues that might explain the urban historian's usual privileging of demographic, economic, or political variables over spatial ones, they claim the material manifestation of the city as the focus of their own urban history. The subject of their book is the Netherlands city as physical artifact—the history of its buildings, pavement, skyline, and plan—while the city's inhabitants and their political, economic, and social activities are invoked only to the extent that they illuminate the material city.

Speculation about the interrelationship between culture and society accounts for much of the urban historian's usual discussion of the physical city. Whether urban form is being used to understand society or society is being used to understand urban form largely distinguishes between various historiographical models. On the one hand, Max Weber and Henri Pirenne occasionally referred to the physical city to illustrate their economic and social theories;

on the other, Lewis Mumford explained the development of urban form as a reflection of changing social, political, and economic conditions. Wolfgang Braunfels has postulated a political, economical typology of cities, invoking imperial, princely, or mercantilist categories as the determinants of urban form. Leonardo Benevolo has studied the city as a work of art, the coherent stylistic product of "material events that determine the urban visage." Such deterministic accounts have been challenged by the treatment of urban form as an independent variable. Spiro Kostof's valiant effort to develop an autonomous formal typology of urban patterns and elements undermines the theory of contextual determinism by demonstrating the reappearance of the same forms in a variety of contexts and the persistence of form in the face of socioeconomic change. Taking the notion of autonomy even further, Anthony Sutcliffe argues that Paris is a city with an identifiable "corporate aesthetic," its urban identity the independent variable. Despite the number of distinguished studies which have successfully examined particular cities under specific conditions, no convincing model of historiography in the service of the general history of urban form has emerged. Not infrequently, moral polemics have fostered the meticulous description of urban form, as in the case of Karl Gruber who views urban order, harmony, and beauty as the result of the religious and spiritual order of the city.¹



Location of major urban centers in the Lowlands, showing population levels; ca. 1650. This book is arranged such that its sections, each devoted to a different period of time, begins with a distant perspective (e.g., the regional scale shown here), and gradually zooms in, to the level of cities, neighborhoods, and, ultimately, buildings. (See illustrations on next page.) (From *Stedenbouw*.)



Plan for a ring of forts at Vlissingen; 1812. (From *Stedebouw*.)

While the analysis of urban form at the small scale has been of marginal interest to those trying to develop an economic theory of urban development, theory has often given way entirely to description for those concerned with tracing the history of urban form. As a result, the history of the city has been hampered by the polarization of a theory-driven history, which does not lead to re-viewing the city, and a positivist, descriptive history, which refuses to acknowledge its own a priori theoretical assumptions or to generate theoretical implications.

Within the recent literature on the broad sweep of urban history, Taverne and Visser come closest to emulating the integrative history of Lynn Lees and Paul Hohenberg, whose kaleidoscopic account of the European city intertwines political, economic, and social history while acknowledging that "cities are artifacts, cultural constructions that order daily life and reveal its contours."² But while this impressive synthesis may explicate the dynamics of urbanization, it does not force us to re-view the city itself. Taverne and Visser have organized their volume to permit exactly such a re-viewing.

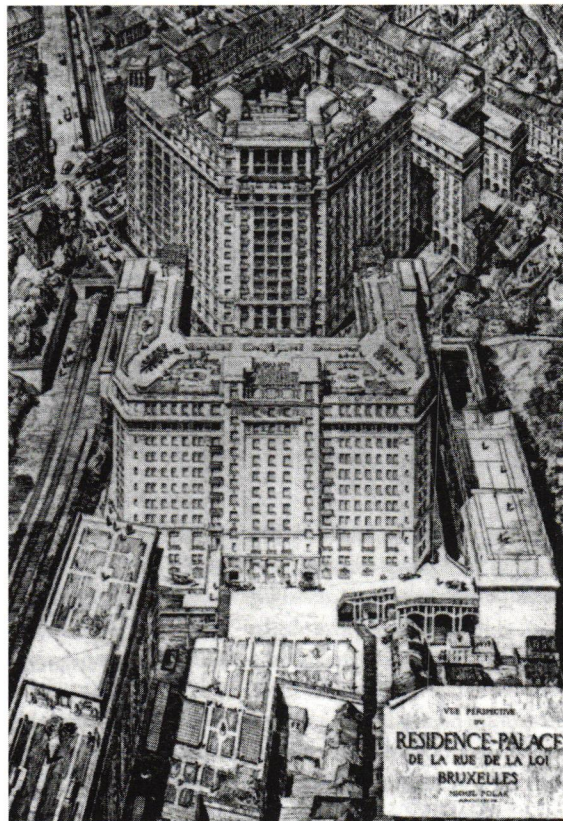
Without explicitly elaborating their historiographical assumptions, Taverne and Visser have demonstrated (through the framework they have imposed upon their contributors) their answer to the debate over the primacy of culture and society in the writing of urban history. While the editors' desire to make the city as artifact the subject of their urban history is by no means original, the organization of the book is. Accordingly, the book is interesting not only because of the high quality of the individual contributions, but because of the impact of its narrative structure, which is essentially visual in character.

The Lowlands is a region tied together by geographic and climatic conditions which have influenced the development of trade and agriculture there. While split over time by varying political

configurations and allegiances, the region has been characterized by shared forms of urbanism. Taverne and Visser establish four roughly defined chronological divisions: the mercantile city of the 16th and 17th centuries, the Enlightenment city of the 18th century, the industrial city of the 19th and early 20th centuries, and the modern city after 1945. These loosely defined divisions are not burdened by any articulated theory of urban development. More important is the principle applied to organize the articles within each of the four periods. For each period, the chapters are arranged in a series, panning cinematically from the distant perspective and grand scale of comparative urban demographics through ever-decreasing scales of analysis to the individual lot and building. The first chapter of each section contains a comparison of the Netherlandish and European city through an overview of economic, political, social, and demographic developments. They address economic base, population growth and decline, and urbanization in the wider context of European patterns. The subsequent chapter moves to the level of the region, as the city and its relationship to the hinterland become the comparative unit. Issues of transportation networks, population shifts, and local economic systems become the focus. At the next level of analysis, the lens zooms in on the city itself—its plan and governance in particular. Finally, each section concludes with a close-up view the city as a composite of individual buildings sites. Building standards and practices, architectural style, and the daily use of the city come into focus. This elaborate framework is filled with short articles, usually presented in pairs to cover both the northern and southern Netherlands, providing cursory overviews that are more often surveys of secondary literature than reports of current research.

What the cinematic sweep provides for each of the broad chronological divisions is a spatial logic in which each scale summons an appropriate level of

Apartment complex by
Michel Polak, Brussels;
1922–28. (From
Stedebouw.)



opening because it heightens awareness of a new experiential way of knowing and of narrative as an epistemological category.

Such re-viewing is not predicated on any totalizing vision imposed by a grand theory, deterministic or evolutionary, but on a vision of the city as a spatial phenomenon that reveals itself at different scales as a result of the interplay of many forces. This has permitted Taverne and Visser to solicit contributions representative of a panoply of methodologies and approaches which, nevertheless, provide a coherent view. The resulting history is a "totality" only in the sense intended by Fernand Braudel in *Civilizations and Capitalism* (London: Collins, 1984), that is, the dynamic interaction of culture, society, politics, and economy, with each simultaneously a dependent and independent variable, acting and being acted upon. Here, the direction of the shift in scale from large to small may imply a particular emphasis on the logic of historical materialism, the determining relationship between base and superstructure; but the reciprocity between building and plan, region and city, nation and region (like that between individual and place) also emerges. Little has changed since Diane Favro and Zeynep Çelik noted in these pages several years ago that "a monolithic, clearly defined interdisciplinary method for urban history does not exist" (*DBR* 17, Winter 1989). This caveat notwithstanding, by invoking a history that straddles a set of constant structures (urban center and hinterland, the plan and its governance, the smallest building unit), each of which elicits particular constellations of social, economic, and political variables, Taverne and Visser have produced a sophisticated, interdisciplinary,

non-deterministic view focused on the physical form of the city.

In the book's last section, the editor's introduce a different approach, the ideational history of the city in literature, geography, art, and philosophy. These representations, "cities of the mind," trace collective memory and experience not through the psychological and social dimensions explored much earlier by Georg Simmel, Ferdinand Tönnies, and their epigones, but through a cultural reading of the physical city. This view of urban history, recently mined by scholars such as Charles Burroughs, Chiaro Frugoni, and others, is as indicative of directions for future research as the other chapters of this evocative book are.⁴ One hopes that this Dutch publication will be soon followed by an English translation. *

NOTES

1. M. Weber, *The City* (New York: The Free Press, 1958); H. Pirenne, *Les villes du Moyen Age* (Brussels, 1927); Lewis Mumford, *The City in History: Its Origins, Its Transformations and Its Prospects* (New York: Harcourt, Brace, and World, 1961); W. Braunsfels, *Urban Design in Western Europe: Regime and Architecture, 900-1900* (Chicago: University of Chicago Press, 1988); S. Kostof, *The City Shaped: Urban Patterns and Meanings Through History* (Boston: Little Brown, 1991); A. Sutcliffe, *Paris: An Architectural History* (New Haven: Yale University Press, 1993); K. Guber, *Die Gestalt der deutschen Stadt* (Leipzig, 1937).
2. L. H. Lees and P. M. Hohenberg, *The Making of Urban Europe 1000-1950* (Cambridge, Mass.: Harvard University Press, 1985), p. 29.
3. J. Ortega y Gasset, "On Point of View in the Arts," in *The Dehumanization of Art and Other Essays on Art, Culture, and Literature* (Princeton: Princeton University Press, 1948), p. 107.
4. C. Burroughs, *From Signs to Design: Environmental Process and Reform in Early Renaissance Rome* (Cambridge, Mass.: MIT Press, 1990); C. Frugoni, *A Distant City: Images of Urban Experience in the Medieval World* (Princeton: Princeton University Press, 1991).

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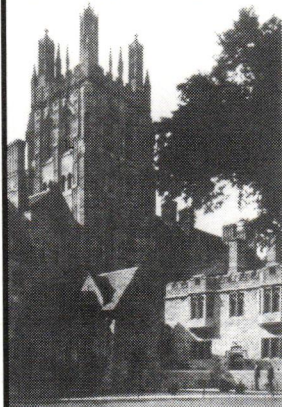
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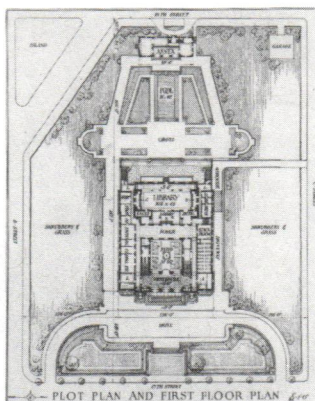


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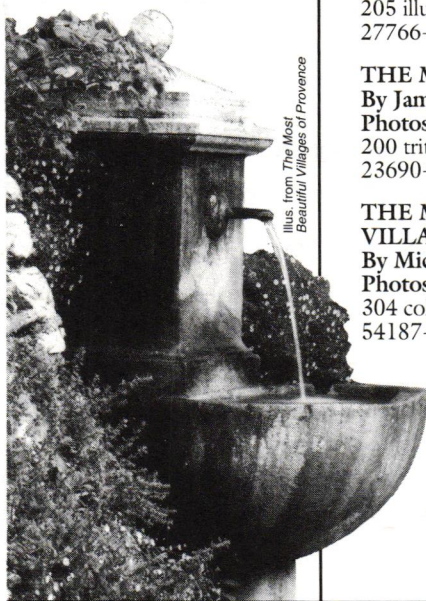
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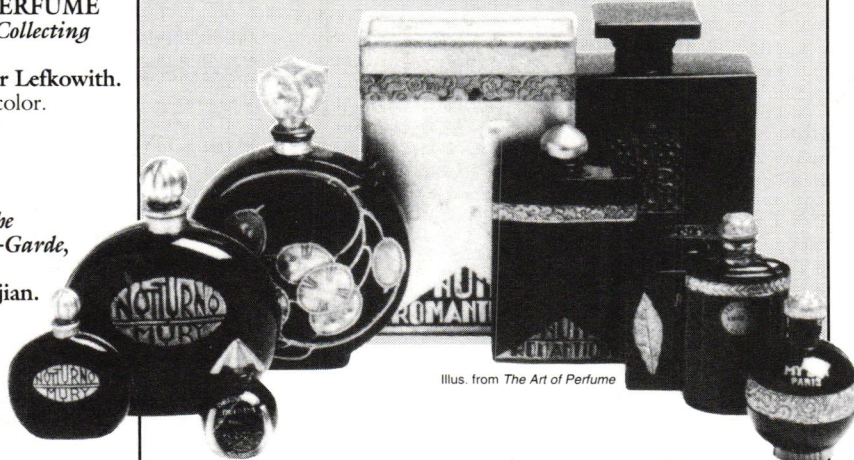
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