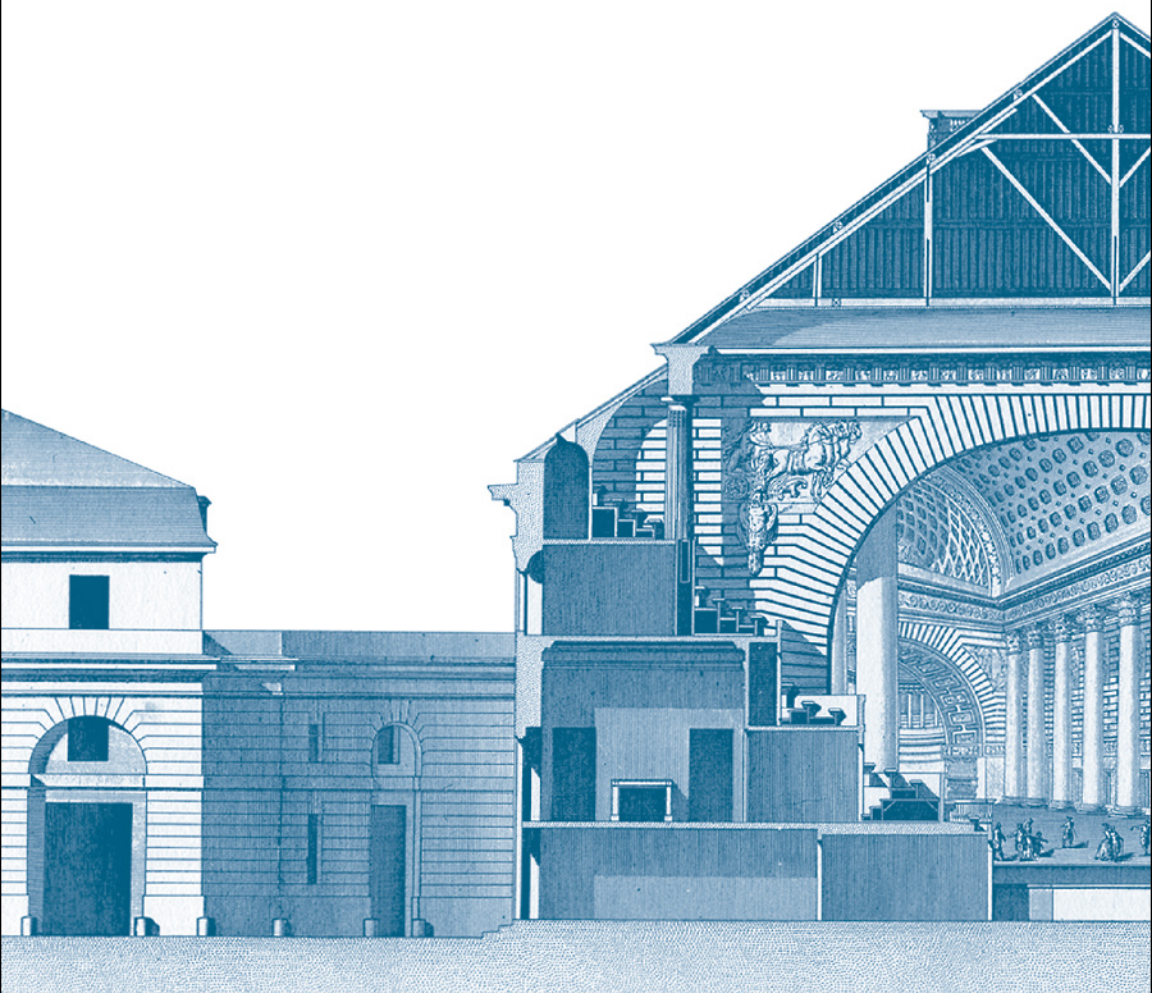# Architecture in Words

Theatre, language and the sensuous space of architecture

Louise Pelletier

Architecture in Words

What if the house you are about to enter was built with the confessed purpose of seducing you, of creating various sensations destined to touch your soul and make you reflect on who you are? Could architecture have such power? Generations of architects at the beginning of modernity assumed it could. From the mid-eighteenth century onwards, architects believed that the aim of architecture was to communicate the character and social status of the client or to express the destination and purpose of a building.

Architecture in Words explores the role of architecture as an expressive language through the transforming notion of character theory and looks at the theatre as a model for creating sensuous spaces in architecture.

Since the beginning of the eighteenth century, the theatre was more than simply a form of entertainment; it changed how individuals related to one another in society. Acting was no longer restricted to the performing stage in theatres; it became a way to conduct oneself in society. Such transformations had obvious architectural repercussions in the design of theatres, but also in the configuration of the public and private domains. The succession of spaces, the careful crafting of lighting effects and the expressive role of architectural features were all influenced by parallel developments in the theatre.

Pelletier examines the role of theatre and fiction in defining the notion of character in eighteenth-century architecture. She suggests that while usually ignored by instrumental applications, character constitutes an important precedent for restoring the communicative dimension of contemporary architecture.

Louise Pelletier is an architect and Adjunct Professor at the School of Architecture, McGill University. She is also Faculty Lecturer at the School of Design, Université du Québec à Montréal.

Architecture in Words

Theatre, language and the sensuous space of architecture

Louise Pelletier

For my daughter Beatriz
who loves words

Contents

Illustration credits

Acknowledgments

This book was made possible by the support and encouragement of many colleagues and friends. I would like to thank Ricardo Castro for his inspiring suggestions and unwavering enthusiasm; Denis Salter for his critical insights and his careful reading of the early versions of the manuscript; Radoslav Zuk and Adrian Sheppard for their suggestions; and Céline Poisson for reading the final text. Many thanks to Lily Chi and David Leatherbarrow, for their precious input at the beginning of my research; and Gregory Caicco, for some much appreciated lunchtime discussions. My sincere gratitude also goes to Anthony Vidler and Robert Mellin who both insisted that this work be published.

My most sincere thanks go to Stephen Parcell for his thorough and critical editing an early version of the manuscript. I am also grateful to Marta Franco for her constant support and her contagious enthusiasm; and to Louis Brillant for his patience and commitment to scholarship. To both of them I am thankful for allowing me to address the relevance of theory in the pragmatic world of architecture.

Special thanks to the staff of McGill University Libraries and the Canadian Centre for Architecture for their helpful support; to Irena Murray not only for her professional assistance, but for her precious friendship; to Louis Hubert, Curator at the Domaine National de Chambord, who helped me trace some of Servandoni's stage sets; and to Eli Brown who helped me secure reproduction rights from the Rare Books Collections at McGill University Libraries. My gratitude also goes to numerous research assistants from the graduate program in the History and Theory of Architecture at McGill University who helped in various aspects of the research over the years. They include Joanna Merwood, Franca Trubiano, Dominique L'Abbé, Jennifer Carter, Caroline Dionne, Jose Thevercad, Christina Contandriopoulos, Mark Neveu, and Lian Chang. I am grateful to the Institut de Recherche en Histoire de l'Architecture in Montreal for providing financial support for them. The Social Sciences and Humanities Research Council of Canada also granted me a postdoctoral scholarship that allowed me to devote much needed time to complete an important part of the research and produce the final manuscript.

I owe my fondest thanks to my husband, Alberto Pérez-Gómez, who taught me much, but most of all the depth and meaning of the architectural space of desire. Last but not least, my sweetest thanks to my daughter Beatriz, who in her own way helped keep my research on track.

Introduction

All has not been said about Architecture.[1]

Architecture articulates intent. From the cosmological ordering of the universe in antiquity to the more prosaic commercial domination of the urban landscape in our contemporary cities, architecture has always played a central political role in ordering human interaction in the public domain. In the past two centuries, we have witnessed radical changes to public life and the gradual dismantling of social conventions after the fall of the *Ancien Régime*. More recently, the rapid spread of technological communication, such as the internet, has transformed the private cell of the home or the individual office into a direct point of access for inter-personal – some may claim public – communication. Every day fewer meeting places are needed. Concurrently, architecture gradually has become faced with a crisis of meaning. If we are to address the ability of architecture to express purpose and intentionality, and its very relevance in the public domain today, architects cannot afford to ignore the political implication of their tools.

In order to grasp the expressive role of architecture, it is particularly instructive to follow its transformations with the rise of the subjective individual at the end of the eighteenth century. During the last decade preceding the French Revolution, Nicolas Le Camus de Mézières (1721–*c*.1793), a French architect, prolific writer and theoretician, defined the role of architecture as a language expressive of its destination and purpose. Like many of his contemporaries, he believed that the aim of architecture was to communicate the character and social status of his clients, but he also believed that buildings could evoke human sensations because they could speak to the mind and move the soul. He claimed that the essence of architecture was fictional and poetic.

Ever since antiquity, Vitruvius had established the expressive role of architecture in his definition of the term "decorum." For Vitruvius, however, architecture

expressed an order that transcended its materiality; it spoke of the order of the universe. Important cultural changes motivated by the Scientific Revolution transformed the very nature of architecture in the late seventeenth century. A questioning of the natural foundation of architecture (the reliance on the analogy between the architectural orders and human proportions) plunged the whole discipline into a potential crisis of meaning. Eighteenth-century architects began to explore the expressive power of architecture as the product of a *personal*, culture-specific imagination, but struggled to maintain its shared language so as to preserve its sense of purpose and "meaning."

Following in the footsteps of Le Camus de Mézières, and sharing his interest in a linguistic analogy, Étienne-Louis Boullée (1728–99), one of the most influential architects and theoreticians of that period, wrote that architecture is an art that addresses our senses by communicating various impressions to them. Moreover, it is an art that fulfills the most important needs of social life. Like many of his contemporaries, Boullée believed that architecture could communicate moral principles by modulating the lives and emotions of its inhabitants.[2] In his *Essai sur l'art* (*c*.1793), Boullée compares architecture to a poem that can evoke in us emotions related to the use of a building, revealing its character. "The images that [buildings] present to our senses should provoke within us feelings that are analogous to their destined usage," Boullée writes. Indeed, this visual poetry was the primordial role of architecture for the architects of the late eighteenth century. Boullée clearly distinguishes between construction and the process of conception, emphasizing that architecture is *not* the "art of building," as Vitruvius had claimed. Vitruvius mistook the effect for the cause, Boullée writes, since conception, this production of the mind, is the first and essential dimension of architecture. "The art of building, therefore, is only a secondary art that will appropriately be called the scientific side of architecture."[3]

Following the French Revolution, however, architectural theory underwent some radical transformations, especially in the work of Jean Nicolas Louis Durand (1760–1834). Paradoxically, Durand was Boullée's close friend and most fervent disciple. For Durand, architecture became an art of efficiency in which buildings must be composed rationally to avoid wasteful expenses. The question of expression became incidental, subordinated to the primary utilitarian concerns. In a very revealing plate in his *Précis des Leçons d'architecture* (1802), Durand proposes a more "rational" alternative to the Church of Ste. Geneviève, the French Pantheon in Paris built by Germain Soufflot after 1764. The plate compares the cruciform plan of the actual Pantheon to Durand's own alternative project for a circular building. His project might have created an effect of vastness and magnificence, but Durand's primary concern was that his rational plan was more efficient in terms of the relationship between the use of walls and the surface area covered by the building. By rejecting the symbolic role of architecture and focusing on its usefulness and functionality, he redefined the discipline as an applied science, and initiated an important paradigm shift in architectural theory.

From the nineteenth century, mainstream architecture was indeed regarded as a functional discipline, less concerned with questions of expression than

its utilitarian role. Coincidentally, the notion of program, previously considered an important constituent of architectural meaning, articulated through discursive language as social conventions, through the use of mythological analogies, or through poetic language as fiction, was reduced to its more pragmatic requirements. Architects ceased to be concerned with the expressive nature of their work because they believed that expression would be conveyed automatically by "solving" the functional requirements of the program. The search for meaning in the notion of character was reduced to a syntactic interest in typology.

In the closing decades of the twentieth century, architectural theory has exceeded this discussion of functionalism. With complex structural forms being calculated by computers, and with innovative building materials being generated by science, any imaginable – or unimaginable – shape can now be built. This extreme freedom to manipulate the form of our built environment has led to recent architectural structures based on organic evolutionary growth and proliferation. In this spirit, Greg Lynn has proposed a "blob architecture" whose primary objective appears to be unexpected shapes: the dream of absolute formal innovation in architecture.[4] He claims that this model of organic growth produces buildings that are more functional than any rational building. He denies, however, that their appearance should be interpreted as a formal expression. In other words, any parallel between the formal generation of architecture and the program it is meant to enclose is purely coincidental. Even though the relevance and application of functionalism continue to be challenged in the early twenty-first century, questions of architectural expression are

still pressing, because if architecture's communicative role in language is relinquished, it may also lose its right to "perform" in the public domain.

In her prologue to *The Human Condition*, Hannah Arendt explains the importance of language for finding meaning in the world, and the troubling disconnection between scientific language and politics in the contemporary context. "Wherever the relevance of speech is at stake," she writes, "matters become political by definition, for speech is what makes man a political being." Scientists, and by extension architects, no longer seem to see or anticipate the political implications of their work because "they move in a world where speech has lost its power."[5]

Arendt establishes the distinction between the social and political realms. She traces the origins of the word "social" as coming not from the Greek, but from the Roman language. The Greeks didn't think of the social as referring specifically to the human condition, but to any animal life. Political life, on the other hand, was not only different, but stood "in direct opposition to that natural association whose center is the home (*oikia*) and the family," in other words, to the social life.[6] This political life, or *bios politikos* as Aristotle called it, was characterized by two kinds of activity – *praxis* (action) and *lexis* (speech) – and excluded everything that was merely necessary or useful. Speech was crucial because it was comparable to action. More than just a means of communication, language was an important mediator for finding meaning in the world.

During the Baroque period, the public realm was governed primarily by the monarchy which occupied the place of mediation between the transcendent order of the universe and the political order of the finite human world. Architecture could occupy this public realm because it was a prime tool of mediation. During the seventeenth century, architecture and related disciplines such as gardening conveyed the symbolic order of the human world through their use of perfect geometry. French gardens, epitomized by the great compositions at Versailles, were not only a sign of the king's power and universal dominance; their geometry established a strong order amidst a changing world. The architecture of theatres also conveyed this political order by incorporating the auditorium and the stage into a symbolic geometry, with a perfect perspective illusion focused on the patron: in most cases, the king. The hierarchy of this architectural framework not only glorified the monarch as the only person who could witness the perfect geometry of the stage; in many Baroque theatres the royal box was the prime focus of attention, competing in importance and ornamentation with the stage on the opposite side of the theatre. One's proximity to the king's box was more important than the action on stage; this indicated the social and political standing of the various members of the audience. As early as the beginning of the eighteenth century, however, citizens were becoming less concerned with their place in a coherent totality and more aware of their own individuality, thus undermining the political stability of the *Ancien Régime*.

With the birth of a new subjective individual,[7] poetry and music flowered and were accompanied by the rise of the novel as an entirely social art form. In theatre, tragedy lost some ground to new dramatic genres such as the *drame bourgeois*, which depicted private and social individuals as opposed to the archetypal
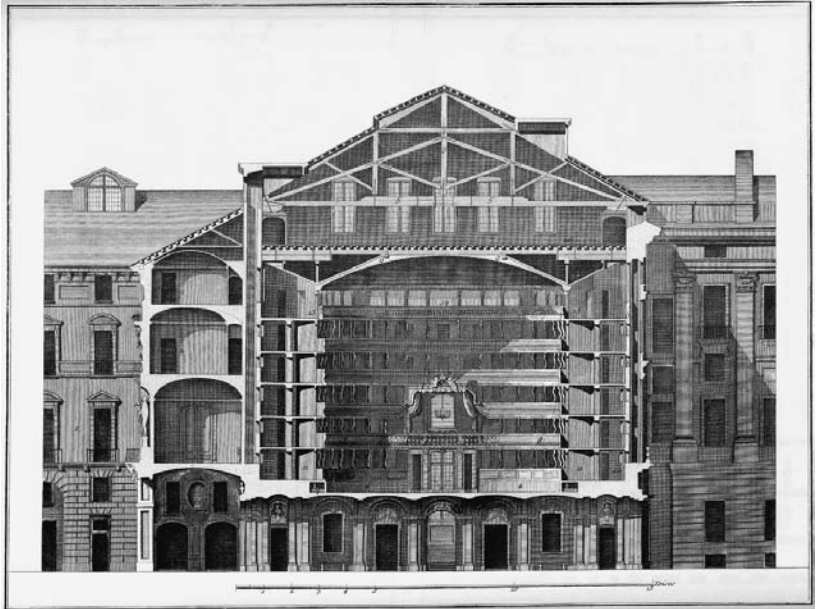
characters of classical tragedy. These radical transformations of the artistic landscape coincided with the decline of the most public of arts: architecture.[8]

The publication of important eighteenth-century treatises on residential architecture, such as Jacques-François Blondel's *De la distribution des maisons de plaisance* (1737–8), Charles-Étienne Briseux's *L'Art de bâtir les maisons de campagne* (1743), and Nicolas Le Camus de Mézières's *Le génie de l'architecture, ou l'analogie de cet art avec nos sensations* (1780), indicates the new importance given to private life. Other treatises, such as Germain Boffrand's *Livre d'architecture contenant les principes généraux de cet art* (1745), also emphasized the social dimension of private architecture. They sought to define architecture as a truly expressive language, an *architecture parlante* of sorts that sought to maintain its political dimension.

In his treatise translated into English as *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, Le Camus de Mézières argues that the complexity of the distribution (including the number of anterooms) depends on the grandeur of the whole and the social status of the client. Interestingly, the relative importance that Le Camus gives to each room (as suggested by the length of the text describing it) is different from in the previous century. Greater emphasis is given to the private rooms devoted to pleasure, such as the boudoir and the baths, as opposed to the public apartments with representational roles, such as the salon and the bedchamber: "[T]here are private apartments in which care must be taken to supply everything that convenience, ease, and luxury may demand. These are more frequented than the state apartments," he writes, "a preference that has its source in nature. The state apartments, properly speaking, exist purely for display, and this

appears inseparable from a degree of unease and discomfort. In rooms that are too large, a man feels out of proportion."[9]

These architectural transformations resulted from the new importance given to the self and to private life during the eighteenth century. These transformations included the abandonment of parade or state apartments (*pièces d'apparat*) in favour of more intimate *petits appartements* for both the aristocracy and the bourgeoisie, with a corridor to isolate every room from the flow of circulation. Dimensions of rooms that formerly were used for display were reduced; the small living room and the boudoir became favored apartments reserved for intimacy and isolation. The word boudoir itself (from the French *bouder* (to sulk)) testified to the possibility of withdrawing from a group, in an isolated place qualified by melancholy; the boudoir was the ideal place to return to oneself.[10] Throughout *The Genius of Architecture*, this need for greater intimacy is reinforced. In the section on distribution, Le Camus insists that connections among rooms be planned so that maids and servants can remain almost invisible. Numerous concealed passages can allow servants to go from one room to the next without being seen, and thus become least intrusive. The boudoir, the heart of intimate and private life, is located at the end of a long sequence of rooms, as if to filter out any unwanted intruders.[11]

In order to follow transformations in the expressive role of architecture, the architectural theory of Le Camus de Mézières, which testifies to the rise of the subjective individual during the last few decades of the eighteenth century, is a fertile site of investigation. Le Camus de Mézières is usually acknowledged for his theoretical influence on important architects of the following generation, such as Boullée and Sir John Soane (1753–1837).[12] Both Boullée and Soane drew important lessons from Le Camus's theory on the expression of architectural character, especially his use of light and shade to convey specific emotions. As a practicing architect, Le Camus is best known for his construction of the *Halle au blé* in Paris (1763–7), a municipal institution for distributing grain in the city, originally built on the land of the *hôtel de Soisson* and integrated into the *Bourse du commerce* in 1889. He also wrote treatises on building construction and strength of materials, but *The Genius of Architecture* is acknowledged as his most significant text, for it includes his clearest formulation of how architecture expresses individual character.

In the eighteenth century, this approach to architecture became known as character theory. It considered architecture as an expressive language, and thus preserved the public relevance of architecture as a means of establishing order despite the rise of the subjective individual. For Le Camus de Mézières, the intersubjective dimension of architecture, expressed as character, was epitomized paradoxically by the private architecture of the *hôtel particulier*. He described the potential of private architecture to express the individual character of its owner on the urban stage, and thus preserve the public role of architecture through language. Le Camus's attention to the expressive role of architecture reflected his personal fascination with the theatre and its ability to move the souls of spectators. The theatre provided him with a pervasive analogy to demonstrate the relevance of architecture as a new form of language.

In addition to his central architectural treatise and his few technical treatises, Le Camus also wrote several literary works, usually neglected by modern scholars due to their apparent lack of architectural value. Scholars have either emphasized the apparent contradiction between the poetic language of *The Genius of Architecture* and his more technical texts on architecture, or tried to reconcile these works by regarding *The Genius* as a technical manual on the *hôtel particulier*.[13] Meanwhile, virtually nothing has been written about his plays, his novel or his description of a picturesque garden. Yet, these "secondary" works provide important clues for understanding the true lesson of *The Genius of Architecture*: not only to define the conventional *distribution*[14] of an *hôtel particulier*, but to convey the tension of architectural space akin to that of an erotic encounter. The mode of discourse in Le Camus's treatise is far from purely technical. Its frequent use of theatrical metaphors to speak about architectural concepts such as gradation of ornamentation, succession of spaces, and emotional climax shows his intention to develop an "architecture of the event" that demands to be reenacted by every visitor/spectator of the architectural scenery.[15] As we shall see, the temporal dimension of architectural experience is structured around a fictional narrative that provides a key to unlock the true meaning of *The Genius of Architecture*, and that may suggest a way to recover the expressive role of architecture today.

Part 1

Character and expression:
staging an architectural theory

Chapter 1

Architecture as an expressive language

In antiquity, architects relied on the shared language of architecture, embodied in the architectural orders, to convey meaning through their work. The temples of Minerva, Mars and Hercules, for example, were built in the Doric order because its simple, potent form was appropriate to the gravity of these divinities. According to Vitruvius, "Because of their might, buildings [devoted to these divinities] ought to be erected without embellishments." Temples to Venus, Flore, Proserpine and the Nymphs required the Corinthian order, which was more appropriate to the gentleness of these goddesses. Temples to Juno, Diana and Bacchus were built in the Ionic order, which best represented these divinities: "The determinate character of their temples will avoid the severe manner of the Doric and the softer manner of the Corinthian." In *De Architectura* (first century BC), Vitruvius described this correctness of expression as *decorum*, "the faultless ensemble of a work composed, in accordance with prece-dent, of approved details." This fundamental respect for conventions (from the Greek *thematismos*) was dictated by both custom and nature.[1]

      Vitruvius first wrote of the expressive role of architecture in terms of ornaments and their potential to express historical events. The story of the Caryatids, these statues of women from Caryae holding entablatures, is a good example. The replacement of columns by statues of enslaved women supporting cornices expressed not only their structural role, but the historical event of the defeat of the inhabitants of Caryae by the Greeks. Vitruvius explains:

> The Peloponnesian city of Caryae had sided with the enemy, Persia, against Greece. Subsequently, the Greeks, gloriously delivered from war by their victory, by common agreement declared war on the Caryates. And so, when they had captured the town, slaughtered the men, and laid a curse on the inhabitants, they led its noble matrons off into captivity. Nor would they allow these women to put away their *stolae* and matronly dress; this was done so that they should not simply be exhibited in a single

triumphal procession, but should instead be weighted down forever by the burden of shame, forced to pay the price for such grave disloyalty on behalf of their whole city. To this end, the architects active at the time incorporated images of these women in public buildings as weight-bearing structures; thus, in addition, the notorious punishment of the Caryate women would be recalled to future generations.[2]

For Vitruvius, architecture expressed an order that was both natural and conforming to cultural conventions. Architecture was not only the "art of building" but also included gnomonics and mechanics.[3] It spoke of the order of the universe. In 1684, Claude Perrault (1613–88), a member of the *Académie Royale des Sciences* and best known as an architect for his design of the east colonnade of the Louvre, translated Vitruvius's treatise, and his extensive notes and commentaries demonstrate some fundamental changes that were transforming the very nature of architecture at the end of the seventeenth century. Whereas Vitruvius argued that architecture consists of *ordonnance* (a translation of the Greek term *taxis*), disposition or arrangement (from the Greek *diathesis*), eurhythmy or proportion, decorum (which Perrault translates as *bienséance*), and distribution (from the Greek *oeconomia*), Perrault insisted that Vitruvius was mistaken and that only *ordonnance* and disposition should be considered true constituents of architecture. Together, they express the use of each room and the *destination* of the building:

> The ordering (*ordonnance*) of a building consists in the division of the space we are planning to use. This division is done in such a way that the dimension of every part is appropriate to its use and proportioned to the size of the whole building. . . . The disposition is the placing of all parts according to their quality, that is to say in the order determined by their nature and custom.[4]

For Vitruvius, however, *decorum* was also a central part of architecture. It was the aspect that determined "the correctness of a building," ensuring that the appearance of a project was "composed of approved elements and with authority." Vitruvius explains that this authority was based on custom and nature. Perrault, however, insists that its origin is in custom (*accoustumance*) and regards it as the principal authority in architecture. Misreading Vitruvius, or perhaps adding a new emphasis, Perrault writes: "Vitruvius *seems to imply* that custom is the principal authority in architecture."[5] In presuming that *decorum* was based primarily on custom, Perrault enabled the discipline of architecture to be conceived as an art based on convention. This radical questioning of the natural foundation of architecture introduced an arbitrariness that plunged the whole discipline into a potential crisis of meaning. However, architects did not immediately embrace Perrault's position; they remained convinced that natural proportions were a fundamental principle, but were obliged to acknowledge the new role of conventions in their theories of architecture.

To understand the scope of these changes, it is important to consider the debate on the architectural orders that began in the late 1670s and resonated in architectural treatises for over a century.[6] In 1683, Claude Perrault published his

Ordonnance des cinq espèces de colonnes selon la méthode des anciens, the first architectural treatise to challenge the Vitruvian canon by questioning harmonic proportion as the foundation of architectural orders.[7] François Blondel (1618–86), professor at the *Académie Royale d'Architecture* and author of the authoritative *Cours d'architecture*, engaged in a debate with Claude Perrault. At issue was whether architectural proportions are based on natural and therefore absolute principles, as argued by Blondel, or whether they result from social conventions and a general consensus among architects, as maintained by Perrault.

In his *Ordonnance*, Perrault argues that architectural beauty and the meaning of architecture cannot reside in precise proportional relations because there is no rule on which all architects agree. Every architect, he claims, has attempted to perfect the art by adjusting architectural proportions. To support his claim, he compares the writings of various renowned authors and shows the inconsistencies among all previous unified proportional systems. He concludes that the beauty of architecture lies more in "the grace of its form" than in "the exactitude of unvarying proportion." The different characters attributed to the architectural orders on the basis of their relative proportions "with little exactitude or precision are the only well-established matters in architecture."[8]

Although Perrault was not the first to identify inconsistencies among the proportions that various authors had ascribed to the architectural orders since antiquity, he was the first to reject the explanation of his contemporaries, including François Blondel, who argued that minor discrepancies resulted merely from interpretation problems while the "universal ideal" remained unchallenged. To account for the dissimilarities, Perrault rejected the concept of a unified theory of harmony, and instead proposed two kinds of beauty in architecture: positive and arbitrary. "Positive beauty" was based on what he called "convincing reason" and included the demonstrable quality of craftsmanship. "Arbitrary beauty," on the other hand, was no less important, but was less tangible because it emphasized the composition of the whole and relied on conventions that could vary from one society to another.[9]

Presuming that the value of architectural proportions is relative, Perrault took the initiative to introduce a new module of his own that slightly adjusted the proportion of each architectural element, so that the pedestals and the heights of columns in the five orders would follow a progression of whole numbers. This "method founded on reason" is superior to others, Perrault argued, for "it affords memory a greater facility for retaining dimensions."[10] Perrault was indeed a true Cartesian: although he believed in the importance of universal norms for guiding architecture, he also thought that these norms should be based on reason rather than on precedents. Despite what might be expected, François Blondel did not refute Perrault's simplified method for determining architectural proportions. On the contrary, in his commentary on *L'Architecture françoise des bastimens particuliers* (1685) by Louis Savot, Blondel praises the advantages of this method. The work of Perrault, he writes,

> contains a method far easier than any other to determine the proportions of the five architectural orders, because their parts follow fixed
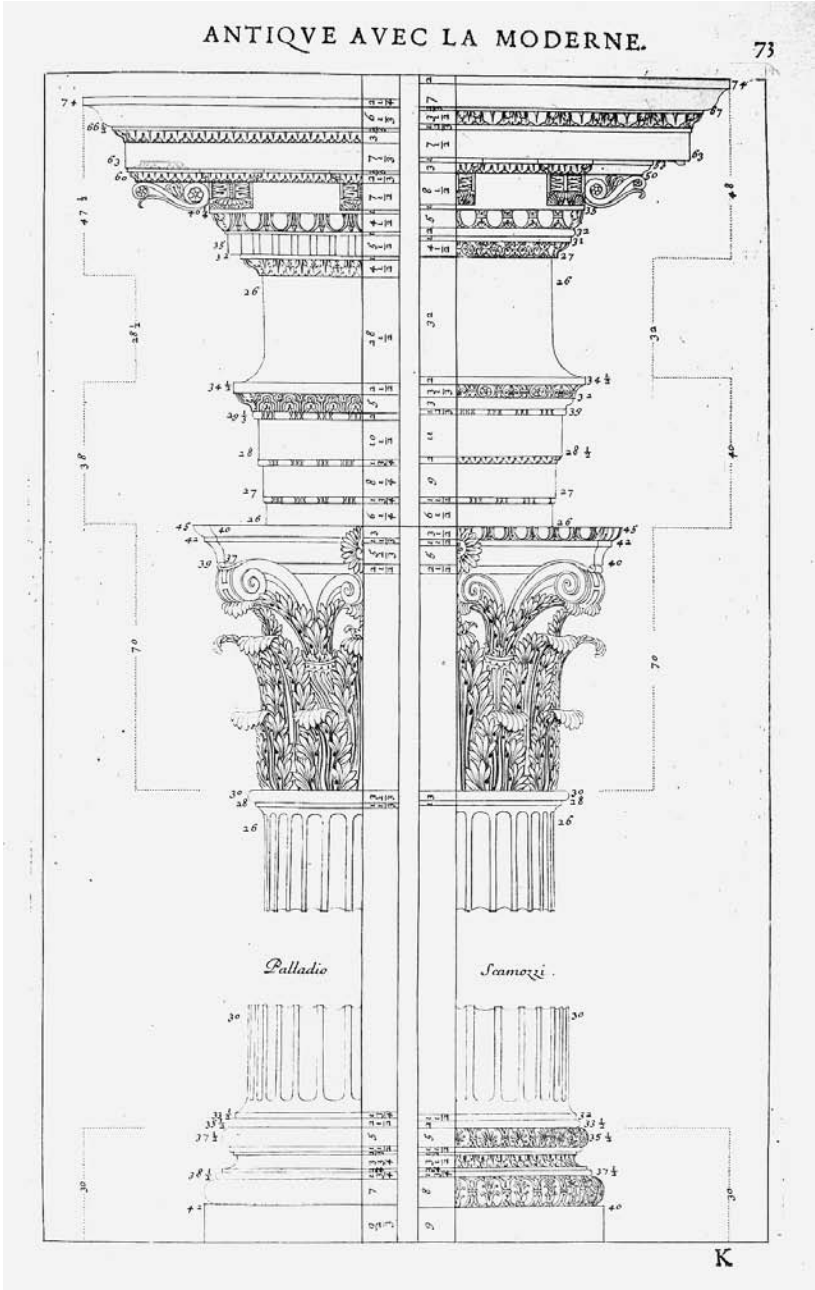
1.1
**Corinthian order
according to
Palladio and
Scamozzi**
Source: R. Fréart de
Chambray, *Parallèle
de l'architecture
antique avec la
moderne*, 1650

1.2
**Proportions of the
five architectural
orders according
to C. Perrault**
Source:
*Ordonnance des
cinq especes de
colonnes*, 1683

measurements and are either the same for all the orders, such as the entablatures that measure two diameters in height; or increase by equal intervals, such as the columns that exceed by two thirds of a diameter from one order to the next and the pedestals that increase by only one third of a diameter.

Blondel concludes that Perrault succeeded in creating a very effective "idea of the measurements of the architectural orders by taking an average between the biggest and the smallest that one can find in works of Antiquity and in architects' books."[11]

Blondel did not oppose Perrault's simplification and rationalization of proportional rules; he opposed the deeper philosophical implications of his theory. Perrault had challenged the premise that architecture is founded on absolute principles. Indeed, the most significant transformation brought about by his theory was the separation between the positive foundations of architecture (commodity, stability, salubrity) and the arbitrary rules based on custom. By promoting arbitrary rules, Perrault enabled architecture to be based on human principles, whereas previously it had always been based on an order that transcended the human condition. In his *Cours d'architecture* (1675–83), Blondel comments on Perrault's forthcoming book on the architectural orders and questions his challenge to Vitruvius's canon. Building, Blondel argues, is natural because it is born from necessity. In building, all that has to do with salubrity, stability and commodity is also natural because it is also derived from necessity. Decorum (*bienséance*) and decoration are more ambiguous, he says, yet they are also in our nature. Addressing more directly his contention with Perrault's position, Blondel refutes the reasons invoked for "the necessity of architectural proportions that are approved only by custom."[12] In effect, Blondel was warning against the long-term consequences of Perrault's position: if the proportions of architectural orders were nothing more than a shared set of conventions established in antiquity and simply accepted by subsequent generations of architects, there would be no reason to prevent them being substituted by an infinite number of other proportions. The selection of proportions therefore would depend on the taste, experience and intelligence of the architect, thus challenging natural harmony as the basis for meaning in architecture. This was essentially the point of departure for a century-long debate over natural beauty and arbitrary beauty in architecture.

The consequences for practice, however, were not felt immediately. Perrault's position remained controversial throughout the eighteenth century while Blondel's teachings endured as the official principles of the *Académie Royale d'Architecture*. After Perrault, Vitruvian authority was not replaced immediately by human custom and convention. On the contrary, the proportions of architectural orders retained their former association with nature (through the proportions of the human body), along with their assumed value and their implicit character. Although "character" was widely sought after by eighteenth-century architects, nature remained the acknowledged source of architectural proportions and its ability to convey meaning in architecture was never really in question. Perrault's thesis, how-ever, marked the beginning of major transformations in architectural theory that would have profound repercussions in practice. He not only developed his system of proportions into a method that was easier to use but also rejected the need for optical correction, thus giving theory an absolute supremacy over practice and enabling it to become a prescriptive tool.

This complex tension between convention and nature pervaded many spheres of knowledge during the Enlightenment. Although the practice of architecture was unaffected by these new theoretical concerns at the time of the debate between Perrault and Blondel, subsequent generations of architects certainly felt the need to acknowledge the profound ideological change brought about by Perrault. Toward the

end of the eighteenth century, the practical implications of Perrault's theory would become obvious in the work of innovative architects such as Claude-Nicolas Ledoux and Étienne-Louis Boullée, who made a radical departure from the traditional "classical" orders of architecture.

Character theory and the language of architecture

Following Perrault's questioning of the Vitruvian canon, eighteenth-century French theory began to confront the loss of absolute principles in architecture. Although authors of architectural treatises continued to acknowledge Vitruvian sources, they gradually discontinued demonstrations of the natural origin of architectural proportions, thus ending a centuries-long tradition in architectural writing. And although architects still respected the Vitruvian principles, they felt the need to define a new theory of architecture that would acknowledge the growing importance of convention. Throughout the eighteenth century, architectural theory never really lost the desire to reconcile architectural order and cosmological order, but architects realized that they could no longer rely on universal harmony to give meaning to their work. Looking for shared conventions of architecture as an expressive language was an attempt to save architectural meaning. This new interest in the expressive power of architecture would lead to a theory of character.

One of the earliest formulations of this new character theory can be found in the writings of Jacques-François Blondel, author of the *Cours d'architecture* (1771–9) and numerous architectural treatises, and professor at the Académie Royale d'Architecture from 1756 to 1774 (not to be confused with François Blondel mentioned earlier). It is in one of his early writings, *De la distribution des maisons de plaisance* (1737–8), an architectural treatise entirely devoted to country houses, that Blondel first declared that the exterior expression of a building should announce its destination. The façades of the main body of a building must be readily identifiable by the richness of their ornamentation and their elevation, Blondel writes, "so that those who only get a view of the exterior can recognize through this sign of distinction the residence of the Master. The other constructions that surround this central building must also express their use, either through sculpture or architectural elements."[13]

As the organization and hierarchy of a façade (its *ordonnance*) should reflect its internal use, inside a house, every room should clearly indicate its destination through a proper use of decoration: "one must always characterize the use of every room." Moreover, Blondel continues, the attributes of a façade should express the character and dignity of its owner: "When one builds a Palace, it is appropriate to ornate its façade with the attributes that express the dignity of the Lord for whom it is built."[14] Subsequent authors extended this expressive ambition to devise a more comprehensive theory of character that included not only architectural proportions and orders, but also all forms of decoration. Germain Boffrand (1667–1754) even suggested that an architect could transform the inhabitants of a building by choosing the appropriate character for it. Toward the end of the century, Ledoux proposed an additional interpretation of character in architecture, emphasizing moral edification: "The character of monuments, like their nature, contributes to the dissemination and purification of morals."[15]

         The theory of expression in architecture relied heavily on other art forms
for its principles. From its early formulation, character theory in architecture demon-
strated some close affinities with the art of theatre, including theories of acting, the
personification of characters, and stage set design. For Blondel, the close relationship
between the exterior and interior decoration demanded a unified intention and a
progression comparable to a sequence of theatrical scenes. A visitor to the building
would then observe a coherent composition unfolding in front of his eyes. Exterior
decorations, he writes, must be "in perfect relationship with the interior; they must
relate to one another with such perfection that the *spectator* could not look at one
with more interest than for the other. . . . A good architect must have general views
and pay greatest attention to the entire *spectacle* of his building."[16] With the unifying
value of character in Blondel's theory, decoration was an essential part of the design,
much more than a mere addition to an independent structure.
         An explicit association with theatre appeared later in Boffrand's *Livre
d'architecture* (1745). This also marks the beginning of the search for the proper
means of expressing character in architecture. In Boffrand's treatise, the architectural
orders are presented as "characters" with an implicit authority as symbolic sources
of measure and beauty. Although an analogy to the proportions of the human body
continues to be assumed, emphasis is placed on the particular expressive quality of
each architectural order.

> It is in the proportions of the Doric order which is the most material, of
> the Corinthian order which is visually the lightest and the most sensitive
> to ornaments, and of the Ionic order that holds the middle ground
> between the two extremes, that one can encounter the character that is
> appropriate to every kind of building.[17]

Boffrand not only attributes a specific character to each order, but also recommends
its appropriate use or situation. He is aware that various authors have presented
different proportions for the architectural orders, but suggests that these discrep-
ancies are due to rules of appropriateness that vary with nation, climate, etc. Knowing
the conventions and customs of a nation and the specific character of each archi-
tectural order, it is the responsibility of the architect, he writes, to choose the
proportions that best represent the destination of a building.
         It is in the second section of his treatise, "Principes tirés de l'art poetic
d'Horace," that Boffrand most explicitly compares the expressive role of architecture
with that of theatre. In a summarizing passage on his ideas about architectural genres,
Boffrand starts by explaining that painting, sculpture, and poetry belong to the same
family in the arts. Music depicts various sides of nature by expressing passions, from
the very tender to the most violent. Similarly, even though the work of architecture
may seem purely material,

> it can convey different genres that animate, so to speak, its various parts
> by the different characters that it brings out. Like in a theatre, a building
> expresses through its composition whether a *scene* is pastoral or tragic,
> if it is a temple or a palace, a public building destined to specific uses, or

a private mansion. Through their disposition, their structure, their deco-
ration, these various buildings must announce their destination to the
spectator; and if they don't, they break the rules of expression.[18]

Continuing his parallel between the architectural orders and the genres of poetry,
Boffrand describes how the character of each order imprints its effect directly on
the senses of the spectator. It is the duty of the architect to know the meanings
expressed by the architectural orders and to use them as basic elements of a shared
language. The expression of specific emotions became the guiding principle of
character theory, subordinating beauty itself to the expressive role of architecture.
"It is not sufficient that a building be beautiful," Boffrand writes, "the spectator has
to feel the character that the building must impart, so that it appears joyful to those
for whom it should communicate happiness, and serious and sad to those for whom
it should command respect or sadness."[19]

In his *Cours d'architecture*, which was not published until 1771, Jacques-
François Blondel expanded his notion of architectural character to include a parallel
with facial physiognomy, inspired by René Descartes and Charles Le Brun, in which
facial expressions represent the internal passions and character of the soul. In his
Conférences sur l'expression (1698), Le Brun suggested that various elements of
facial expression combine to convey a particular emotion. His theory was most influ-
ential in the art of painting and acting theory, but Blondel believed that it also had
direct affinities in architecture. He even claimed that Claude Perrault's celebrated
monuments owed much to Le Brun's theory. Blondel proposed that elements of a
building could suggest facial physiognomy and thereby convey a character that would
unify its program. However, like many of his contemporaries, Blondel did not avoid
the apparent dilemma of conflicting intentions. On the one hand, he questioned the
need for an absolute and universal basis for architecture, grounded on natural

1.3a, b, and c
**Tuscan
entablatures from
Palladio to Vignola**
Source: J. F.
Blondel, Cours
d'architecture,
1771.
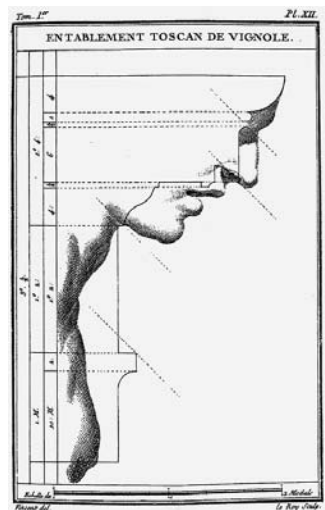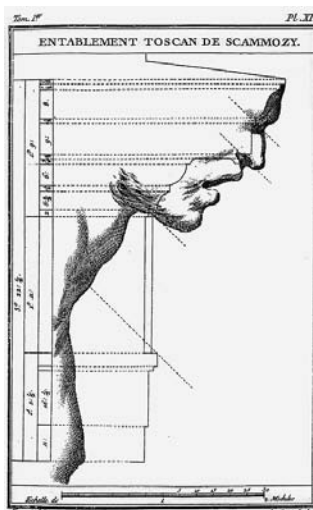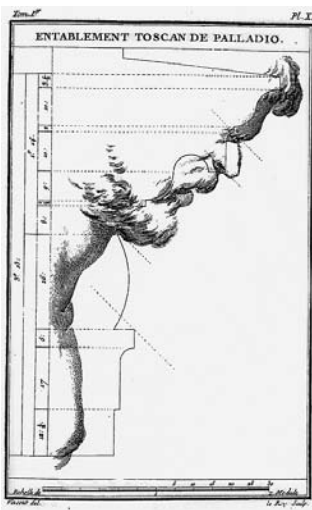
proportions; consequently, he attributed an important role to convention in establishing the expressive language of architecture. On the other hand, he felt the need to account for relativity in notions of taste and beauty. In his *Cours d'architecture*, Blondel writes: "the character of a composition can be found in the architectural orders, and since their proportions are drawn from nature, it is in nature that one should look for signs of the beautiful or the mediocre."[20]

A contemporary of both Blondel and Boffrand, Charles-Étienne Briseux, also wrote a treatise on architecture in which character theory figures prominently. Even though his *L'Art de bâtir les maisons de campagne* (1743), a treatise devoted to country houses, was written only a few years after Blondel's *De la distribution des maisons de campagne*, Briseux's treatise clearly anticipates the architectural theories that emerged in the final decades of the eighteenth century. The architectural orders were relegated to the end of the second volume of his treatise, rather than appearing at the very beginning, as was the tradition. Briseux justifies this decision by saying that the orders do not properly belong to private architecture but only to palaces and public buildings. His decision to include them at all was motivated only by a desire to provide the reader with all essential parts of architecture. In effect, Briseux not only challenged the established priority in architectural writings, but was also the first to dissociate the notion of character from the architectural orders, reducing them to one of many attributes that converged to define the particular character of a place.

For Briseux, the distribution of a country house was determined by "the specific use of every construction that must be placed according to its destination, and the status of the owner." Like most of his contemporaries, Briseux was conscious that customs and conventions played an important role in the distribution of a building. For example, the position of the chapel in a private house would depend on the specific rules of the diocese. "In some areas," he writes, "it is permitted to place it inside the main building, even in a closet, as long as the room is not being used for indecent purposes. In other dioceses, it should be placed in an isolated building. It is the responsibility of the architect to learn about the rules of a region before determining the position of a chapel."[21]

Briseux discusses the appropriate location for each room, giving an unprecedented importance to service areas. He begins with the kitchens, the greenhouse or the orangery, and the bathroom; he then describes the location and disposition of stables and sheds, the attic where grains are stored, and kennels; the icebox and various ways of preserving ice; and only then describes the principal rooms, their use, and their distribution. The position of the meeting cabinet, he writes, usually determines the distribution of the other rooms. Moreover, "the size of the main rooms must be appropriate to the status of the Master and the extent of the building."[22] Unlike the architects of the following generation, however, Briseux was more concerned about convenience than representation when defining the position of every room.

While the first volume of Briseux's treatise is devoted mainly to distribution, the second volume tackles problems of construction, from building materials, foundations and structure to exterior and interior decoration. Echoing Blondel and Boffrand, his first consideration in the decoration of a façade is

appropriateness. The decoration of façades must "reflect their specific use." Consequently, one must maintain a hierarchy, giving priority to the main part of the building; the first floor must also be lighter than the ground floor, which appears more "neglected and male." The orders, he insists again, are not appropriate for country houses, but only for palaces, castles, temples, and other public monuments. It is important, however, to designate the particular character of each façade so that "the profile of architectural elements such as a cornice, plinth, transom, archivolt, etc. can follow the proportions of a given order, and the moldings will also express, through their proportion, an increase from simplicity to richness."[23]

The last part of Briseux's treatise discusses interior decoration, suggesting again an increase in the level of ornamentation as one proceeds from room to room. This progression is designed to incite the inhabitant, turned into a spectator, to enjoy the spectacle: "The first rooms, starting with the vestibules, must satisfy more by the nobility of their forms than the richness of their ornaments, and the skillful architect must satisfy the curiosity of the *spectators* with such gradation that their admiration can increase as they proceed and find each room more decorated than the previous one."[24] Here, near the end of Briseux's treatise, there is a hint of a theatrical analogy in this unfolding of architectural space in a private house. Almost four decades later, it was developed much further when Le Camus de Mézières explored this temporal enactment of architecture and pushed the theatrical analogy to a new level. While Boffrand, J.-F. Blondel and Briseux, as pioneers in this new expressive theory of architecture, made use of the theatrical metaphor, nowhere is this parallel more explicit than in Le Camus de Mézières's *The Genius of Architecture*.

Le Camus de Mézières and the metaphor of the theatre

In the first half of the eighteenth century, architectural theoreticians assumed that the proportional relations of architectural elements could communicate the destination of a building. Whether based on natural harmony or on cultural convention, the architectural orders (or their corresponding proportional relations) continued to be used as a shared language to convey the character of a building. With the surge of neo-classicism around mid-century, the orders became the "metaphysical principle" of architecture that expressed not only character but the very essence of architectural meaning. Marc-Antoine Laugier, in his *Essai sur l'architecture* (1755), clearly expresses this renewed importance:

> The elements of an architectural order are the integral parts of a building. Therefore, they must be used not only as ornament, but also as constituting parts of a building. The existence of a building must depend on their union to such an extent that it would be impossible to remove a single element without causing the entire building to collapse.[25]

During the last decades of the *Ancien Régime*, however, although the architectural orders remained important, they were no longer sufficient to convey the desired character of buildings. Their status became assimilated to that of sculpture and painting, and only the coherent use of different modes of ornaments throughout a building could convey its appropriate character. Learning from the teachings of his

predecessors, Le Camus de Mézières believed that the characterization of space should represent the owner's personal story. However, he no longer restricted the expressive role of architecture to the orders but also addressed the senses using light, color, smell and music to convey specific emotions. In Le Camus's theory, the architectural orders were grafted almost incidentally to fit the chosen character, and were treated as almost equal to painting and sculpture. The owner's personal story served as the basis for the architectural program, with every room articulating one part of the narrative.

The Genius of Architecture proposes a narrative program that not only conveys the owner's social status but also gives a temporal coherence to the entire composition. In fact, the whole treatise is devoted entirely to private architecture, demonstrating how the character of a specific client can be translated into the programmatic requirements for the *hôtel particulier*, the great town house of the *Ancien Régime*. Echoing the writings of Boffrand and Blondel, Le Camus writes:

> The Building erected for a great Nobleman, the Palace of a Bishop, the Town House of a Magistrate, and the House of a Military Man, or of a rich private Citizen, require to be treated differently. The sensations they arouse are not the same; and consequently, the proportions of the whole and those of the masses and of the details must be appropriate in character.[26]

Previous architectural theories on private architecture considered the general pro- portions of the whole and the use of specific architectural orders (or their established proportions) to convey the appropriate character of a building. Like his predecessors, Le Camus believed in the importance of masses and proportions to express the destination of a building. He also maintained that there should be a close relationship between the exterior appearance and the internal distribution of a building, and he devotes a chapter of his treatise to "exterior decoration." Most of his treatise, however, is a linear, room-by-room description of living spaces and service quarters (*servitudes*), starting at the vestibule and concluding at the riding school (*manège*), in which he reinterprets the classical principles of distribution to evoke particular sensations in the spectator/inhabitant through the use of appropriate characters.

Le Camus takes the reader on a tour of an *hôtel particulier* emphasizing the relationship among successive rooms. Clearly influenced by Briseux's architec- tural theory, Le Camus de Mézières stresses the importance of a unifying theme that recurs throughout the building, with dramatic tension that builds toward an emotional climax. His description of an *hôtel particulier* leads to a dramatic unfolding, with a central character of the architectural composition indicating the need for dramatic unity: "Just as in a play a single action occupies the stage, similarly in a building the unity of character must be observed, and this truth must capture the imagination by presenting itself to the eye."[27] This desire for narrative cohesion came from a need to substitute the principles of cosmic harmony that had guided classical architecture until the end of the seventeenth century. The temporal unfolding of the architectural program required an embodied observer to confirm the expressive character of the

architecture. Although Boffrand and J.-F. Blondel had already made the "spectator" an important element in their theories, Le Camus de Mézières proposed an even greater emphasis on the beholder and the senses. Le Camus's fundamental innovation was to place the theatre at the centre of his discussion of the expressive nature of architecture. *The Genius of Architecture* therefore describes the succession of rooms in the *hôtel particulier*, each one announcing the next in a way that recalls the unfolding of a play, each doorway framing a new scene like a theatrical proscenium. Le Camus's linear description of the distribution and ornamentation of rooms was a novel way to present his ideas on architectural expression; even more innovative was his description of how transitional spaces, such as the vestibule and the series of anterooms, must announce the character of the main rooms: "In [the second anteroom], one must become aware of the sensation to be expected in the rooms that follow; it is, so to speak, a *proscenium*, and the utmost care must be lavished upon it to announce the *character of the performers in the play*."[28] In comparing the second anteroom to the proscenium at the theatre, Le Camus identifies the actual threshold of the *hotel*. This "staging" of the first scene that announces the character of the rooms that follow emphasizes the sense of progression through the building, thus introducing a temporal dimension to the experience as well as the planning of architectural spaces.

It is the cornice that performs the role of framing the character of a room, he explains, and one must pay it careful attention. Its genre and character must be distinct. By gradually increasing the richness of ornament throughout this progression of spaces, the character of the *hôtel particulier* is progressively disclosed. This disclosure resembles the build-up of dramatic action and "suspense" in a play. In other words, Le Camus's treatise describes an unfolding of space with an emotional tension that is similar to the unfolding of action in the theatre. Each room was also intended to convey a different emotion. Le Camus explicitly compares the emotions created by architecture to those engendered by theatrical stage sets. "When we look at a monument," he writes, "we experience various sensations of contradictory kinds: gaiety in one place, melancholy in another. One sensation induces a meditative reflection, another inspires awe, or maintains respect, and so on." If one is to understand the cause of such sensations, he continues, we can look at the effects created by

> stage decorations, which use the mere imitation of works of Architecture to govern our affections. Here, we see the enchanted Palace of Armida: all is magnificent and voluptuous; we guess that it was built at Love's command. The scene changes: the abode of Pluto strikes horror and dread into our souls. We see the Temple of the Sun, and we respond with admiration. A view of a Prison inspires sadness; Apartments ready for a festival, surrounded by gardens, fountains, and flowers, excite gaiety and prepare us for pleasure. At the sight of the forest of Dodona, the soul is moved; we are seized with the sacred horror of the grove.[29]

Architecture here becomes an expressive language that can produce "poetic effects upon the beholder."[30]

Le Camus's analogy between architecture and the various modes of expression at the theatre would greatly influence the subsequent generations of architects and theoreticians. Sir John Soane, for example, who was known to have translated an important part of *The Genius of Architecture* while preparing his own lectures for the Royal Academy, wrote in his notes in preparation for his fifth lecture that

> the front of a building is like the prologue of a play, it prepares us for what we are to expect. If the outside promises more than we find in the inside, we are disappointed. The plot opens itself in the first act and is carried on through the remainder, through all the mazes of character, convenience of arrangement, elegance and propriety of ornaments, and lastly produces a complete whole in distribution, decoration and construction.[31]

Throughout *The Genius of Architecture*, the theatrical metaphor is pervasive. In the first few pages of the introduction, Le Camus admits his admiration for the work of the famous architect and stage set designer Jean-Nicolas Servandoni (1695–1766). Servandoni's work at the theatre became a model for Le Camus's architectural theory. The use of light, the unity of character, and the temporal and emotional progression in a play were fundamental concepts of Servandoni's performances that Le Camus transposed directly into his architectural theory. But Le Camus's interest in theatre was not only theoretical. It also came from a genuine interest in play-writing. During the ten years prior to the publication of *The Genius of Architecture*, Le Camus animated the Society Theatre of Charonne, which met in a pavilion that he had erected on Rue Saint-Blaise in Charonne.[32] He wrote many plays that were performed in this private theatre. As we shall see, Le Camus's involvement with the theatre, both as a playwright and as a spectator, was determining in defining his innovative architectural theory.

Chapter 2

Character theory in theatrical staging

The introduction of "character" in architectural theory stemmed from a new concern with the expressive nature of architecture during the eighteenth century. It was prompted not exclusively by a transformation within the field of architecture, but by an association with other disciplines. After seeking universally valid proportions in music, architecture examined other theories of expression in painting, poetry, and theatre to try to redefine its status as an art of imitation that was no longer limited to the proportions of the human body. In *The Genius of Architecture*, Le Camus de Mézières explicitly identifies the sources that most influenced his architectural theory. In the first pages, he expresses his fascination for a theatrical performance that, in his view, fully corroborated his architectural intentions: a *jeu d'optique*, or optic play, by the famous architect Servandoni at the *Salle des Machines* in 1741. This theatrical production relied on the stage sets and the modulation of light to convey the plot. Servandoni's design of theatrical scenery directly informed Le Camus's own theory of architecture. Unlike most of his predecessors, Le Camus's character theory no longer relied on the architectural orders as the main device to convey the destination of a building; rather, Le Camus borrowed from theatre a mode of expression where the complexity of stage sets and lighting effects could convey a wide array of human emotions. As a result, for Le Camus architecture was no longer a codified language that could be read unambiguously. Instead, the language of architecture became akin to poetry, rebelling against the transparent language of the architectural orders; and like Servandoni's optic plays, it communicated its purpose by creating emotions in the spectator.

Le Camus frequently refers to the succession of rooms and anterooms in the *hôtel particulier* as an unfolding of scenes in a theatrical performance, and he defines spaces using lighting effects and maintaining a unity of character – principles borrowed directly from his knowledge of theatre, and dear to Servandoni. A close look at these theatrical principles and Servandoni's theory of expression will indicate

their influence on Le Camus de Mézières's theory for the distribution of the *hôtel particulier* and help define his notion of "character" in late eighteenth-century architectural theory.

Servandoni, the master of special effects

Jean-Nicolas Servandoni was an exuberant character, short-tempered, and with a bad reputation. Known for his quarrelsome temperament, between 1731 and 1735 he apparently made death-threats to the architect J.-B.-A. Beausire; hit one of his draughtsmen; and left his wig as spoils to the other tenants of the hotel de Longueville.[1] He was nonetheless very prolific as an architect and stage designer in France from his arrival in 1724 to mid-century. In 1728, he became "First Painter Decorator" for the Royal Academy of Music, the Opera, where he worked for about eighteen years, producing over sixty designs. In 1731, he was admitted as a landscape painter to the Royal Academy of Painting. In 1732, he took over Oppenordt's work for the church of Saint-Sulpice in Paris, and his façade on the west side was to become a turning point in neo-classical architecture.[2] He also designed numerous ephemeral structures for festivals and special events such as the birth of the Dauphin in 1730 and the marriage of Madame Elisabeth to Don Philippe in 1739. He organized celebrations at Sceaux for the duchess of Maine, and at St-Germain for the duke of Noailles. In his text for the *Salon* of 1765, Denis Diderot described Servandoni as "a great stage designer, great architect, good painter, and sublime decorator." Servandoni greatly influenced the architects of the eighteenth century: besides his explicit impact on Le Camus de Mézières's architectural theory, he was admired by J.-F. Blondel, and influenced the career of Charles de Wailly (one of the architects of the *Comédie française*), who studied under him.

Servandoni was known for bringing the Italian tradition of oblique perspective (known as *perspectiva*, or *scena per angolo*) to the French stage, a tradition originally introduced by Ferdinando Galli Bibiena in his treatise *Architettura Civile* (1711). This important text clearly indicates a transformation in the relationship between the stage and the audience in the eighteenth century. A general comparison of scenic representations on backdrops reveals a remarkable change from central perspectives in the late seventeenth century to complex-angled views in the eighteenth century, in which multiple vanishing points would draw spectators beyond the limits of the scenic frame. Indeed, the perspective illusion of the *scena per angolo* projected the walls of virtual cities forward, to embrace the audience. The eye of the spectator was intentionally pulled in various directions to create the illusion of an endless extension to the stage. The composition created "a sense of expansion in the spectator,"[3] precisely because the boundaries of the virtual space could not be grasped. Servandoni, in particular, succeeded in creating new spatial effects and increased the vastness of the decor by using gigantic architectural elements in the foreground, such as bases of enormous columns that were cut off by the proscenium arch but were imagined to extend far up into the fly tower. To increase the apparent depth of the stage, Servandoni modified the sizes of elements and their relative distance as they receded into the background. He also preserved a backdrop that was extended in height to increase the spectators' perception of endless distances.

Servandoni effectively created an illusion that the space of the stage spread outwards, beyond the wings and into the space of the auditorium.

Although the specific performance recalled at the beginning of *The Genius of Architecture* probably involved some principles of the *scena per angolo*, Le Camus de Mézières refers to a different kind of staging, also devised by Servandoni, that relied solely on sets and lighting effects to create an illusion that could induce emotion in the spectators: the *optic play*. At first, these representations excluded live actors and even music. Servandoni's ambition was to create a spectacle in which the pictorial illusion, enhanced by lighting effects and mechanical change of scenery, would be the principal element. Imported from Italy, the construction of elaborate machinery to change the sets and create magical effects through the mechanical
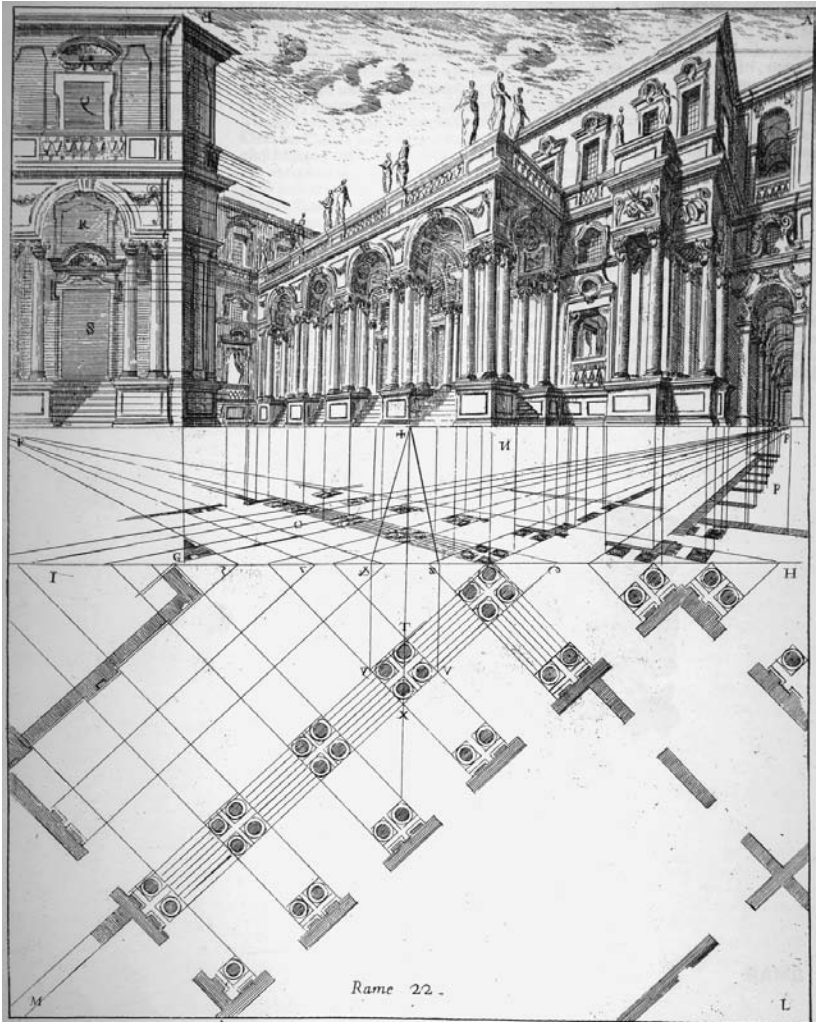
2.1
Example of
perspectiva per
angolo
Source:
F. Galli da Bibiena,
L'architettura civile,
1711

apparition of scenic elements opened up a new realm of possibilities for stage design. In 1737, Servandoni obtained the concession of the *Salle des Machines* on the Tuileries, whose greatest advantage was the depth of the stage because it permitted unequaled use of stage machinery.[4] Although the acoustics were terrible due to the geometry of the theatre (very deep and narrow), this limitation was of little concern to Servandoni, since the spectacles were to be silent. The very first show he produced for the *Salle des Machines* even rejected the narrative continuity of theatrical performance. It was a kind of diorama based on a painting by Pannini, representing St. Peter's basilica in Rome. The descriptive program of the event announced "an exact representation" of the interior of the church. The declared objective was to "make the famous basilica known to those who could not go to Italy."[5] To give a sense of the enormous dimensions of the architectural space, Servandoni added kneeling people painted in perspective.[6]

Writing much later, Quatremère de Quincy praised this innovative performance for transforming what is normally considered the accompaniment of a drama into the main object of the representation. It is, so to speak, a "drama without words that keeps the mind interested in the scenic action through the eyes only."[7] However, the reception of this visual event, devoid of either music or narration, was divided. In the pamphlet describing a later production, *Enea's Descent into Hell* (1740), produced two years after the spectacle of St. Peter's in Rome, Servandoni himself acknowledges the limitations of organizing a performance around a fixed perspective image. The need to "entertain the public for a certain amount of time" required not just the prestige of the machines, but also the performance of a few actors and even concerts to give "some kind of life to this spectacle."[8]

Servandoni later reintroduced music into his optic plays and supplemented the mechanical figures on stage with live actors performing pantomime. The succession of scenes, however, remained the primary elements that expressed the dramatic unfolding of the action. Performances attracted an important crowd of spectators who were curious to witness the elaborate lighting effects and extravagant settings. The large expense of each production, however, meant that Servandoni could hardly cover his costs. In some instances, the cost of candles alone exceeded the income from ticket sales. In 1742, he was forced to stop and returned to work at the Opera to pay off his debts. He resumed his production of optic plays in 1754, but again ran out of money four years later. The *intendant des Menus-Plaisirs* paid his debts a number of times, but soon gave up. Diderot himself, who admired Servandoni's work, wrote some caustic criticism of the man as an incorrigible spender.[9] Toward the end of his life, given his quarrelsome personality, his intransigence, and his insolvency, Servandoni fell into disfavor and seems to have been shunned by all of Paris. By the time Le Camus de Mézières wrote *The Genius of Architecture*, more than two decades after the last performance of the optic plays, Servandoni's fame had faded. Yet, the performance at the *Salle des Machines* in 1741 evidently made an indelible mark on Le Camus, for it was the first example that came to mind when he sat down, forty years later, to write his innovative architectural theory.[10]

Le Camus establishes direct connections between Servandoni's optic plays and his own character theory in architecture. He believed that every building

2.2
Plan of the Salle des Machines in the Tuileries (seventeenth century)
Source: D. Diderot, *Encyclopédie*, 1751–80
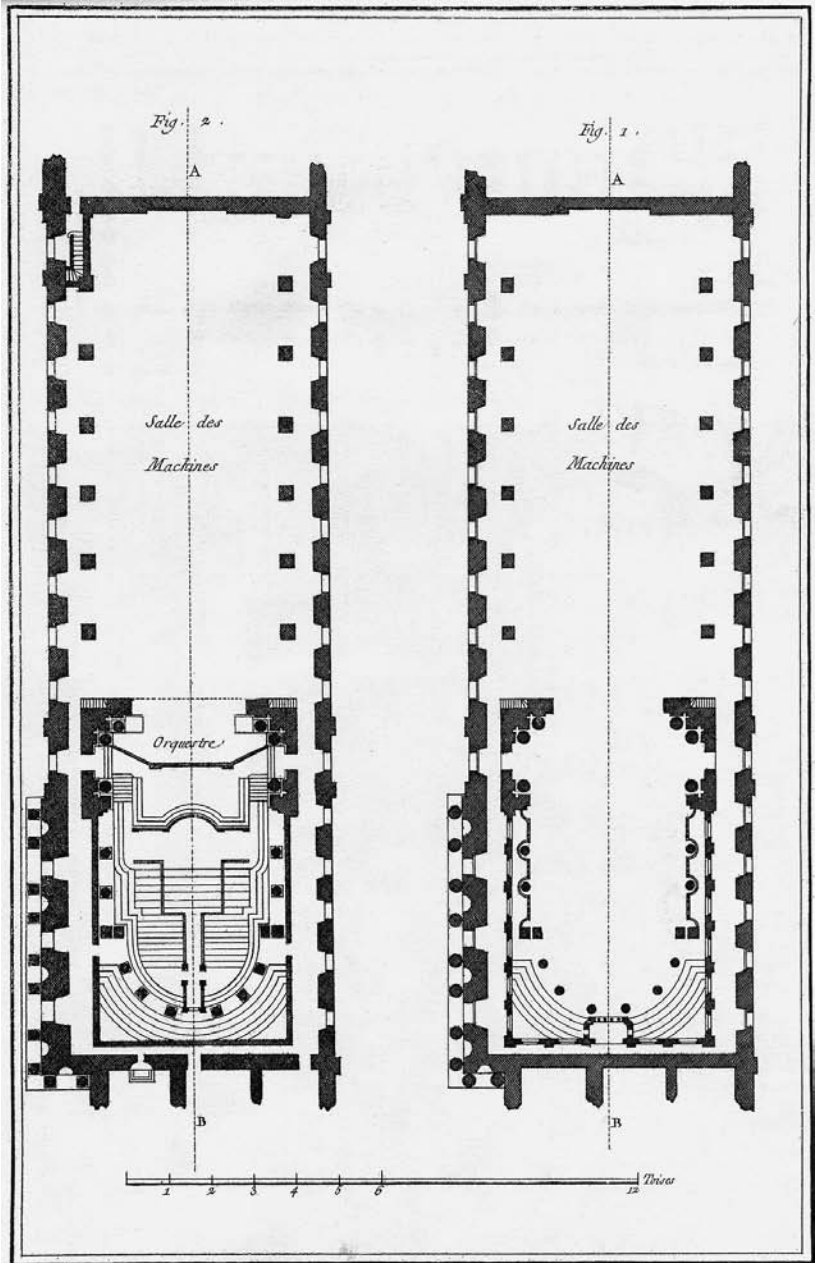
could be compared to a theatrical event of the kind produced by Servandoni, since architectural compositions were also expected to express a specific character and speak directly to the senses. As Condillac emphasized in his *Traité des sensations*, however, language proved to be a necessary mediator between sensation and reflection. To overcome the limitations of performances without dialogue, the shared language of mythological stories and natural phenomena became crucial elements of Servandoni's staging. They also informed Le Camus's means to express architectural programs.

The declared goal of Servandoni's optic plays was to impress the eye and to create visual epics; to do this, he attributed the character of a particular divinity to each set, or used a natural element to dominate a scene. Excessive heat or cold could be suggested by introducing signs of a particular season, Le Camus explains. A single scene with neither actor nor narration could "make us feel the burning heat of the Sun" or could convey to our souls "the idea of a biting cold" through a simple representation of lonely, bare trees rising from snowy rocks:

> A somber air, and a pale and featureless sky, would have betokened the onset of new frosts. Rivers frozen to a standstill, springs caught and arrested in their flight, would have shown us nature devoid of life and movement. That would have been a spectacle to make us shiver.[11]

The specific character of each stage set, and its ability to inspire distinct emotions in the spectator, is precisely what Le Camus considered most relevant to his own character theory. While the enchanted Palace of Armida exudes magnificence and voluptuousness, a scene representing Pluto's abode evokes horror and fear. Servandoni's optic plays used architectural compositions as a visual language to express various emotions, and touched the soul as only architecture could: "The arrangements of forms, their character, and their combination are thus inexhaustible source of illusion."[12] In associating architecture and stage sets, Le Camus not only challenged the traditional role of architecture, but also redefined the notion of illusion in the theatre. He made no criticism of optical deception at the theatre for he accepted optical corrections as an important part of his craft. He believed that "meaning was embedded in the object and not, as Perrault maintained, in the mind."[13] Instead, it is through sensations or "affections" that theatrical settings, like architecture, could speak to the mind, move the soul.

The modulation of light and darkness

The use of light was an effective way to express the character of theatrical scenes, especially in Servandoni's optic plays. An increased contrast between the light on stage and a dark auditorium could create terrifying and sublime effects. The lighting system in French theatres, however, remained primitive until the end of the eighteenth century, and very few theatres allowed such contrast of light between the stage and the auditorium. As a general rule, the auditoriums of Renaissance and Baroque theatres were at least as well illuminated as their stages. Until the early part of the eighteenth century, numerous French theatres had windows to admit natural light, and since performances took place in the afternoon (ending before 4: 30 p.m.),

theatres most likely relied on this source of light. The presence of natural light confirms the fact that complete darkness in the theatre – or at least in the auditorium – was not a priority, and probably hardly an issue in France until the third decade of the eighteenth century, when Servandoni started using light as a central element of his performances.[14]

In 1781, Antoine Laurent de Lavoisier presented his *Rapport sur la manière d'éclairer les salles de spectacle* to the Royal Academy of Sciences, showing that lighting was still a major problem.[15] Toward the middle of the century, increasing use of footlights had eliminated some chandeliers lighting the front stage, but the light on stage was still insufficient, and the air in theatres was still "filthy and unhealthy" even though wax candles had replaced tallow. A greater contrast could be achieved between the lighting on stage and in the auditorium, but this lighting from below distorted actors' facial expressions, and a background that received only lateral lighting would be completely dark at the centre. Lavoisier complained about the mediocrity of current theatres, where many spectators still could not see the stage. Chandeliers were known to have fallen from ceilings, while most of the remaining ones lit either the front stage, blinding the actors, or the auditorium, blinding many of the spectators. Chandeliers also obstructed the view of spectators, mainly those in the second boxes, who would often be disturbed during a performance while the candles that filled these chandeliers were trimmed.[16] Lavoisier also identified two major problems in the general lighting of French theatres. First, in all parts of the auditorium that were not lit by footlights, such as the orchestra, the amphitheatre, the stalls, and even some boxes, the darkness made it difficult to recognize people or to read anything. To understand the significance of this "problem," it is important to remember that throughout the eighteenth century, spectators often went to the theatre primarily to be seen. The second problem was that the footlights cast too much light close to the stage, blinding those in the front rows.

Lavoisier proposed a number of changes, such as lighting the front-stage from above, and using what he called *réverbères* – a type of reflector unknown even to the members of the Académie – to reflect light in the appropriate direction. Lavoisier was aware that the clarity of an object depends not only on the amount of light it reflects, but also on the light that surrounds it.[17] For example, an object seen against the sun may reflect much light but would be indistinguishable. This phenomenon was well known to Servandoni, who understood that one could increase the effect of decorations and the theatrical illusion either by casting more light onto the stage or by diminishing the light in the auditorium. To achieve the greatest effect in the theatre of the Tuileries, Servandoni devised a system of counterweights that could raise the candelabra into a well above the ceiling of the auditorium as the curtain rose, thus producing semi-darkness in the auditorium. This Venetian invention was not widespread in French theatres, however. Even though Servandoni demonstrated that darkening the auditorium was technically feasible, and that a greater lighting contrast between the auditorium and the stage enhanced the visual illusion of the performance, his example was not immediately followed by anyone else in Paris. The next recorded instance of the auditorium of a French theatre being darkened during a performance was only in 1778, when the chandelier of the Versailles Opera was

raised into some kind of bell in the ceiling. Many protested against this darkening of the auditorium, and it seems that after this first performance in darkness, the chandelier of the Opera was kept in its lowered position.[18] Most preferred to keep the auditorium illuminated throughout the performance.

Complete darkness in the theatre did not become a common feature until the nineteenth century, partly for technical reasons but mostly because light in the auditorium was required so that spectators could interact with one another. The social implications of making the action on stage the sole focus remained unacceptable. It was generally assumed that the same light should surround actors and spectators, since the division between these two realms was not yet clearly defined; they effectively shared the same world, a public space of social interaction.

Like most of his contemporaries, Lavoisier was not in favor of darkening the auditorium, since he was aware of the social problems it would entail. Instead he suggested that the lighting system be improved in all three parts of the theatre: the stage and its decorations, the actors, and the spectators. To light the auditorium, Lavoisier proposed that sources of light be placed behind elliptical openings in the ceiling that would serve as reflectors. He emphasized that the actors and their movements should be lit properly so that every subtle expression could be perceived. He suggested various ways of lighting actors from the front, since this provides the most direct light and increases the contrast with the light in the auditorium, to augment the theatrical illusion. Such strong light would tend to blind the actors, but he said this was not a problem because the actors did not need to see the spectators in front of them. For Lavoisier, the visual contact between actors and spectators could be partly severed, suggesting an increased segregation between the two realms of the theatre.

To increase the contrast between the stage and the house, Lavoisier proposed to light the stage set panels from behind in ways that would hide the source of light and increase its intensity by using more reflectors. He stressed that the backdrop was the most important element of the theatrical illusion but complained that it was rarely lit properly because of its width. In response, he suggested that it could be lit very easily with parabolic or spherical reflectors placed above the front stage, within the arch. These reflectors would be mobile and could be filtered through screens of different densities and colors to modify the quality of light. Even though very few technical descriptions of Servandoni's optic plays still exist, one can easily assume that the devices described by Lavoisier, if not explicitly attributed to Servandoni, are similar to those used by the Italian architect. Lavoisier's technical advice corroborates the magical effects praised by so many contemporary observers of Servandoni's optic plays.

Servandoni made light an active part of pictorial creation by controlling its color and intensity on stage and by darkening the auditorium. His performance of *Pandora* in 1739, for example, began with a representation of chaos. Thunder and lightning accompanied the creation of the Elements, and Fire was represented using transparencies.[19] It was followed by a depiction of Olympus, with Jupiter's palace surrounded by hundreds of shining gold and silver columns. Iris, the gods' messenger, appeared on her luminous arch (15.5 meters in diameter) in the colors of a rainbow.

The stage was then darkened to anticipate the calamities when Pandora received the box containing ills and miseries. The performance ended with a new vision of chaos and nature in rebellion: "Trembling of the Earth, volcanoes, rains of fire, collapsing cliffs, thunder, lightning and all that might serve to represent a universal disorder, ended this grand performance."[20] The following year, with *Enea's Descent into Hell*, Servandoni warned his public that he had chosen a subject "that provides the greatest contrasts, causing rapid changes from darkness to light, from fear to delight, from terror to grace, surprises that constitute the main events of a silent spectacle."[21]

In *The Enchanted Forest* (1754), presented more than a decade later, Servandoni gave a new importance to pantomimes and music written by Francesco Geminiani in the overall production, but the stage sets and the lighting effects continued to be the principal elements conveying the story. Based on Torquato Tasso's epic *Jerusalem Liberated*, it tells the story of Godefroy de Bouillon, chief of the first crusade to Jerusalem. After the Christian army has been pushed back from the Holy City and their weapons burnt by Clorinde and Argan, the magician Ismen decides to cast a spell on the nearby forest to ensure that the crusaders will not be able to rebuild their artillery. The representation begins with an image of a forest where darkness prevails, which gives the tone to the entire production. Only some faint rays of moonlight pierce the dense foliage. The forest is "so dense and so dark that its appearance inspires fear."[22]

Invoking all the demons, rebellious spirits and dark inhabitants of Hell, Ismen asks them to unite themselves intimately with every tree in the forest, as the soul and the body of mortals are united, so that when the Christians come to the forest to get wood to rebuild their machines, the malevolent spirits will cause them to run away. As the magician completes his malefic spell, "the moon is covered by a thick veil and the night stars lose their brightness."[23] Later, the light of the moon turns blood red as the forest becomes possessed by evil spirits. As the Christians try to enter the woods, the stage is suddenly darkened and a thickening mist slows their progress. When they are met by specters and phantoms, dreadful noises are heard, like the roaring of lions and the whistling of serpents accompanied by thunder. As they try to brave the nightmarish spectacle, a wall of fire stops them. The Christians try to climb it, but are pushed back by demons that belch forth torrents of flames. As they cannot endure such an attack, the soldiers retreat to their camp. There, the brightness of the sun and the scorching heat have created a drought that is causing the soldiers to die of thirst and weakness. The visual effect of the scene was so powerful that it profoundly influenced Le Camus, who describes it in *The Genius*:

> The celebrated Servandoni . . . once contrived, in a mute Spectacle, to make us feel the burning heat of the Sun. The camp of Godefroy was seen parched by the fires of the Dog days: almost no shadow, a reddish sky, an arid earth, an effect of light that suggested flames in the air; all this created an illusion to which no Spectator was immune. We supposed that we ourselves were suffering; we were in the power of Art.[24]

Godefroy is pondering how he could deliver his soldiers from such calamities when the Saint Hermit Peter appears in front of his eyes, bringing with him the young

Renauld, a knight who alone can defeat the forces of darkness that have invaded the forest. Godefroy presents Renauld with a sword that an angel had given him for this purpose, and sends him to the forest. In the meantime, the Hermit raises his arms to the sky and, in response to his fervent prayers, receives the sound of thunder that will lead to a salutary rain to ease the suffering of the soldiers. As Renauld approaches the forest, all seems quiet and peaceful, with no sign of the feared demons. Again, the atmosphere of the play is conveyed by the lighting effect: "The first light of dawn was barely emerging from the deep of waters; the brightness of the night stars was slightly veiled by a more vivid light." The forest appears joyful with its fresh greenery and its charming shadings. Renauld is soon surprised by the pleasant sounds of the forest: "the soft whispering of waters, the plaintive singing of the nightingale, combined with the voice of mermaids and many musical instruments, created a harmonious concert."[25] This prelude announces nymphs emerging from trees. They encircle Renauld, who thinks for a moment that he has recognized in one of them the features of the beautiful Armide. Since he is expecting the tricks of demons, he does not let her beauty touch him, and instead takes out his sword, which unleashes the fury of all the demons that inhabit the forest. Renauld defends himself, and as he strikes the most majestic tree that embodies the master of darkness, the malediction is defeated. Thunder immediately ceases to rumble; the ground becomes firmer; the air recovers its serenity; the myrtle disappears, and with it the monsters and all the enchantments of the forest. Good has prevailed over evil, and the Christians re-enter the forest. Although Servandoni gives very few specific indications of the lighting effects and the devices used to create them (such as transparencies and light filters), it is clear that stage transformations, rather than the performance of mimes, carried the dramatic action in his optic games.

Servandoni also exploited his lighting effects and optic games outside the theatre, including the design of various ephemeral structures for royal and political events. To celebrate the birth of the Dauphin in January 1730, the marquis de Santa-Cruz, ambassador of Spain, and M. de Barrenechea organized celebrations "as majestic and sumptuous as they could be," on the request of Philippe V.[26] They took place in the hôtel of the duc de Bouillon, by the river Seine, and involved elaborate lighting and sumptuous decorations. Servandoni was commissioned to build a structure on the river, between the Louvre and the hôtel de Bouillon, so that the entire population of Paris could take part in the celebration. The structure was in the form of two mountains united at their base, representing the Pyrenees and symbolizing the alliance between France and Spain. Some waterfalls, trees, plants, Tritons, Nereides, and other sea creatures populated the composition. The two mountains floated on two boats richly decorated with gold and shells. The boats also supported orthogonal structures representing the temples of Pleasure and Joy, occupied by the musicians. On either side, two floating terraces covered with colored sand and patterns of grass supported two rocks on which two bronze statues again represented Spain (a lion, symbolizing courage and majesty) and France (a rooster, symbolizing vigilance and ingenuity). Elaborate fireworks were also staged and divided into two acts. For about an hour, fireworks were launched from various sea monsters, and the two mountains transformed into volcanoes. Then, from the centre of the two

2.3
Ephemeral structure on the river Seine in Paris, designed by J.N. Servandoni to celebrate the birth of the Dauphin in 1730
Source: G. Mourey, *Le livre des fêtes françaises*, 1930

mountains, a powerful light simulated the rising sun. At the same time, a giant rainbow linked the two mountains, and on top, the goddess Iris floated on a cloud. The overwhelming presence of these rocks emerging from the river and embracing the sun used "sublime" nature to express the grandeur of the event.

A decade later, Servandoni staged the celebration in honor of the marriage of Madame Elisabeth to Don Philippe on August 29–30, 1739, which was unquestionably the most widely acclaimed public event of that period. Quatremère wrote that it surpassed all events of its kind ever to take place in Paris.[27] As with previous celebrations, Servandoni used the river Seine as his stage, but this time he did not limit himself to one specific location. The entire area between the Pont-Neuf and the Pont Royal became the theatre for the festivities. J.-F. Blondel devoted an entire publication to commemorate the event. A temple devoted to Hymen was erected in

2.4
Floating pavilion on the river Seine in Paris, designed by J.N. Servandoni to celebrate the marriage of Madame Elisabeth to Don Philippe in 1739
Source: J.-F. Blondel, *Description des festes données par la ville de Paris*, 1740

the middle of the Pont-Neuf, on the *terreplein* where the statue of Henri IV stood. It was "some kind of Greek Temple, open in the shape of a peristyle or colonnade, isolated on all its sides."[28] A transparent octagonal music pavilion was lit from inside and floated on the Seine. Fireworks were choreographed from the buildings.
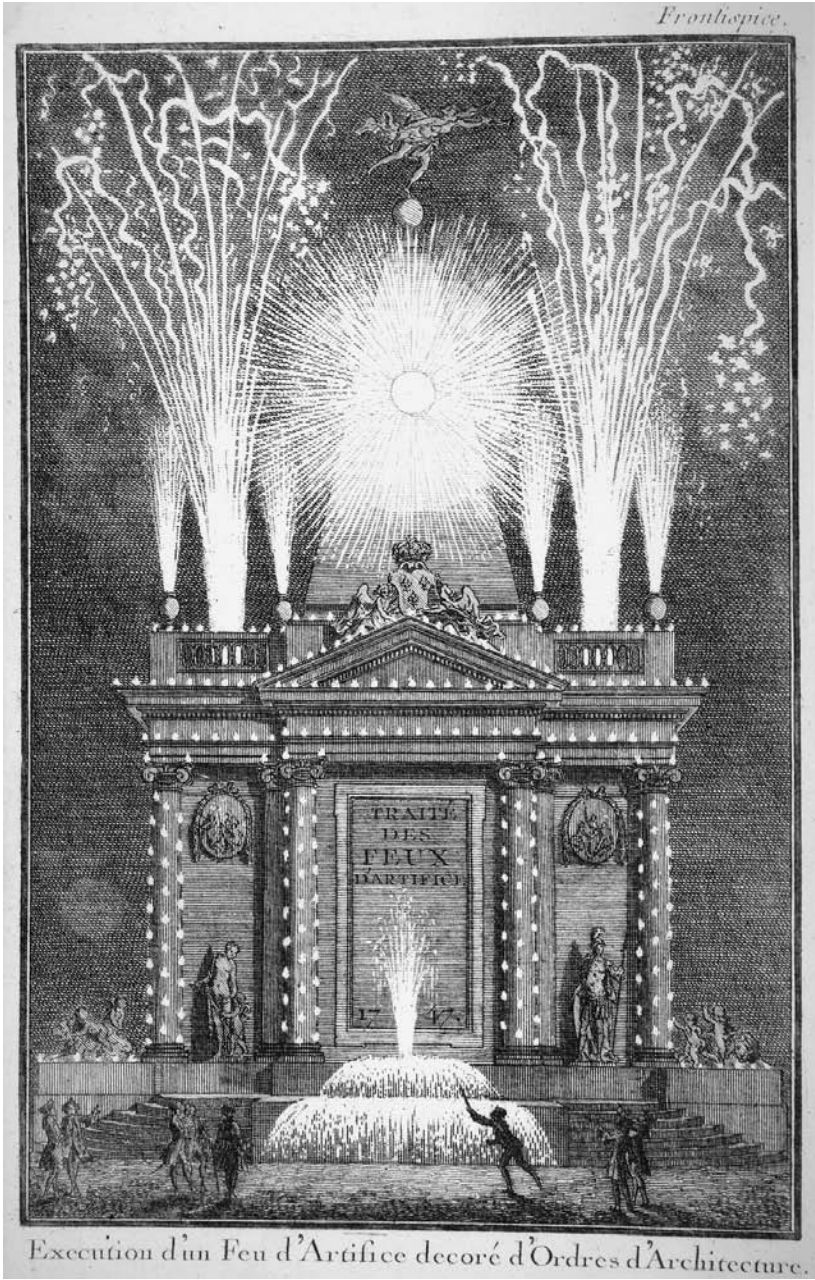
2.5
Firework decorated with architectural orders
Source: A. Frézier, *Traité des feux d'artifice pour le spectacle*, 1747

The relationship between fireworks and architecture was carefully considered during the eighteenth century, and became a subject for treatises. *Traité des feux d'artifice pour le spectacle* (1747) by Amédée François Frézier was probably the most important one. Frézier discusses the specific elements involved in the production of fireworks but also describes the appropriate architectural order to accompany fireworks and emphasizes the cohesion of all the arts. Frézier says that the talents of pyrotechnicians must be completed by those of "the architects, painters, sculptors, but particularly by the ability of men of letters to present in a pleasant way the causes for festivities."[29] Implied in this statement is the need to articulate the purpose of the event through an appropriate narrative. Frézier defines the appropriate disposition and decoration of the various kinds of *théâtres d'artifice*, and describes the particular architectural order and conventions that must regulate each kind of celebration; a wedding celebration, for example, needs a Temple to Hymen, for she is the goddess who presides over marriages. This respect for architectural decorum would ensure that the celebration conveyed its precise meaning.

Frézier was not the only one to describe the relationship between architecture and fireworks. Francesco Miliza and J.-F. Blondel included fireworks in a special category of their architectural treatises. Given the major importance of public gatherings, Blondel included celebrations (*fêtes*) as a basic element of architecture, and devoted entire chapters to ephemeral architecture in his *Cours d'architecture*. In that context, architecture clearly involved the temporal unfolding of a choreographed event. It is interesting that Blondel placed fireworks in a category of architecture that included less ephemeral, yet temporary structures such as ballrooms, feasts, triumphal arches and entertainment parks. In his *Cours d'architecture*, Blondel describes such structures together with theatres and Vauxhalls, again emphasizing the direct connection between public events and architecture.

Architects certainly were sensitive to how the character of an ephemeral structure should relate to the specific event it celebrated. Fireworks in these festivities played a role analogous to the lighting effects at the theatre. In his *Essai sur l'art*, Boullée criticizes the limitations of theatre lighting, especially the lack of control of the lighting contrast between the stage and the auditorium. The impressions that a play intends to make on the spectators, Boullée explains, are often undermined solely by the misuse of lighting in the auditorium. Even though the title of a play might announce a lugubrious event, he writes, when the curtain rises and reveals a gloomy scene, if the spectator is surrounded by very bright light, the effort required to place oneself in the appropriate frame of mind can only work against the desired illusion.[30]

Boullée's regard for light in architecture was greatly indebted to Le Camus de Mézières. Like Le Camus, Boullée believed that light should be used in a building to create a unified effect. To express specific characters, he drew from nature, especially from the seasons. Boullée compares the specificity of their lighting effects: "We have noticed that the joyful images of Fall come from the great variety of objects, from the contrast of light and shadow, from the picturesque shapes and their lack of similarities, from the singularity and strangeness of variegated colors." Boullée also describes how in winter "the effect of light creates an impression of sadness; objects
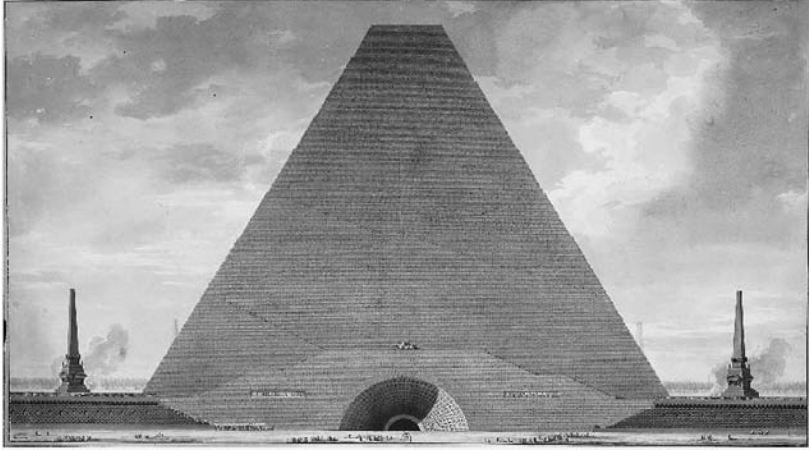
seem to have lost their vividness, their color, and shapes appear more harsh and angular; the bare ground offers a universal sepulcher." Boullée's funerary architecture was directly inspired by the modulation of light and shade in winter. "In order to create sad and somber images," he writes, "I have tried in the funerary monuments to present the skeleton of architecture through bare walls, and create the image of a buried architecture, using nothing but low and sunk proportions, buried in the ground, made of substances that absorb light, thus the dark picture of an architecture of shadows drawn by the effect of even darker shadows."[31] Similarly, Le Camus advises that to make a place look sad, "daylight must be somber and restricted and must create halftones; there must be simple and unified masses, and therefore less liveliness in the whole."[32] On the other hand, an even and subdued light, complemented by lighting from above, evokes thoughtfulness. The half-light of the interiors of the église du Val-de-Grace, the Sorbonne, and the College Mazarin, for example, suggests reverent meditation by reorienting the movement of the soul inwardly.

Le Camus was the first architectural theoretician to discuss the effects of lighting and their impact on our perception of spaces and their qualities. The control and modulation of light sources became a crucial element in his architectural compositions. As the proportions of masses and the general ordinance of façades convey specific characters, Le Camus writes, the same is true for all lines, contours, profiles, and ornaments in architecture. Every detail, appropriately employed, contributes to the specific sensation that the architect seeks to evoke. Light and shade, artfully distributed, reinforce the desired impression and can ensure a successful effect: "A building that is well lit and well aired, when all the rest is perfectly treated, becomes agreeable and cheerful. Less open, more sheltered, it offers a serious character; with the light still more intercepted, it becomes mysterious or gloomy."[33]

Le Camus compares the art of using light and shadow in architecture to the art of a skillful painter who knows how to take advantage of the effects of shadings and how to use nuances of tints to impart harmony to the whole. For Le Camus, however, the use of light in architecture was not equivalent to a painterly

concern with color, or to the frozen moment of a painting. The changing position of the sun during the day continually transforms the light that falls on a building and, consequently, the general distribution of the *hôtel particulier* must account for the particular orientation of each room. Le Camus suggests that the roof of the covered portion of the riding school be used as a garden for the boudoir and the dressing room, and that the garden in front of these two rooms be oriented toward the setting sun:

> From this aspect, which is favorable to compositions, the grandest effects might be derived; the part of the colonnade that faces the windows, and thus the West, would be lit picturesquely by the rays of the setting Sun. The contrast of light and shade would produce the effect of a *theatrical scene.*[34]

The intimate relationship between the distribution of rooms and the movement of the sun was not unique to Le Camus's theory, for Vitruvius had recommended that baths and winter apartments be oriented toward the "wintry sunset."[35] Le Camus's discourse on distribution, however, is not concerned, like that of his predecessor, with health, cosmology or typology. For Le Camus, the "quality" of lived space was related to its evocative power. Le Camus transposes the use of light in Servandoni's optic plays into an architectural composition, and simultaneously transforms the users of the boudoir and dressing room into spectators of an architectural sunset in which the sharp contrast of shadows and the subsequent dimming of light announce the melancholy of the night.

Le Camus complains that architects have neglected to consider light as an architectural element. A work that is magnificent in itself often seems frigid if it is bathed in the wrong light, for the wrong exposure can dull contrasts and transform a good composition into a monotonous display. This is demonstrated by the façade of the hôtel des Monnaies by Jacques Antoine, Le Camus notes: "Although finely conceived, well composed, and harmonious to a degree, this work seems monotonous: the result fails to answer our expectations."[36] The problem is the northerly exposure of the building, which prevents the articulation of shadows and the expression of the projecting portions. The colonnade of the Louvre, on the other hand, is called on to support Le Camus's argument. With its easterly exposure, the effect of light and shadow enhances the relief of the façade. "Even the most intelligent Architect can hope to succeed only by adapting his design to the exposure of the Sun to the principal parts of his building,"[37] Le Camus explains.

In his chapter on exterior decoration, Le Camus develops his theory for an architecture of light and shadow. The specific character of a façade will be influenced not only by its orientation but also by the modulation of its relief. The true artist who wants to produce a soft and tranquil scene will be careful not to combine masses that vary drastically, and will avoid large differences in protruding and receding parts that would produce excessive contrasts between light and shade. "Nothing better conveys the character of softness than shadows that become more faint as they lengthen."[38] To attain respect, one must achieve a character of grandeur through well-proportioned masses and noble profiles. Le Camus recommends that an

excessive play of light be avoided, and that shadows be even, with little reflection. If a building is destined for entertainment, the architect should eliminate harsh effects produced by deep relief, with a strong contrast between light and shade, for they disturb the enjoyment of scenes intended for amusement and pleasure. To create the effect of terror, on the other hand, one should exploit great contrasts because terror results from magnitude and force, and the opposition of light and darkness expresses such effects. Darkness alone evokes terror, but this sensation is heightened when darkness is combined with intense light, leading to sublime effects. We recognize in Le Camus's words the influence of Edmund Burke's theory on the sublime and the beautiful. Burke's sensationalist philosophy aimed at clarifying the process of human perception so that various elements such as light and shadows could be used to create specific effects. Burke's theory and its influence on late eighteenth-century architects will be discussed in more detail in Part 3.

      The sensation of sadness or gaiety in architecture depends directly on the compactness of the masses. This is a natural principle, Le Camus explains, since "we are so constituted that in moments of joy our heart expands and loses itself in space." It also depends on the intensity of light and the general sense of openness: "An open place, abundant daylight, great harmony, great consonance, little shadow, and therefore less contrast, will evoke that spirit of gaiety that accords so well with health."[39] A severe light falling on straight lines in a narrow, vertical space may induce a state of reverence, as in Gothic churches, Le Camus suggests, since reflected daylight and light coming from above produce a majestic dimness appropriate for religious buildings. To evoke voluptuousness, on the other hand, straight lines must be partly abandoned in favor of curves, which are more appropriate to Venus, and light should not be too bright or the mystery will be lost. The modulation of light and shade in architecture is an important means for conveying the appropriate character, and it is through such modulation that the architect can produce true beauty: "The shadows must temper the light, and the light must temper the shadows. In this principle, success resides; here alone *true beauty* is to be found."[40]

      The modulation of light and shadow became an important way to convey meaning in architecture, and for Le Camus this crucial means of expression became a central distinction from previous character theories in architecture. Rather than a codified language where every sign would have one single interpretation that could be read unambiguously, the architecture of light and shadow orchestrated a symphony of emotion to be perceived through the senses. Le Camus's conception of architecture would find followers in renowned architects such as Boullée, John Soane and even Le Corbusier, if we remember his definition of architecture as "the masterly, correct and magnificent play of masses brought together in light."[41]

Unity of place and the perfecting of an illusion

In addition to light, stage sets were another compelling way to express the character of a scene at the theatre. Until the middle of the eighteenth century in France, many complained of the lack of realism caused by primitive machinery, and the fact that the same stage set was often used for many productions, and even various locations within the same play. These "generic" sets were commonly called *Palais à volonté*,

meaning that they could become whatever the action required. Many argued that such universal backdrops could not adequately invoke more than one location without breaching the unity of place. Although this notion of "unity of place" was not described explicitly in the classical theory elaborated in Aristotle's *Poetics*, it was usually regarded as a corollary of the classical unities of time and action. According to Aristotle's notion of unity of time, "Tragedy endeavors, as far as possible, to confine itself to a single revolution of the sun, or but slightly to exceed this limit."[42] The classical ideal of unity of action stated that, "in a tragedy we cannot imitate several lines of action carried on at one and the same time; we must confine ourselves to the action on the stage and the part taken by the players."[43] Such unities implied a physical coherence of the place being represented on stage, which forced the authors to stage their plays in a unified location. The famous French dramatic poet, Pierre Corneille (1606–84), rigorously observed this rule but was aware of the greater difficulties encountered by modern authors, compared to those in antiquity. The laws of convention and decorum often prevented a complex action unfolding in a single place, and Corneille therefore permitted "some extension of the rule." The action could take place in more than one location, provided that all of the scenes were in a single city, and that the scenery changed only between acts.[44]

The notion of unity of place on the stage was greatly challenged by eighteenth-century authors, and it took a radical turn in the second half of the century. Authors such as François Marie Arouet (1694–1778), known as Voltaire, and Jean-Baptiste Nougaret claimed that the greater flexibility in dramatic action demanded various locations that were impossible to recreate in front of a single background because it would break the narrative illusion. In his article on "Decoration" for the *Encyclopédie*, Marmontel, a close friend of Voltaire, complains about the conventions that apply to the stage sets for tragedies. Those sets should be changed as easily as they are at the opera, he claims. He condemns the current practice in stage set design for its indifference to verisimilitude, and denounces the neutral stage that the unity of place had encouraged in France as an artistic hindrance. When Cinna, the son of Pompei, gives an account of his conspiracy in the same living room where Augustus will deliberate, Marmontel explains, or when in the first act of Brutus, two helpers come to remove Mars's altar to make space on the stage, the theatrical illusion is broken:

> Even if the poet wants to carry the spectator away to the place of the action, what is presented to the eyes becomes at every instant what the imagination depicts [. . .] The lack of decorations prevents changes, and this limits the authors to the most rigorous unity of place; this rule is a nuisance that forbids them a great number of beautiful themes, or forces them to mutilate them.[45]

Voltaire contributed directly to the debate on this issue in the successive staging of his tragedy, *Semiramis*. Commissioned for the *relevailles* (or post-partum recovery) of Madame la Dauphine, it was still incomplete when Marie-Thérèse-Raphaële died after giving birth to a princess.[46] The story of *Semiramis* is complex. It begins with the queen of Babylon, Semiramis, killing her husband Ninus with the help of Assur,

a deceitful pretender to the throne. Tormented by remorse and by the shadow of her husband, she looks for help and support to a young general, Arzace, with whom she falls in love without knowing that he is her own son. A young princess named Azéma is Semiramis's rival. After the king is assassinated, Assur unsuccessfully tries to ascend to the throne by proposing marriage first to Semiramis and then to Azéma. When Semiramis announces her decision to marry Arzace, Ninus's tomb echoes with the sound of thunder, and the shadow of the deceased sovereign appears. Through the mouth of a grand priest, Arzace learns the truth about his secret birth. Without knowing, Arzace inflicts a deadly wound on his mother in the mausoleum of his father. Assur is taken away, and Semiramis invites her son to marry Azéma.[47]

The comedians of the Comédie française agreed to perform *Semiramis* in 1748, and to ensure that the decors could be realized with the appropriate magnitude, Voltaire asked Madame de Pompadour, the Duc d'Aumont and the Duc de Fleury to persuade the king to pay the expenses. For its first performance in 1748, however, the number of sets was reduced from four to one because the space on the stage of the Comédie française was crowded with spectators (a widespread custom that plagued various theatres between 1637 and 1759), and because of the clumsiness of the machinery for changing the scenery. The actions, which were supposed to take place inside a temple, at the door of a mausoleum, and in a garden in front of a palace, were all performed in front of a single background, designed by Dominique-François Slodtz, painter at the *Menus Plaisirs*. Voltaire opposed this generic set and denounced the inconsistencies that it caused. He also vehemently argued against the presence of spectators on stage. Until 1759, this greatly affected the staging of plays and restricted the movements of comedians. It also led to some amusing anecdotes. In a performance of *Semiramis* in 1748, for example, at the end of Act III, Ninus's shadow was supposed to enter the stage from a lateral wing, but with spectators blocking the way, a guard was forced to shout: "Make way for the shadow!" The dramatic effect of the scene was greatly compromised by this unexpected warning, and the entire audience broke into laughter.[48] Voltaire, offended by this incident, but mainly disturbed by the lack of realism that it engendered, led the opposition to the presence of spectators on the stage. In his preface to *Semiramis*, he describes the appalling physical context of theatres in the middle of the eighteenth century, complaining that the converted tennis courts and other similar structures did not do justice to the quality of plays being performed in France at that time.[49]

After twenty-one performances in the Comédie française during 1748 and 1749, the play was withdrawn from the repertory. *Semiramis* was later performed at Fontainebleau for the king, and for this occasion Voltaire revised many passages in the play. Given the small dimensions of the theatre, some physical adjustments were needed. Voltaire also requested that no candelabra be hung from the proscenium, for he needed complete darkness for a night scene in Act III.[50] Voltaire's advocacy for a greater realism on stage also applied to declamation, and costumes were expected to be historically more realistic. In 1756, *Semiramis* was presented once more at the Comédie française, with Henri-Louis le Kain playing Arzace. His performance shook the audience with its realism, but Voltaire apparently resisted

extreme realism in acting. Although he fought for the greatest possible realism in the theatrical setting, Voltaire's attitude toward acting remained bound to the French tradition that demanded restraint, even in the expression of passion.

In 1759 a radical change was made in a new staging of *Semiramis*. Using his political influence, Voltaire succeeded in having the spectators removed from the stage of the Comédie française and having specific sets designed for the crucial scenes of his play. In 1758, after decades of complaints by Voltaire and others about spectators on the stage, the comte du Lauraguais compensated the actors of the Comédie française for the loss of income caused by removing audience seats from the stage. This century-old tradition was irrevocably abolished the following year.[51] The disappearance of the spectators transformed the stage into a tableau, while the audience, physically well contained in the auditorium, became more easily controllable.[52] The removal of spectators was intended to create a greater illusion on the stage. In eighteenth-century society, however, "illusion" was not equated to unreality. In fact, the distance intentionally maintained between representation and reality during the seventeenth century was collapsed in the eighteenth century, and the mechanism for "deceiving" the spectator became hidden. The aesthetics of stage illusion is clearest in Marmontel's article on "Entr'acte" from his *Les éléments de littérature* (1787). The audience and the actors live in different worlds, he emphasizes, and their autonomy should be maintained to preserve the illusion. Consequently, changes of scenery should be hidden from the audience. This abolition of the distance between representation and reality is also clear in Ferdinando Galli da Bibiena's treatise *L'architettura civile* (1711). Although his treatise is supposedly devoted to architecture, he writes about theatre and the representation of architecture, equating represented buildings to theatrical scenery. In regrouping them under the general category of architecture, the eighteenth-century architect/stage set designer implicitly assumed a correlation between architecture and the theatre.

In the decades following the removal of spectators from the stage, transformations in stage design thus tended toward greater realism, as did theories of acting and costume design.[53] The first three pairs of wings no longer hidden by spectators gave stage designers a greater ability to create visual effects. The machines developed during the second half of the seventeenth century (such as those introduced by Torelli and later by Vigarani for the Salle des Machines) also enabled stage sets to express the specific character of each scene. The acting area of the Comédie française, newly freed from spectators, permitted a new style of acting and a greater mobility for the actors.[54] The generic sets (*Palais à volonté*), in which changes of place were marked only by different accessories, were replaced by different settings for each scene.

On August 6, 1759, the new production of *Semiramis* opened, with stage sets by Paolo Antonio Brunetti. It seems that an arcade in the foreground remained constant, while the background changed as necessary.[55] This staging of *Semiramis* marked a turning point toward more realistic architectural settings in the theatre. The specificity of the sets not only influenced the realism of the play, but also enabled the actors to move more freely on stage and no longer worry about transgressing the different conceptual spaces imposed by the scenery. Voltaire had also criticized
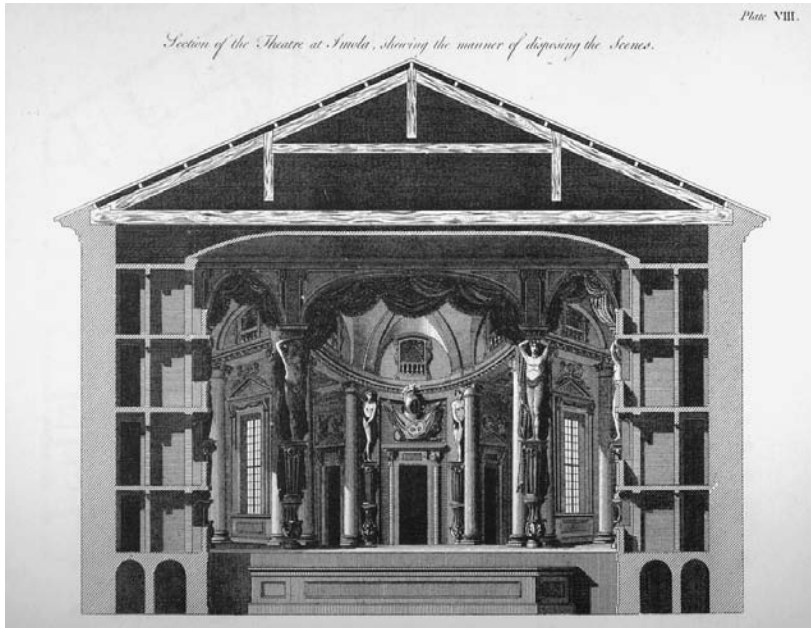
2.7
Section of the theatre at Imola by C. Morelli (1779) showing a tripartite stage
Source: G. Saunders, *A Treatise on Theatres*, 1790

builders for not providing distinct places for action on the same stage, complaining that a public place, a temple, or a palace could be juxtaposed on stage to a vestibule, a cabinet, etc.[56] To address this problem of continuity and unity of space, various theatrical devices were formulated between 1760 and 1784, many of them influenced by Voltaire, including a tripartite stage that allowed actions to occur concurrently, and complex machinery that permitted quick changes of scenery. In 1765, Charles-Nicolas Cochin (1715–90) devised a stage divided into three parts that enabled three scenes to be performed simultaneously in his *Projet d'une salle de spectacle pour un théâtre de comédie*. Since three scenes can indicate three different locations united by the front stage, Cochin explains, the rule of unity of place that so often restricts an author's imagination could be followed more easily. The partitioned stage indeed conveyed three different locations, often needed in plays such as Voltaire's *Semiramis*.[57]

Ledoux built a tripartite stage in his theatre at Besançon, designed after 1776. He framed the stage with an undecorated arch, presenting an unobstructed view, and divided the wide opening into three sub-stages to permit a greater variety of scenes. Ledoux's triple scene fulfilled the aesthetic requirement of spatial and temporal coherence, while treating each scene as an individual *tableau*. This divided stage proved to be a technical nightmare for the machinery engineer, however, and Ledoux himself had to outline and paint some of the canvas to be used on stage.[58] Ledoux's idea of a triple scene may have been inspired by an early proposal by Peyre and de Wailly for the Comédie française.[59] In 1771, they had also designed a divided stage, but by the time the theatre was built in 1779, successive sets had been universally adopted.[60]

The new specificity of theatrical scenery had wide architectural repercussions, especially in the theories of Le Camus de Mézières. In *The Genius of Architecture*, one of the fundamental concepts was to give each room a distinctive character that would accurately express its destination. Since each room or apartment in a building is used for a specific purpose, Le Camus thought, it must be treated differently. The character of a room would be expressed with certain proportions and architectural elements: "The proportion between one part and the whole determines the natural placing of an object, indicates its kind, and supplies the style appropriate to every scene."[61] Just as generic scenery at the theatre was replaced by elaborate and *successive* sets, in Le Camus's architectural theory every room was experienced in a temporal unfolding of the architectural space.

On the exterior, the modulation of masses and the articulation of façades would express the purpose and relative importance of the various parts of the building. In the relationship between garden and building, Le Camus insists that the aisles, the parterres, and the esplanade must be proportional to the size of the building because it governs the composition. The proportions among the various parts are the essential basis of a building: "Everything must concur to a single end, as in stage decoration, where all is connected."[62] Like a play telling a unified story, the entire building would express the owner's character: "Just as in a play a single action occupies the stage, similarly in a building the unity of character must be observed, and truth must capture the imagination by presenting itself to the eye."[63]

Chapter 3

Rules of expression and the paradox of acting

In the first few pages of *The Genius of Architecture*, Le Camus de Mézières acknowledges the affiliation of his theory of architectural character with the work of Charles Le Brun (1619–90), an influential French painter protected by Colbert and Louis XIV:

> The celebrated Le Brun, whose talents do honor to his country, has proved the truth of this principle [character theory] through his characterization of the passions; he has expressed the various affections of the soul, and has rendered joy, sadness, anger, fury, compassion, etc., in a single line.[1]

Le Brun was entirely committed to the empirical study of emotions. His *Conférences sur l'expression* (1698), an anatomy of the passions, became the first systematic recording of human physiognomy as it is transformed by emotions. Le Brun's theory was most influential on classical and neo-classical painting in France and in England,[2] but was also important for the art of acting because it provided a clear set of facial expressions that could be reproduced by actors. Le Camus considered that architecture was less defined in terms of a frozen picture than as a temporal unfolding. Therefore, he does not compare architecture to painting, but only mentions how forms can evoke specific emotions. According to Le Camus, it is the combined effect of architecture, painting, and sculpture that can powerfully convey to the soul "almost all the affections and sensations known to us."[3] The painterly comparison in *The Genius of Architecture* merely introduces the analogy to theatre, which, like gardening and music, involves the spectator/visitor/listener in a temporal unfolding of the artistic work. It is therefore the underlying assumption of this chapter that Le Camus was interested in Le Brun's theory for its temporal application in acting rather than for its pictorial application in painting.[4]

Le Brun's theory of expression

Charles Le Brun, a contemporary of Claude Perrault, helped create the Académie Royale de Peinture et de Sculpture under Colbert. He presided over the Académie as chancellor from 1668, and as director from 1683. His book *Conférences sur l'expression*, published posthumously in 1698, was originally delivered as a lecture to the members of the Académie. In it, Le Brun defines the notion of expression as "what stamps the true characters of every thing [. . .] Expression is also a part that intimates the emotions of the Soul, and renders visible the effects of Passions."[5] Passion is "an emotion of the Soul" whose cause also has an effect on the body. Le Brun explains that "corporeal actions" provoked by passions are induced by the motion of the "nervous juices" that pass through the muscles and inscribe a certain expression on the body:

> The nerves act only by the spirits contained in the cavities of the brain; and the brain receives the spirits immediately from the blood, that passes continually through the heart, which heats and rarefies it so, that, being strait conveyed to, and filling the cortex of the brain, a certain fluid juice is there produced, called *Animal spirits*.[6]

The soul was said to be located in "a little gland in the middle of the brain" – what Descartes called the pineal gland. Le Brun thus maintains that the face is the most expressive part of the body because of its closeness to the soul. The eyebrows, because of their physical proximity to the pineal gland, are most indicative of the passions. Likewise, the mouth reflects the movements of the heart because the heart is where we feel the effects of the passions. These effects are felt in every function of the body, such as the heartbeat, digestive function, and internal heat. They are also expressed by every part of the body, as we recognize anger or wrath in "a man clenching his fists, and seeming to strike."[7] Le Brun divides the range of passions into two categories, the simple passions and the compound ones, and gives an extended description of their physical manifestations. Of anger, he writes:

> When Anger seizes the Soul, it is expressed by red and fiery Eyes; the Pupil wild and flashing; the Eyebrows alike, either lifted up or depressed; the Forehead very frowning, with wrinkles between the Eyes; the Nostrils open and extended; the Lips pressing together, the Under One rising above the Upper, leaving the corners of the Mouth somewhat open, and forming a cruel and disdainful smile. The Teeth will seem to gnash, and the Mouth foam; the Face appear pale in one place and inflamed in another, but swelled all over; the Veins of the Forehead, Temples and Neck also swelled and extended; and the Hair standing on end: In time, the Person thus affected will seem rather to pant than breathe, the Heart being oppressed by the abundance of blood flowing to its relief.[8]

Le Brun's intention was to provide painters with an elaborate description of facial movements to signify specific emotions. Although he might have sought to establish "a scientific analysis of the principles governing expression so that painters might work not in imitation of nature but according to its laws, creatively," the text and

illustrations of the *Conférences* were soon recognized as "fixed patterns for expression."[9] Various facial traits and lines of the eyebrows and mouth began to serve as ready-made formulae to express specific emotions. This codification of facial expression was to have an impact also on acting theories throughout the eighteenth century. French actors started to model their bodily movements and facial gestures on codified rules of expression derived from Le Brun. His dual influence on painting and the theatre became especially evident in a French form of entertainment during the late eighteenth century, known as *Tableaux vivants*. Denis Diderot promoted this form of acting, in which actors would group and regroup to form compositions derived from paintings acclaimed for the intensity of their emotional effect, such as those of Jean-Baptiste Greuze. In 1761, for example, the Comédie italienne presented *Les noces d'Arlequin*, using Greuze's painting *L'Accordée de village* as the model for a *tableau vivant*. According to the *Mercure de France*, the garments and attitudes of the actors resembled those in the painting, and during the scene of the wedding festivities, the curtain was drawn to reveal the *tableau*.[10]

Le Brun's influence on the theatre went far beyond this literal use of "live" paintings as models for theatrical scenes. He initiated a theory of acting in which actors were taught to reproduce almost mechanically the emotions identified in human physiognomy to evoke the same emotions in spectators. This concept seduced the scientific minds of the Enlightenment but was not without opposition. It rekindled the century-old debate on the moral status of actors and comedians and

the authenticity of their emotions. Actors themselves were divided into two opposing factions whose major point of contention concerned the role of conventions in the art of acting. They debated whether actors really felt the emotions they were conveying to the audience or whether they were generating an appearance of emotions using acting techniques. Some believed in an "inner sensitivity common among all educated men" that could reveal truth and authentic emotions, while others shared Le Brun's belief that expression could be reduced to a code. The theatrical stage thus became the site for an open debate on the moral, social, and artistic role of conventions, in a century when theatre was pervasive.

In his *Réflexions critiques sur la poésie et la peinture* (1719), l'abbé Jean-Baptiste Du Bos (1670–1742) seemed to reconcile these positions, first by praising the illusion of "artificial passions," and then by presenting his theory of an inner sensitivity that could judge taste in the arts (the essential component that prevented the eighteenth century from falling into relativism). Du Bos redefined the balance between the intellect and the artistic intuition he called "sentiment," emphasizing that reason could be used only to justify this intuitive judgment. Since moments of passion are usually followed by days of sadness, art that relies on passionate emotions could recreate artificial passions that would allow us to taste the delightful side of emotions while avoiding their unpleasant consequences.[11] Nature has made us in such a way that we are affected by the emotions and suffering of anyone or anything that approaches us, Du Bos writes. This is why actors who are touched by the characters they are impersonating can affect us directly. Unlike Le Brun, Du Bos believed that an actor had to feel the emotions he was portraying in order to touch a spectator, rather than using a gesture code. The argument, however, was not a simple one, since Du Bos also spoke of an artistic distance that enabled the artist (poet, painter, or actor) to create artificial passions that were not equivalent to the emotions that inspired them. As opposed to the original passions that take hold of us entirely, he writes, artificial passions let us be the master of our emotions, since we can take a distance from their intensity and decide on their duration.[12]

Du Bos devotes an entire section to such artistic distance and theatrical illusion. He argues against the notion that the poetry of words, the verisimilitude of a stage set, and the apparent truthfulness of an actor's declamation can make us believe we are witnessing a real event instead of a performance. The difference between illusion and reality must be maintained for the work of art to be fully appreciated. We do not go to the theatre expecting to witness real action, Du Bos continues, and even though we may be touched by it, we remain aware that we are witnessing an imitation.[13] To prove that pleasure from a theatrical performance is not caused by the illusion itself, he notes that this pleasure is often greater when we become aware of the workings of the illusion, and when we can appreciate the work a second time. For Du Bos, the artistic distance produces a cathartic effect at the theatre. This artistic catharsis enables the spectator to witness artificial passions with controlled pain. These passions are weaker than natural passions but are more bearable to the spectator, who can observe the situation on stage without suffering the same degree of pain as in real life.[14] Du Bos devotes an entire section to this notion that dramatic poetry "purges the passions" by showing spectators the

distractions and aberrations to which the passions can lead. One of the first objectives of theatre was to teach morals by inspiring hatred of vice and love of virtue.[15]

The apparent opposition between those who defended the role of actors as catalyst of emotions, and those who favored the use of conventional signs to portray passions, led to an important debate on the notation of gesture and voice at the theatre. In painting, facial expressions were tabulated by Le Brun and later completed by Lavater; in dance the need for a system of notation had always been recognized; but in theatre the recording of actors' gestures remained controversial. Some, such as Servandoni d'Hannetaire[16] and Duclos in the *Encyclopédie*, objected that annotating a play would produce uniform performances, reduce actors to puppets, and give absolute authority to the person who made the annotations. Others, such as Du Bos, considered notation as the foundation of the "science of play-acting."[17]

The paradox of the actor

The actor Luigi Riccoboni, in his *Pensées sur la déclamation* (1740), condemned the French acting style as contrived and artificial. He believed that an actor should "feel" the emotions in order to create an illusion for the spectators. His son, Antonio Francesco Riccoboni, in his *L'Art du théâtre à Madame XXX* (1750), insisted instead that an actor should understand "the natural reactions of others and imitate them on stage through complete control of his expression."[18] Even though acting theories remained divided between these two apparently contradictory positions, all agreed that actors could succeed in communicating a wide range of emotions by closely following a set of conventional gestures. The debate was concerned more with the degree of personal feelings that an actor was permitted to convey.

The treatise of F. Riccoboni, the son, systematically describes the various components that constitute the art of acting, including gestures, voice, and declamation. In the section on gesture, he describes the general position of the body, then the head, arms, etc. It is in his section on "silent acting" that Riccoboni emphasizes the physiognomy of the face and explicitly recalls Le Brun's theory of expression. However, his description of specific passions, and how they are expressed by the inflexions of the eyebrows, by the movements of the mouth and the eyes, is aimed specifically at the art of acting; he says that the actor should use the upper part of the face to convey the greatest effect, instead of the mouth or chin. Even though these movements of the face are regulated by specific conventions, Riccoboni also notes that "it is a great advantage if one received from nature pronounced traits." An actor can acquire the ability to wrinkle the forehead or to frown the eyebrows but to "express with the face in a sensitive manner" it is helpful for an actor to have the eyes "of a striking color and a liveliness that can be perceived from afar."[19] Riccoboni certainly was not opposed to an actor contributing his/her own personal character to the role being portrayed. In fact, he emphasized the innate character of each actor (physiognomy, eye color, voice, etc.) and insisted that an actor not play a role whose character was opposed to his/her own. He believed that acting involved playing on the recognized individuality of every actor, and recommended that those who wanted to play comedy, for example, must find "the kind of roles that are most suitable to

their talent, but mostly to their face and voice."[20] He warns against forcing one's voice or trying to change its natural tone, or, even worse, trying to imitate the voice of another actor. If one has severe eyes and a harsh voice, one should not try to express emotions inspired by love, he writes. Even though the signs that express a feeling may be well known and can be learned, one should avoid expressing certain emotions, feelings or passions that would seem contradictory to one's innate character, for it would deny the "appropriateness of character." Therefore, it appears that F. Riccoboni's position was not so different from that of his father: both believed that the actor had to start from an internal condition to express various emotions or passions. Nevertheless, for F. Riccoboni, the actor's art was in mastering and submitting one's emotions to the rules of expression. The actors could create the impression of being penetrated by certain emotions, but could not let those emotions truly invade them, otherwise they would be in no position to act, for in a play "feelings follow one another with a rapidity that is unnatural. The short duration of a play forces this haste which gives the theatrical action the intensity that it needs."[21]

Denis Diderot (1713–84) carried forward the debate between the two opposing positions in acting theory, in his own writings on the theatre. The text that presents his views on the art of acting most explicitly, *Le paradoxe sur le comédien*, leads to conclusions that seem contradictory to a position that he eloquently defended in his earlier writings on the theatre, such as *Entretiens sur le fils naturel* (1757). Diderot devoted himself to the art of the theatre only briefly: in 1757 he wrote a play entitled *Le Fils naturel*, followed by a series of philosophical reflections in his *Entretiens sur le fils naturel* that defined a new theatrical genre. The following year, he published a second play, *Le Père de famille*, followed by *Discours sur la poésie dramatique*. The play was not immediately received with the enthusiasm that its author had expected, but nonetheless was a significant development in eighteenth-century theatre. These two plays, accompanied by their theoretical discussions, constitute the founding works of the *drame bourgeois*. A fundamental objective of this new dramatic genre was to depict the movements of the human soul as truthfully as possible in an attempt to raise the moral values of the spectators. Sensitivity was a basic requirement that would guide even the most mediocre actor to express truthful emotions on stage.[22]

Diderot's next involvement in the theatre came more than a decade later, when Grimm entrusted him with the task of writing a review of a recent book on acting entitled *Garrick ou les acteurs anglais* (1769).[23] Diderot admired the play-acting ability of David Garrick to distance his expression from the feelings of his soul. A week later, Diderot enthusiastically wrote to Grimm and announced that the book had inspired him to write what might be his finest and most original piece: "It is a beautiful paradox. I maintain that mediocrity is the attribute of sensitive comedians; extreme sensitivity produces narrow-minded comedians; calm and cool-headedness, the sublime ones."[24] A year later, the "beautiful paradox," a sixteen-page essay, appeared in the *Correspondance littéraire* under the title *Observations sur une brochure intitulée Garrick ou les acteurs anglais*. Diderot's inspired text was rewritten many times and at least five versions are known to exist. Although it was published only posthumously in the nineteenth century (1830),

Diderot's manuscript was known to many of his contemporaries and prompted countless attacks for its controversial depiction of actors' dubious moral sense. The primary quality of the greatest comedians, he claimed, was their ability to reproduce realistic signs of emotions without ever sensing them. Diderot was suggesting that acting is an art of imitation that undermines authentic emotions, and that the cold and rational reproduction of conventional gestures was far superior to any felt (natural) emotion.[25]

The paradox that occupied Diderot was not a simple opposition between art and nature, however. Diderot believed that *convention* was ultimately founded on nature. In comparing "tears raised by a tragedy of real life" and those raised by a "touching narrative," Diderot warns that while the directness and immediacy of the natural world may seem superior to the world created on stage, the former is more vulnerable: it may not reach its audience in a controlled way and cannot be repeated with the same fervor. If an actor truly felt the emotions he is expected to portray on stage, he argues, it would be impossible for that actor to perform the same role every night with the same genuineness and success. He believed that Mlle Clairon (whom he considered a sublime actress) truly experienced the torment of the characters she impersonated when rehearsing a new play, but once she fully possessed her role, she repeated it with no emotion: "she is the soul of a great mannequin that envelops her; her rehearsals fixed it to her."[26]

For centuries, forms of acting had been closely related to the content of what was being performed, and so acting was a form of rhetoric. Diderot, however, undermined this relationship. In his *Paradoxe*, he conceived performing as an art form in and of itself, with no reference to what was being performed. In other words, this amounted to a divorce between form and content. His position on the innate character of comedians was also more radical than that of any of his predecessors. While F. Riccoboni put forward a thesis similar to Diderot's, that actors did not feel the passion they enacted on stage but only reproduced recognizable signs, he still believed that certain roles were more appropriate to some actors because of affinities to their personal character. Diderot, on the other hand, denied that comedians have a character at all. It is not that they have lost their natural character because they continually personify others, he insists; this would be mistaking the effect for the cause. Instead, actors can play an infinite number of roles precisely because they have no character of their own.[27]

Diderot has often been accused of philosophical inconsistency in his theory of acting, for his posthumous work appears to contradict the thesis of his earlier work, particularly his theory for the *drame bourgeois*, but also many of his texts for the *Salons* that address the sensitivity of spectators. The apparent contradiction between his early writings where he claimed that actors should rely on their authentic emotions, and his *Paradoxe* that gave priority to codified gestures, however, may not be entirely irreconcilable if we consider them closely. As in the *Paradoxe*, Diderot's *Entretiens* criticizes every aspect of French theatre that opposes verisimilitude, including the generic decors and the declamatory style that deviates from reality. The actors' relationship on stage is equally unnatural since they maintain a fixed distance among themselves, never daring "to look each other in the face, turn

their backs to the spectator, move close to one another, part, or rejoin." Diderot suggests instead a more natural arrangement on the stage similar to the *tableau* in painting.[28] One of the reasons why Diderot's two major texts on theatre seem to contradict each other is that they were written from opposite viewpoints: the *Paradoxe* focuses on the actor, while the *Entretiens* considers emotions evoked in the spectator. The *Paradoxe* could be defined as the science of acting, while the *Entretiens* elaborates on the art of performance. In Diderot's search for truthful expression, these works depict two sides of a unified reality. Truthfulness at the theatre does not involve showing things as they are in nature, for this is only commonplace, Diderot writes: "Truthfulness on stage consists in the conformity of actions, of discourse and expression, of the voice, movement and gesture with an ideal model imagined by the poet, and often exaggerated by the comedian."[29]

Diderot's theory of acting, like Le Brun's interest in physiognomy, was closely related to the theory of character in architecture at that time: like an actor learning the signs that express specific emotions, an architect would learn a conventional language of lines, masses, and ornaments to express specific characters. The dome of the Invalides, for example, with its pyramidal composition and the base from which it rises so majestically, inspires grandeur and magnificence, Le Camus de Mézières writes. As the subtle movements of an actor's eyebrows can express alone a wide range of emotions, the relative heights of buildings (the rooflines forming an architectural expressive feature) also express a complex modulation of human emotions. Describing the juxtaposition of masses of different height in a courtyard, Le Camus explains: "Buildings of different height around a single space embody the degrees that separate sadness from cheerfulness."[30] With the perspective effect and the movement of the viewer, the modulation of masses and the projection of various parts contribute to an impression of movement in the façades. In addition to the modulation of the masses, the variation of the roofline ensures that the intended character of a building will be expressed, like the gesture of an actor on stage, even from a great distance. Le Camus illustrates this notion by referring to the "monotony" of the garden façade of the Château de Versailles. If one looks at the ensemble from a distance, the façade appears as a long, monotonous, high wall. If the architect had broken the rigidity of the roofline and the uniformity of the mass, however, this modulation would have given it "playfulness and life," he concludes. The reasons again are provided by the rules of perspective and optics, emphasizing once more that the building cannot be reduced to a frozen image – a painting – but demands a temporal experience of the composition:

> The masses, the recesses, and the projecting bays concur to produce the effect. In plan they give variety; in the masses they supply grace; and in the elevation they break the monotony of the straight line, which would otherwise terminate the building and make it wearisome and dull. Perspective causes the projecting bays to seem higher than those that form the body of the structure; and to our eyes they have the advantage of standing out and tracing the form of their plan against the skies.[31]

Diderot himself devoted a few disparate reflections to the question of architecture and expression. In his *Essais sur la peinture*, an entire chapter deals with architecture as the mother of all the arts; unlike the arts of imitation such as painting and sculpture, architecture has no model in nature, he writes. In *Le monument de la place de Reims* (1760), Diderot explicitly addresses the expressive role of architecture and the destination of buildings, criticizing the general lack of intention and appropriateness in most contemporary buildings: "Architects do not ask themselves: What is the main object of my building? What will it be used for? What will be the circumstances in which events will take place?"[32] Consequently, buildings may be beautiful, but unlike the great temples of antiquity, he writes, they are not necessarily suitable for the site and the purpose for which they are built. "If a project takes into consideration the time, place, nation, and destination for which it is built, the proportion of masses and voids, of forms, ornaments, and all that is related to the art will vary infinitely."[33] The main role of the architect is to consider various expressive means and to ensure that the destination of a building is clearly asserted.

This ability of architecture to indicate its usage is precisely what occupied Le Camus de Mézières in *The Genius of Architecture* but, as opposed to his predecessors, Le Camus also understood that the infinite variations provided by the expressive means of architecture would have to be orchestrated in a manner that exceeded the objective cataloguing of Le Brun's characters. Like Diderot, Le Camus also drew from both convention and nature in his search for truthful expression. He devised an architectural language that could be understood at once by the *spectators*, but that could not be reduced to a single code. Architecture, he thought, could express its destination by evoking specific emotions or sensations through its proportions, the modulation of its masses, the rhythm of its façades, and the variation of its rooflines, but like a poem in which the overall meaning cannot be reduced to that of the separate words, the character of a building resisted transparent language.

Le Camus observes that the articulation of a façade "gives life" to a building, but also insists on a close correspondence between the interior decoration and the exterior expression. The ornaments of a façade are like theatrical costumes that convey appropriate character. If the degree of richness in a façade is not consistent with the interior decoration, it produces a sensation like that of "a person in a superbly braided coat but with the rest of his attire poor, rustic, and uncouth."[34] During the second half of the eighteenth century, the appropriateness of actors' clothing to their specific character was a subject of controversy. Before then, costumes were usually very elaborate, in accordance with the prevailing taste of the time. Actors invented new fashions for the stage that were then adopted by the general public on the streets of the capital.[35] In his article on "Decoration" for the *Encyclopédie*, Marmontel condemns the current practices of theatrical costume. He advises actors to use costumes that suit the character and the situation, instead of relying on traditional elegant tragic dresses and ornate wigs. "It is the spectator who should be displaced, not the spectacle; and this is what all actors should consider for every role they play. Then Cesar would not appear with a square wig, nor would Ulysses come out all powdered from the middle of the waves."[36]

Marmontel was not alone in pleading for more realistic costumes. In his *Saggio sopra l'opera in musica* (1755), Francesco Algarotti discusses the importance for costumes to represent current usage as closely as possible.[37] Similarly, Louis Charpentier in *Causes de la décadence du goût sur le théâtre* (1768) argues that an overly elaborate costume, with too many diamonds or a misplaced richness, focuses attention on the actor (or, most often, the actress) to the detriment of the character being represented (*le personage*).[38] In his treatise *De l'art du théâtre* (1769), Jean-Baptiste Nougaret also complains about the inappropriate costumes at the theatre. Actors undermine the theatrical illusion by wearing garments that are not suitable for their character, he argues.[39]

The growing concern for theatrical attire during the eighteenth century led to a renewed debate over the use of masks and make-up on stage. Nougaret writes that in antiquity, Greek and Roman actors used masks representing joy on one side and sadness on the other. This double-profile mask expressed all the passions that agitated the actor. Declamation was written in a form similar to musical notation, and the movements and gestures of actors were recorded in a similar fashion. Nougaret explains a fundamental difference between the "symbolic" form of acting in antiquity and that of his contemporaries: the modern actor, he writes, expresses passions with the face, and must try to reproduce the signs of these passions as naturally as possible. Nougaret's concern echoed those of contemporary actors such as Mlle Clairon, the famous interpreter of Voltaire's tragedies, who was opposed to the use of powdering known as "grimage," a make-up that disfigured the actors' faces. It helped to reflect the poor light of the stage, but its principal function was to distinguish between a normal individual and a theatrical one. Clairon generally opposed it because it masked the face of the actor and reduced the possible range of facial expressions.

The complex relationship between natural and symbolic expression at the theatre during the eighteenth century casts some light on a similar situation in architecture. In antiquity, the double-sided mask was sufficient for expressing the entire range of emotions required of an actor, as the few architectural orders were sufficient for expressing the entire range of architectural programs: a temple of Apollo, a temple of Venus, or any other kind of building. Toward the end of the seventeenth century, Le Brun's theory of expression marked a radical change not only in painting, but in acting theory and to some extent in architecture as well. He believed that every passion was specific and that their signs were universal. Consequently, when Le Brun worked occasionally as an architect, his practice reflected his theory of character, using codified architectural elements such as the classical orders but also con-ventional iconographic elements and symbolic motifs. In the twelve pavilions he designed for the Château de Marly, these elements are easily readable and express the destination of each building. His theory of expression would influence architectural theories of the first half of the eighteenth century, such as those of J.-F. Blondel and Boffrand, for whom the notion of convention was predominant.

Later in the eighteenth century, the number of characters and passions portrayed at the theatre increased, as gestures and facial expressions grew more complex and as the innate character of each actor was recognized. At the same time,
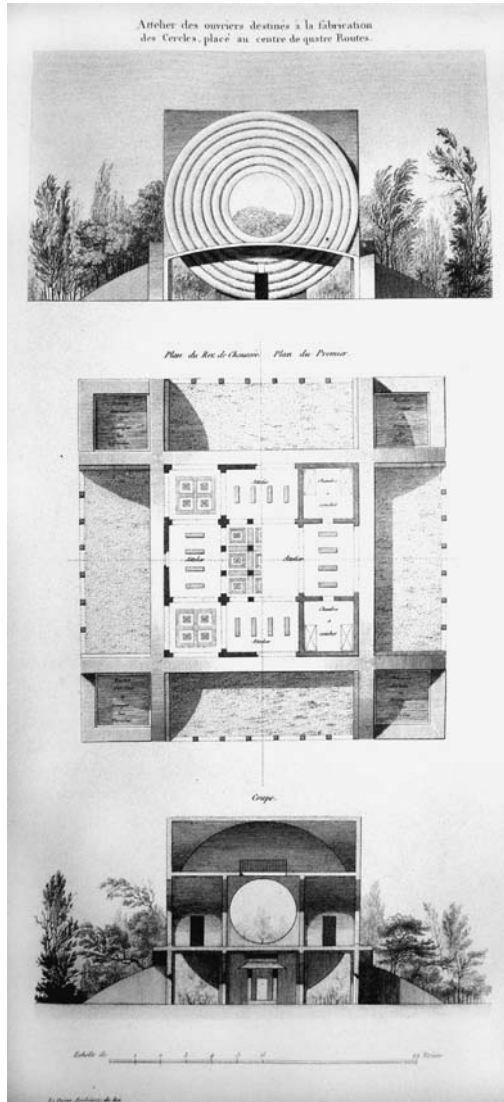
the range of architectural programs also multiplied. In *L'Art du théâtre*, F. Riccoboni advocated this individualization of character, stating that every actor should play roles that correspond to his/her own character.[40] Toward the end of the eighteenth century, Ledoux brought this quest for individual affirmation into his architectural theory, and went so far as to invent a specific architectural form to express the individuality of each client. Although Le Camus did not invent a new architectural form for each client of his *hôtels particuliers*, his public monument for the conservation of grain in Paris, the *Halle au blé*, inscribed in the dense urban structure a truly innovative form that clearly announced its unprecedented architectural program.

Part 2

Play-acting and the culture of entertainment: architecture as theatre

Chapter 4

Theatre as the locus of public and social expression

If the theatre can be used as a lens to look at the question of expression in eighteenth-century architectural theory, it is because since the beginning of the century, theatricality of social life had extended gradually beyond the physical boundaries of theatre buildings and out into the city. The role of theatre became much broader than simply a form of entertainment; it changed how individuals related to one another in society. Acting was no longer restricted to the performing stage in theatres; it became a way to conduct oneself in society.

In his novel *Persian Letters* (1721), Charles de Secondat, baron de la Brède et de Montesquieu (1689–1755), exploited a recent fascination with exoticism to comment on this new form of social interaction. One of his characters, Rica, a Persian visitor to Paris, naively describes the behavior of spectators in theatre boxes and mistakes them for mute actors. Through the eyes of this visitor, Montesquieu was in fact describing a social behavior that was strongly criticized by many of his contemporaries:

> Yesterday I saw something rather odd, although in Paris it happens every day. Toward the end of the afternoon, everyone assembles and goes to perform in a sort of show, called, so I have heard, a *play*. The main action is on a platform, called the *stage*. At each side you can see, in little compartments called *boxes*, men and women acting out scenes together, rather like those that we have in Persia. Here there may be a woman unhappy in love, who is expressing her amorous yearnings, while another, with great vivacity, may be devouring her lover with her eyes, and he looks at her in the same way. Every emotion is displayed on the face of these people, and conveyed with an eloquence which is all the more effective for being silent. Here the actresses are visible only down to the waist, and usually have a shawl, out of modesty, to cover their arms. Down below there is a crowd of people standing up, who make fun of those who are performing above, and they in turn laugh at those below.

> But those who exert themselves most are certain people who are chosen for this purpose at an early age, to endure fatigue. They are obliged to be everywhere: they go through places that nobody knows except themselves, and climb with surprising skill from tier to tier; they are up, they are down, and in every box; they dive, so to speak; they get lost, then reappear; often they go away from where one performance is going on in order to act in another. [. . .] Eventually everyone goes off to a room where they act a special sort of play: it begins with bows and continues with embraces. They say that however slightly one man knows another, he has the right to suffocate him.[1]

As in other eighteenth-century novels that used the theatre as a setting for considering convention and appearance in society, Montesquieu emphasized the reversibility of the roles of actor and spectator, and the complementarities of seeing and being seen. Spectators not only performed for their peers; they often interacted loudly with the action on stage.[2] As social actors, they felt compelled to proclaim their appreciation of the plot, to improvise new rhymes, and to interrupt the play when they judged it to be unworthy of their attention. Part of the audience even specialized in this "quality control" of new plays, and became known in France as *la claque*. One such group of improvised critics in Paris was led by Chevalier Jacques-Rochette de La Morlière, a Casanova of sorts and king of mischief. Very influential in theatre circles, La Morlière's *claque* was feared by everyone related to the stage. His influence could make a play a resounding success or destroy it completely in a few minutes. Desperate authors, insecure over the fate of their play, would try to bribe him for some applause. Opposing factions would pay him to cause a commotion that would lead to the demise of the play and its author. He once ruined a play simply by yawning continuously. "The contagion of his yawns spread through the whole audience and finally attacked the actors themselves!"[3] Ironically, La Morlière's career as a critic was terminated after he himself wrote a play that was received so badly that he lost all credibility.

The public inclination to interact with a play, and often to interrupt it, was due partly to the design of the auditorium. Most boxes in a horseshoe theatre did not face the stage, so spectators' attention tended to drift toward their peers. Also, until the last decades of the eighteenth century, the *parterre* usually provided no seats, and the spectators who were forced to stand throughout a performance were more likely to display their lack of interest in a play by reacting to it. Moreover, the numerous spectators (mainly the young and members of the upper rank) who sat on the stage of the Comédie française in Paris until 1759 often moved around freely and invaded the performing area. The presence of both actors and spectators on stage and the almost uniform lighting throughout the theatre made it difficult to distinguish the acting in the play from other kinds of acting.

The tendency for theatrical acting to serve as a model for social expression is described most eloquently in *Angola* (1746), a satirical novel by Chevalier de La Morlière himself, and one of the most popular *boudoir* books in France during the second half of the eighteenth century. Prince Angola was sent to a fairy queen from

a faraway land to complete his education in a manner that would avoid him having his heart broken by love. This plot serves as a pretext for a titillating description of the manners and customs of Paris at the time. To show Prince Angola appropriate behavior in high society, Almaïr, a courtier and close friend of the Prince, takes him to the Opera, where he is presented with a new social code. At first dazzled by the novelty and magical illusion of the scene, the Prince gradually becomes more relaxed, and even starts listening to the Opera with what La Morlière describes as "some vulgarity": that is to say, he gives it his whole attention. Meanwhile, Almaïr, who is more experienced than the Prince, simpers, quizzes all of the women, and does not sit still for a moment in his seat, on which he sprawls rather than sits. The Prince is most annoyed by Almaïr quietly humming what the actors are singing on stage. Weary of this perpetual movement, the Prince asks Almaïr how he can appreciate the play since he appears to be completely distracted. Almaïr replies scornfully that men of his reputation go to the theatre primarily to see the women and to be seen. It suffices to listen to a few celebrated passages to then praise the play to excess or to denigrate it entirely.[4]

Their arrival and departure from the theatre were also crucial moments of the theatrical experience. Later in the book, the Prince makes a second visit to the theatre. After spending many days partying in the country, a group of courtiers, including Angola, decide to return to town to see a play at the Comédie française. Although they have seen it many times, the play is fashionable and they could not miss this performance because all of Paris would certainly attend it. This time, the most important events in the "ritual" of theatre-going happen outside the theatre, during the transition between the street and the auditorium. As they arrive at the entrance of the theatre, women pretend to hide their faces to play incognito as they go up the main stairs, but make sure to be recognized before reaching their box.

The author emphasizes the presence of the "charming women, clad in their most sumptuous garments" who "simply came to parade their charms in the half-light of the theatre," and the fashionable disinterest of the men who crowded the stage, then left during the most interesting passage of the play, disturbing the actors and displaying their calculated boredom to everyone.[5] This apparent nonchalance and spontaneous audience response demonstrated that actors and spectators inhabited the same world in the middle of the eighteenth century, and that this world was in no way distinct from real life. The city itself was regarded as an extension of the theatre, and eighteenth-century authors consciously acknowledged this direct relationship. In 1749, Fielding spoke of London as "a society in which stage and street were *literally* intermixed."[6] A few years later, in his *Lettre à Monsieur D'Alembert* (1758), Jean-Jacques Rousseau characterized urban man as an actor. It is precisely because the rules and conventions that regulated social behavior were set so clearly and had become so ingrained in their way of life that spectators at the theatre and urban actors could behave with this uncanny spontaneity. Richard Sennett explains these actions by saying they were perceived as signs rather than symbols. "People did not at every moment have to engage in a process of decoding to know what was being said to them behind the gesture. This was the logic of the point: spontaneity was a product of artificiality."[7]

The rules of civility and conventions at the theatre

A pungent critic of his own time, Diderot concludes his *Paradox of Acting* by comparing the comedian to a social actor, stating that both succeed in their enterprise not by being sensitive, but by simulating signs of true emotion: "When we say in society that a man is a great comedian, we do not mean to say that he feels, but rather that he excels in simulating emotions, even though he feels nothing."[8] The individual in society who pleases everyone, adjusting his/her discourse to the situation and speaking positively on every subject, has no innate character, Diderot writes. "This person is a professional adulator, a great courtier, a great comedian."[9] In his apparent criticism of the comedian and the social actor, Diderot is in fact alluding to a much broader concern related to the notion of authenticity and the role of conventions in society.

　　　　The set of codified behaviors that seemed to dominate the public domain was not entirely new in the eighteenth century; its sources can be traced back to the rules dictated by the art of civility and *bienséance* in the previous century. From the early seventeenth to the mid-eighteenth century, numerous manuals on civil conduct were published in France. Their basic premise was that a person's inner qualities were not sufficient for him/her to become a "gentleman" or a "lady"; each individual had to learn the rules of civil conduct to understand his/her place in society, to project an appropriate appearance, and to provide pleasing company. Moreover, the art of pleasing was not an optional pastime, it was a real duty. In the art of conversation, for example, it was not enough to understand everything the other was saying; one had to appear to be listening.[10]

　　　　These rules of *bienséance* may seem arbitrary and easy to manipulate because they regulated only appearances and allowed intention and action to be disconnected. However, the status of conventions in eighteenth-century French culture eludes simplistic definitions. Their arbitrary nature never led to dispensable rules. Instead, they became a basic ground for both ethical and aesthetic judgment in arts, as well as in social behaviors. Even in the gallant society of the eighteenth century, where social conventions were most refined, and where every minute gesture – the intonation of the voice, timidity in the eyes – could be forged and manipulated to convey a calculated impression, the transgression of this shared common language could be read as perjury and lead to immediate social condemnation.

　　　　The novel by Choderlos de Laclos, *Les liaisons dangereuses* (1782), clearly illustrates this complexity. The story is about ultimate power involving two masters of emotional illusionism: the Marquise de Merteuil and the Vicomte de Valmont. Playing with the signs that served to indicate consent between lovers, the Marquise and the Vicomte enter into a cruel contest to determine who can most successfully manipulate appearances of love to deceive a fated prey. In a letter written to the Vicomte, the Marquise de Merteuil is proud of her perfect control over emotions and her ability to master the signs and gestures that normally indicate a woman's love. She describes in great detail how she plans to ridicule Prévan, one of her suitors, by leading him on, pretending to have fallen for him:

> When we went into supper he offered me his arm. Accepting it, I was wicked enough to make my hand tremble lightly in his and, as we walked, to lower my eyes and quicken my breathing, as if in presentiment of my defeat and awe of my conqueror. He was so quick to notice this that in a trice he had treacherously changed his tone and demeanor. He had been gallant, he became tender.[11]

The Marquise devises an elaborate plot at the end of which her prey appears to have out-stepped his rights and intruded into the Marquise's bedroom. The maids who were waiting for the Marquise's signal to intervene hurry to spread the story of Prévan's apparent crime. Proud of her wickedness, she challenges the Vicomte to equal her deeds with Madame de Tourvel. As the Marquise is about to savour her victory, however, the Vicomte launches a counterattack. He discloses to the world the true intentions of the Marquise and the means she used to attain her goal. By publishing the letters she had addressed to him, in which she revealed her most perverse intentions, the Vicomte exposes the Marquise as the greatest manipulator of appearances and established conventions. Social condemnation is immediate. In a letter from Madame de Volanges to Madame de Rosemonde describing the unfolding of events, we read:

> Madame de Merteuil, returning from the country the day before yesterday, that is Thursday, had herself set down at the Comédie Italienne, where she has a box. She was alone in it, and, what must have seemed extraordinary to her, not a single man presented himself to her during the entire performance. When it was over, she proceeded as she usually does into the small salon, which was already full of people. A murmur immediately went around, of which, however, she apparently did not suppose herself to be the object. She saw an empty place on one of the benches and sat down, whereupon the other women already sitting there rose immediately, as of one accord, and left her absolutely alone. This very marked display of indignation was applauded by all the men, and the hubbub increased to the extent, it is said, of hooting. [. . . Madame de Merteuil], I am assured, maintained an air of neither seeing nor hearing anything, and did not so much as change her expression! But I think this is exaggerated. However that may be, this scene – truly ignominious for her – lasted until her carriage was announced. As she left, the scandalous jeering was redoubled.[12]

The story clearly indicates the malleability of gestures as arbitrary signs of an expressive language. Yet, it also shows that social conventions had acquired the positive status of ethical behavior. By transgressing the rules and manipulating the signs and gestures accepted by general consensus as the expression of love, the Marquise had committed the ultimate social crime – even worse than adultery, the transgression of a legal rule. Consequently, her punishment took place in the public realm: she was expelled from the public institution *par excellence*, the theatre. This social condemnation was worse than death itself. In the same letter, Madame de Volanges concludes:

> The same person who gave me these details told me that Madame de Merteuil was attacked the following night by a violent fever, which, it was thought at first, must be the effect of the terrible predicament in which she had found herself; but since last night it has become known that confluent smallpox of a particularly malignant type has declared itself. It would really, I think, be fortunate for her if she died of it.[13]

Clearly, the complex nature of conventions is illustrated by this strange duality between arbitrary conventions and the ethical values that determined the fate of the Marquise. This complexity governed not only social behavior, but the entire domain of artistic production. This should be kept in mind whenever we confront the notion of convention in the arts, especially in the possibilities of architectural meaning throughout the eighteenth century.

Louis XV and the new taste for private performances

The form of play-acting in society expressed in Laclos's novel had many architectural repercussions during the eighteenth century. In *The Genius of Architecture*, for example, Le Camus de Mézières insisted that the *hôtel particulier* must provide transition spaces to allow the master of the place to control his/her own appearance in the house (Le Camus uses the word "representation"). The lobbies, he writes, must be provided with hidden doors so that one can pretend to have gone out when one is still inside. This device enables the master to show his presence or to hide when necessary, as in a performance.[14]

In many instances, Le Camus characterizes not only the master but also the guests as social actors or active spectators. In a section devoted to the dining room, for example, he suggests surrounding the room with a small amphitheatre of two or three steps on which freshly cut flowers could be placed to further enhance the cheerful character of the place. If some authors have described this architectural setting as an attempt to address the sense of smell, as well as an overt reference to the picturesque garden,[15] Le Camus obviously sees it as a way to further impress on the guests the character of gaiety and sweetness, appropriate to the dining activity. Surrounding the dining room with this amphitheatre of flowers also creates a fitting stage for the guests to become social actors.[16]

The passion for theatre became a way of life during the eighteenth century as the eagerness to perform crept into every branch of society. This is confirmed by Bachaumont's description of Paris society in 1770. In his *Mémoires secrets*, he writes that the acting frenzy grew stronger every day and everyone yearned to have a theatre in their house. Soon everyone also longed to be an actor, even if performing only for a few guests, and in a few decades the popularity of private theatres grew rapidly in France.[17] From the death of Louis XIV to the end of the eighteenth century, however, few new public theatres were built in Paris. A royal decree at the end of the seventeenth century limited the number of official "public" theatres to three.[18] These "privileged theatres" were the Opera, the Comédie française, and the Comédie italienne. The three theatres with royal privilege had been granted the exclusive right to perform the classical and operatic repertoires. The Opera was granted the privilege

to exploit any art form in music, including singing and dancing, and held the exclusive right to produce opera and ballet. The Comédie française and the Comédie italienne, the two other official theatres, divided the classical repertory between them. The former retained the privilege to any classical play performed in "the French manner," including tragic drama and comedy of the French repertory, while the latter could perform comedy reminiscent of the *commedia dell'arte* – an improvised theatre typical of the Italian tradition – and in the late 1760s, the comic opera. In 1769, they were entrusted with the power to review and censor the repertory of every fair theatre, a power that they were often accused of using to annihilate all dramatic value from plays performed on the boulevard and in the fairs. This political control did not reflect the remarkable changes in the social role of the theatre, however. By mid-century, more than sixty private and court theatres had been built in Paris alone. By the time of the French Revolution, this number had grown exponentially.[19] Private theatres ranged from large-scale entertainment halls, privately owned but open to the public, to more intimate theatres that were sometimes secret.

The Théâtre des petits cabinets at Versailles was undoubtedly the most famous (and probably the least secret) of these clandestine theatres. Throughout the eighteenth century, boredom was a prevalent social disease, and one from which Louis XV was known to suffer.[20] To fight the king's boredom, his favorite, Madame de Pompadour, resorted to various modes of entertainment to amuse the king and the court, theatre being her preferred diversion. It was indeed under the influence of Madame de Pompadour and with the interested assistance of her brother, the Marquis de Marigny, that Louis XV took interest in the theatre.

From very early on, Madame de Pompadour was recognized as a distinguished musician and a beautiful woman. Born with no title of nobility, Jeanne-Antoinette Poisson (1721–64) came from bourgeois origins. She received a princely education supervised by the *Fermier général* Le Normand de Tournehem, the uncle of her future husband. Her natural and acquired talents soon led her to the steps of the throne. She became Madame Le Normand d'Étiolles before being chosen by the king to become his favorite. At Étiolles, she had played comedy in a theatre built for her by the uncle of her husband, and which was comparable in magnificence to the Opera. She also played at Chantemerle, in the theatre of her friend Madame de Villemur. Her past success in playing comedy prompted her to have a theatre built at Versailles to entertain the king. A gallery of the palace, close to the *cabinet des médailles*, was transformed into a place for performance known under the name "Théâtre des petits cabinets." This theatre remained a secret, and the list of guests was very restricted. The king had the exclusive power to choose the spectators, and it was the greatest honor to be invited. There, Madame de Pompadour continued to exploit her acting talent. In the first year of the Petits cabinets, from January 17 to March 18, 1747, she performed in all the plays and sang during many spectacles. After showing the king that she was an "exquisite comedian" and a "talented singer," she achieved her goal of awakening the king's love for her and reaffirming her power.[21]

Before the opening of the next season in December 1747, the theatre was extended to accommodate changing rooms. The space reserved for the king
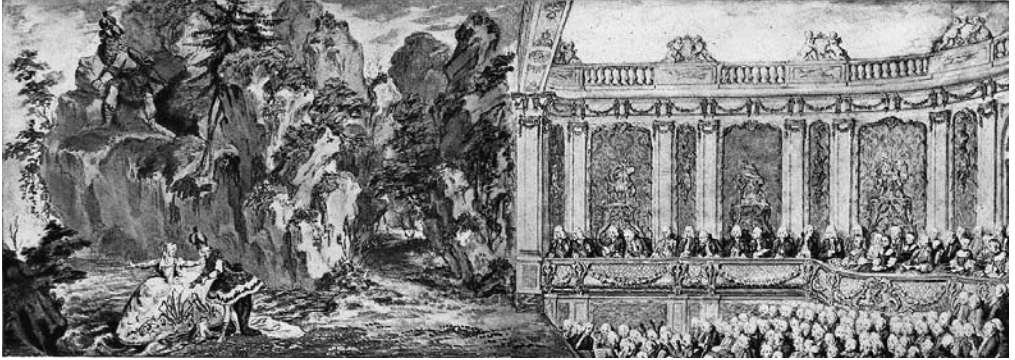
and the spectators was also increased and the orchestra was placed between them and the stage. The following year, the theatre had become too small for its popularity, and a new temporary theatre was built at great expense in the grand marble staircase of the Ambassadors. This second theatre could be dismantled in fourteen hours and reassembled in twenty-four. To be accepted as a member of the troupe, one had to demonstrate an aptitude for playing comedy, but politics was also involved. Regardless of whether they played in a particular performance, every member of the troupe was given access to the theatre, and therefore could be present as a spectator. Given the limited number of places and the elitist selection of spectators, many were willing to trade political favors to obtain even the smallest role.[22] One consequence of letting all of the actors become spectators was that both the stage and the auditorium of the Théâtre des petits cabinets were filled with "actors," again showing social behavior being influenced by theatrical convention. Also, to ensure that they would not be excluded from this most select group, actors as well as spectators were urged to express their most enthusiastic participation. The rules, however, were strict and women were all-powerful on the stage of the Petits cabinets: only they could choose the works to be performed, the time and frequency of rehearsals, and the days of performance. It was forbidden to refuse a role. Latecomers were charged fines but women were granted a half-hour grace period.

　　　In 1748, Madame de Pompadour began the construction of the château de Bellevue, including a small theatre to be completed at the end of the 1749–50 season. Because of the excessive expenses of the theatre at Versailles and the political controversy surrounding it, the king decided that all performances would now take place at Bellevue.[23] The theatre at Bellevue was even smaller than the ones at Versailles. It forced the king and Madame de Pompadour to restrict even further the number of guests. The Troupe des petits cabinets received less applause in Bellevue than it had received at Versailles, partly because of the size of the theatre. Faced with a reduced audience, the actors' interest also diminished. The performances became less and less regular, and finally stopped altogether when there were no more actors.[24] The Théâtre des petits cabinets, from its first performances at Versailles to the final attempts to revive it at Bellevue, had lasted for six full years.

4.1
Performance of the opera *Acis et Galatée* on the stage of the Théâtre des petits cabinets in Versailles; after a gouache by Cochin (1749)
Source: A. Jullien, *La comédie à la cour*, 1885

Historians have speculated on the reasons for the demise of Madame de Pompadour's theatres and her coincidental descent from the rank of favorite. Political maneuvering by the duc de Richelieu was partially responsible for moving the troupe from Versailles to Bellevue. It has also been suggested that the theatre in the grand staircase of the Ambassadors was dismantled because a balcony that had been added in 1749 destroyed the intimate character of the theatre that had pleased the king.[25]

An equally famous private theatre was that of La Guimard (1743–1816), the first dancer at the Opera, renowned for her many lovers and the luxury in which they kept her.[26] The public's fascination with the private lives of performers became widespread during the eighteenth century, and titillating personal details often became the subject of loud comments by spectators during performances. At the same time, performers also played a social role in their mundane life. This is best exemplified by the very prestigious crowd that gathered at La Guimard's private theatre. She owned various theatres in her successive residences,[27] but the one built by Ledoux for her hôtel in the Chaussée d'Antin was most celebrated. This private theatre, built in 1772, was Ledoux's first theatre design.[28] It provided him with many contacts, which in turn led to more lucrative projects, including his theatre in Besançon. With its oval shape and surrounding colonnade, the auditorium was a reduced version of the Opera at Versailles built by Jacques-Ange Gabriel in 1770. Rumor had it that the Bishop of Orléans actually financed the sumptuous hôtel of La Guimard. Fleury describes its theatre as "the most delectable boudoir dedicated to the muse of comedy that the imagination of an architect could conceive."[29] In his *Mémoires secrets*, Bachaumont claims that philosophers, enlightened spirits, artists, and individuals with a wide variety of talents comprised her audience and promoted her to become an adulated figure. The theatre could hold 500 people comfortably and it included some closed boxes (*loges grillées*) on the ground floor so that women of the court could arrive incognito and escape through a back door after enjoying the performance. This anonymity was deemed necessary in La Guimard's theatre because she was famous for presenting on her stage some very explicit plays called *saynètes érotiques*, often censored by the authorities. Unlike Madame de Pompadour's Petits cabinets, where the rules of *convenance* were sometimes partially rewritten to please the favorite's whims but were never truly transgressed, La Guimard's "Love Theatre"[30] explored the darker side of theatrical pleasure. Private theatres, such as that of La Guimard and the society theatres established by the bourgeoisie, were intentionally ambiguous: neither "privileged" nor "popular," they could pretend to be private while actually being public.[31]

Society theatre and Diderot's *drame bourgeois*

As the fever for the theatre spread throughout France, a new theatre genre emerged during the second half of the eighteenth century: the *drame bourgeois*. Usually attributed to Diderot, Louis Sébastien Mercier describes it as a cross between tragedy and comedy, borrowing "pathos from one and naïve depictions from the other."[32] Using Aristotle's *Poetics* as the basis of his analysis, he writes that the word *drama* comes from Greek Δρυμα, which literally means "action": "It is the most honorable title that one can give to a play, because without action, there is no interest nor life."[33]
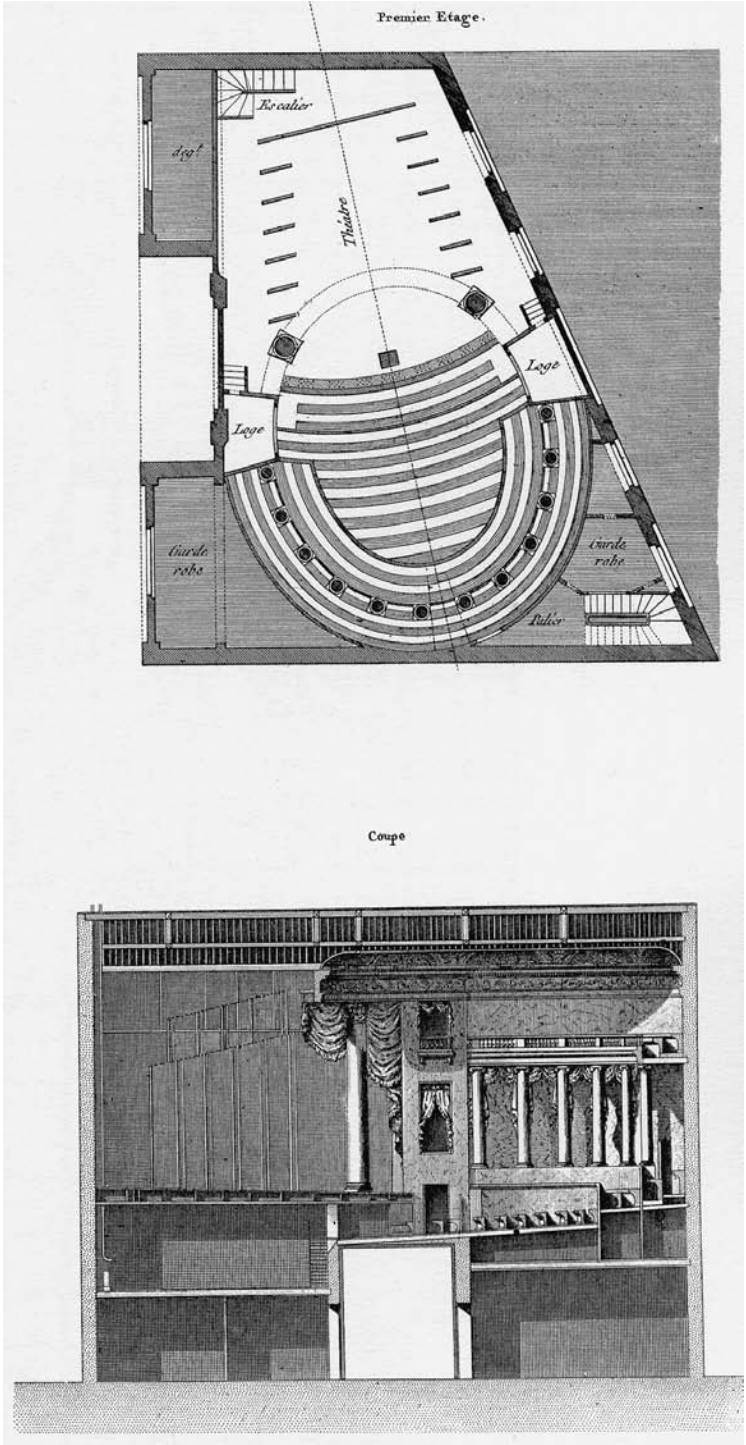
Premier Etage.

Escalier

deg.¹

Théâtre

Loge

Loge

Garde
robe

Garde
robe

Palier

Coupe

Mercier further explained the distinction between tragedy and the *drame bourgeois*, also called the "maudlin genre" (*genre larmoyant*), by the fact that tragedy belonged to the Greeks, while the eighteenth-century spectators in France needed a different kind of theatre that could "portray our fellow men, move us, and interest us in their condition."[34] This questioning of the appropriateness of Greek tragedy in eighteenth-century France resonated with a similar challenge to the rules of the classical orders in architecture. Mercier explained that theatre conveys the mores, the character, and the genius of a nation and of a century. Because theatre also presents details of the private life, the legislation, and the virtues of its time, classical theatre needed to be reconsidered.[35]

Diderot himself acknowledged the lineage from the classical genres to the *drame bourgeois*. In his view, the *drame bourgeois*, or "serious genre" as he calls it, is the middle ground between comedy and tragedy, bridging two extremes. However, he emphasizes their dissimilarities.[36] One of the fundamental distinctions between classical tragedy and the *drame bourgeois* lies in the nature of their characters. While tragedy depicts archetypal *personae* such as kings, warriors, and even mythological figures and demigods to incite the highest emotions in spectators, the *drame bourgeois* is intended to abolish the distance between spectators and represented characters so that the audience identifies with the action on stage.[37] In the *drame bourgeois*, Diderot writes, characters are often as general as in comedies, but they are always less individual than in tragedies. Diderot explains the difference between comic and tragic characters in these terms:

> The comic genre is of kinds, and the tragic is of individuals. [. . .] The hero of a tragedy is a specific man: it can be Regulus, or Brutus, or Caton, and it is no one else. The principal character of a comedy on the contrary must represent a large number of people. If, by chance, it had a physiognomy so specific that it could only be one single individual in society, comedy would regress and degenerate into satire.[38]

Theories of acting and especially the relationship between actors and audience were also diametrically opposed in classical tragedy and the *drame bourgeois*. In a tragedy staged during the seventeenth or early eighteenth century, the body of an actor was largely immobilized due to the weight of the costume and wig, problems of lighting, and the need to face the audience continually, since facial gesture was the most important element of dramatic communication. In a tragedy, actors played "for the audience" and rarely looked at each other. In the *drame bourgeois*, on the other hand, the audience was ignored and assumed to be non-existent. The actors in this new genre were no longer symbols; they started expressing themselves as individuals, while spectators gradually became silent witnesses beyond the invisible fourth wall of the stage.

Le fils naturel, one of the founding works of the *drame bourgeois*, and the subsequent *Entretiens sur le fils naturel* (1757) are Diderot's first significant dramatic writings. Diderot intended *Le fils naturel* to be more than a rendition of a fictional story. His intention was to portray in the most realistic manner the souls of theatrical yet authentic individuals at crucial moments in their lives. As if to ground

the play in a real, contemporary setting, Diderot introduces the story by describing his first encounter with Dorval, the main character, in the countryside where Diderot had gone to rest just after the publication of the sixth volume of the *Encyclopédie*. We are told that the story he is about to tell was known throughout the canton, and everyone admired its main protagonist for his great virtue.

Dorval, a man of great honesty but illegitimate birth, is the closest friend of Clairville, a man with good standing in society. After residing at Clairville's house for some days, Dorval decides abruptly that he must leave. Although Diderot does not immediately reveal the reason for this decision, the dramatic tension suggests a hidden passion that prevents Dorval from thinking clearly. As the story unfolds, we learn of Dorval's secret love for Rosalie, Clairville's fiancée. The feeling is reciprocal, so Rosalie's relationship with Clairville is compromised. Because of his loyalty to Clairville, Dorval attempts to escape this untenable situation but Constance, Clairville's sister, tries to prevent him from leaving. Constance declares her love for Dorval, but this feeling apparently is not reciprocal. The story then takes a twist when Constance finds an unfinished love letter by Dorval that she mistakenly believes to be for her. The letter, in which Dorval declares his passionate love and explains why he must disappear from her life, instead was written for Rosalie. Constance gives the letter to her brother, who interprets Dorval's desire to leave as a sign of scrupulousness, to avoid Constance getting involved with a man of his obscure origin. Clairville insists on giving his sister's hand to Dorval, who cannot refuse unless he rectifies the situation and confesses his love for Rosalie. Since he cannot betray Clairville's friendship, Dorval resigns himself to marrying Constance, despite Rosalie's desperation. As Dorval finally sacrifices "his passion, his fortune, and his freedom" for the sake of friendship, Rosalie's father, Lysimond, returns from a painful voyage during which he was detained as a prisoner in England. When Lysimond recognizes Dorval as his illegitimate son, Dorval and Rosalie thus discover that they are brother and sister, and their reciprocal attraction is explained as fraternal instinct. The intrigue is resolved: virtue has won over human passion.[39]

Le fils naturel was followed by three *Entretiens* that take the form of a dialogue between Dorval, the main character of *Le fils naturel*, and Diderot, in which they discuss various issues, from the relationship between art and nature to the three dramatic unities.[40] It is also in the *Entretiens* that Diderot defines how the new theatrical genre differs from both tragedy and comedy, while acknowledging its debt to these two classical genres. The complex genealogy of the *drame bourgeois* and its similarities to other genres have led to various interpretations since its inception in the mid-eighteenth century.

Pierre-Jean-Baptiste Nougaret, while acknowledging Diderot's contribution to this genre, calls it *comédie-bourgeoise* or *comique-larmoyant* in *De l'art du théâtre*, and distinguishes it from other kinds of comedy because its subject is taken from what are called honest people, and its objective is less to provoke laughter than to make one cry.[41] The *drame bourgeois* favors ordinary characters who express their natural feelings. By privileging the commonplace and by collapsing the traditional distance between actors and spectators, theatre could become a vehicle for moral reform by showing the consequences of one's actions in an everyday context. This

claim for the moral impact of theatre and art in general pervades Diderot's work: "To render virtue likable, to despise vice, to expose ridiculousness, this should be the intention of any honest man using a pen, a brush, or a chisel."[42] In Diderot's later writing on theatre, the *Paradoxe sur le comédien*, he describes the theatre as a cleansing, cathartic device. He explains that a citizen who enters the theatre leaves his/her vices at the door to take them up again on the way out. When theatre was at its best, however, it had the potential to truly transform the spectator.[43]

With this notion of theatre as a tool for moral reform and with his attempt to redefine the notion of participation in theatrical performances, Diderot anticipated Jean-Jacques Rousseau's own reflections on the theatre in his *Lettre à Monsieur D'Alembert sur les spectacles*, written one year after the publication of Diderot's *Entretiens*.[44] Rousseau's *Lettre* was written as a response to d'Alembert's article on Geneva in the *Encyclopédie*, in which he attacks Rousseau's native city for being unreasonably conservative.[45] A former ally of Voltaire and the Encyclopedists, Rousseau appeared deeply offended by the article, and his response depicts Geneva as an ideal society. In his *Lettre*, Rousseau condemns the theatrical nature of cosmopolitan cities and openly criticizes Voltaire and the Encyclopedists' enthusiasm for the theatre, which in his view was "the poison of Parisian mores."[46] In fact, since 1755, Voltaire had been established in Geneva, *aux Délices*, and was trying to persuade the city to build a theatre where his plays could be performed. This prompted great opposition from Rousseau, who saw seeds of depravity in the theatre that led to corruption in large cities because they provided a playground for evil. In cosmopolitan cities, men are not restricted by conditions of survival, Rousseau argues, but have time for leisure, which in his mind necessarily led to vice. In a society of strangers, social codes are established and prevent "honest" interaction. The mask of politeness is a sign that individuals are acting, and thus losing their inner selves.[47] In the *Lettre*, Rousseau also comments on the apparent contradiction between social gathering at the theatre and the growing isolation of each spectator: "Although we believe that we gather at the theatre," he writes, "it is there that we isolate ourselves."[48]

After proclaiming the inherent social dangers of theatre, Rousseau finally admitted that in an ideal republic – as he imagined Geneva to be – there is a need for spectacles, but of a different nature. These spectacles must involve the entire population in an active way, rather than expecting them to witness an illusion passively, as in the allegory of the cave in Plato's *Republic*: "Let's not adhere to these exclusive spectacles that sadly confine a small number of the population in a dark cave that maintains them in fear and immobility, silence and inaction," he writes.[49] In contrast to traditional theatre, Rousseau suggested that the subject of the spectacle should be the spectators themselves: "make a spectacle of the spectators; convert them into actors themselves."[50] Such spectacles, Rousseau proposes, could take various forms such as gymnastic competitions, races, wrestling, and other exercises for the body.

Although Diderot also believed in the importance of involving spectators directly, his definition of theatrical performance remained more traditional, for he did not abandon the narrative structure of plays. For Diderot, as for Louis-Sébastien

Mercier who also defended the *drame bourgeois* for its moral role in society, theatre was not just a mirror of reality but also a means for transforming reality. Mercier even refers to the playwright as a "legislator" whose fictions on stage rectify social and political injustices. The role of the poet is to paint the portrait of some infamous character, he says, and to punish those who have escaped the trial of justice: "Let's remove this monster from the midst of his infamous voluptuousness; let's build a scaffold for his public execution which shall be his only suitable theatre."[51]

For Mercier, the ultimate objective of the theatre should be to educate the population rather than to be merely frivolous entertainment or mindless distraction. Similarly in *Le fils naturel*, the *drame bourgeois* reenacts more than a simple story. The purpose of the play is to convey to future generations an example of moral and virtuous behavior. In fact, in the introductory pages, Diderot explains that the play was written at the request of Dorval's father, Lysimond, who was touched by the virtue of his son and the good fortune that it precipitated, and now proposes to transform their own story into a modern myth whose ritual would be reenacted every year in the place where it first happened.[52]

This concern with public education as well as with the site specificity of a play appears in some of Le Camus de Mézières's writings for the theatre. Le Camus's interest in the theatre is evident throughout his architectural work. The constant intertwining of theatre and architecture stems from an explicit interest in the expressive role of theatre as a performing art. Le Camus was a dilettante playwright, and created with his brothers the *Société dramatique de Charonne* (1770–81) which met in Le Camus's own private theatre, where the Parisian intellectual crowd also liked to gather.[53] Part of the repertoire of the *Société* was published in *Mes délassemens ou les Fêtes de Charonne* (1781). It included two plays set in the very surroundings where they were meant to be performed.

The first play, *Les Dragons de Charonne*, indicates that the action is set in the gardens of Le Camus de Mézières's beloved wife.[54] The story portrays a penniless young gardener, Colas, who was orphaned at an early age. Colas is unwillingly enrolled in the king's regiment as a *Dragon* – a name given to the soldiers of the royal regiment. Meanwhile, Colas's girlfriend, Lise, discovers that he is not an orphan as he thought, but is in fact the son of rich parents who had left for America when he was still young. They had entrusted him to the care of a farmer couple until they returned but war broke out and communication was lost. M. Lindor, the captain of Dragons, turns out to be Colas's real father. As they are reunited, the story ends in an effusion of love and happiness. Colas's and Lise's good mistress – identified with Madame Le Camus de Mézières – gives Colas a hundred thousand *écus* and Lise's hand.

The second play, *Les laitières de Bagnolet*, is set in Bagnolet Street, a main road in Charonne, a block away from Le Camus's theatre. The social status of the main characters, however, is more identifiable with the peasants in the countryside. The story presents an encounter between two farm girls, Perrette and Suzon, who are taking their merchandise to Paris (following La Fontaine's fable, Perrette is carrying a milk jug that will break before she arrives in Paris), and two poachers, La Forest and La Plaine. Illegal hunting epitomizes for Perrette and Suzon all that is

despicable and contemptible in young villagers. However, one of the poachers (La Forest) is Perrette's lover, whom she does not recognize under his disguise. As the story unfolds, La Forest is caught by a forest warden, and Perrette is devastated when she learns of La Forest's identity. She nonetheless pulls every possible string to free her fiancé, and once more, thanks to the open heart of the good mistress of the canton (again, identified with Madame Le Camus de Mézières), virtue, love, and expression of goodwill overcome obstacles caused by initial carelessness.

Both plays contrast the simple happiness of country life and the chaos of city life, a theme obviously influenced by Jean-Jacques Rousseau that will reappear most strongly in Le Camus's fascination with picturesque gardens.[55] Le Camus's plays, especially the first one, demonstrate a clear affiliation with a new theatre genre, the *drame bourgeois* or *comédie sérieuse*, created two decades earlier by Diderot.[56] Indeed, the settings of Le Camus's plays, the social status of the characters, the moral questions raised by their condition, and the hidden family origin of Colas in *Les Dragons* are not unlike the condition of Dorval in Diderot's *Le fils naturel*, a founding work of the new theatre genre in the eighteenth century.[57]

The staging of a play

Although Le Camus de Mézières's plays lack the dramatic complexity and character depth of plays such as *Le fils naturel*, they have a similar moral aim: to punish crime and glorify virtue. Le Camus de Mézières's use of the theatre as a prime model for his architectural theory was not a mere coincidence or a personal whim. During the eighteenth century, the theatrical stage and bourgeois architectural settings were continually influencing one another. In the *drame bourgeois*, theatrical scenery included not only traditional urban and institutional settings (such as temples and palaces), but also internal domestic spaces of private apartments. In his *Entretiens*, Diderot even creates an equivalence between the dramatic space and the private space of the *hôtel particulier* by staging the first performance of *Le fils naturel* in the living room where the events were said to have taken place. After inviting himself to what was meant to be a private performance, a reenactment of Dorval's personal story, Diderot is finally given permission to attend, but his presence had to remain unnoticed because of the private nature of the play. Diderot was thus allowed to witness the unfolding of a family drama as a hidden spectator: "I entered the living room through a window, and Dorval who had pushed everybody aside, placed me in a corner where I could see and hear the entire story without being seen."[58]

This initial performance of *Le fils naturel* epitomized fundamental principles of the *drame bourgeois*. Because the actors did not acknowledge the spectator, the traditional dominant role and space of the spectator were undermined. Whereas in Baroque theatres, the geometry of the auditorium and the stage scenery was designed for the dominating gaze of the sovereign, and the performance was directed toward this ideal vantage point, in the *drame bourgeois*, and especially in *Le fils naturel*, the spectators assumed a more voyeuristic role. Because the actors–characters seemed unaware that they were being watched, the performance acquired an aura of authenticity. The spectators became silent observers of a private scene. In abolishing the virtual distance between actors and audience, it created a

greater identification of the spectators with the action on stage.[59] Hidden in a far corner of the room, Diderot knew that his presence must remain unnoticed to avoid disturbing the action taking place before his eyes, yet he felt compelled to interject and wished he could become an active participant in the play: "The performance had been so true that in many occasions, forgetting that I was a spectator, and an ignored spectator for that matter, I had been on the verge of coming out of hiding to add a real character to the scene."[60]

Diderot used a similar notion of a hidden spectator in one of his earlier works, *Les bijoux indiscrets* (1748), a boudoir novel written in less than six months that became an instant success. Like other libertine novels of the time, the underlying intent was to demystify women's apparent modesty and virtue, and to reveal those values as "the most detachable of masks."[61] The story portrays a Sultan (whom critics identified as Louis XV) and his Sultana (most likely based on Madame de Pompadour) discussing the truthfulness of women's expression of love. The Sultan Mangogul is skeptical that women ever express their true feelings, and wagers that he can prove to the Sultana that his suspicions are well founded. He is given some magic rings that can make him invisible. When Mangogul turns his rings on a woman, they unleash their magical power to disclose the secrets of female sexuality, making her private parts speak freely. Like Diderot himself sitting in a hidden corner of Clairville's living room to witness the performance of *Le fils naturel*, the main protagonist of *Les bijoux indiscrets*, Mangogul, thus becomes a voyeur of scenes performed by improvised actors who are unaware of his presence. The Sultan is given access to the authentic emotions of women by becoming invisible and observing their unrehearsed performance.

By appearing to ignore the spectator's presence, the *drame bourgeois* paradoxically enthralls the spectator, based on a belief that the emotions presented are authentic. Because it seems that the actors are not really playing a part but only being themselves, the spectators believe in the genuineness of the action and are drawn into the performance as hidden participants.[62] In his *Discours sur la poésie dramatique*, published with his second play, *Père de famille* (1758), Diderot describes this concept in terms of an invisible fourth wall that isolates the stage from the auditorium. He advises authors and actors to behave as if the spectators did not exist, and as if the edge of the stage was walled up from the auditorium: one should perform as if the curtain never rose, he suggests.

Although Diderot implies a physical severance of the spectators from the space of performance, one should not conclude that the audience was excluded from participating, or that the performance itself could take place without the presence of an audience. One should keep in mind that this desire to exclude the spectators from the space of performance had many implications in 1758. At this time, spectators were still sitting on the stage of the Comédie française in Paris. This new notion, that the spectator sees the action through the missing fourth wall of a closed room, was not fully accepted, even by those who were in favor of radical changes in the theatre. For example, Nougaret, in *De l'art du théâtre*, opposed Diderot's idea because he could not accept the virtual disappearance of the spectators. Instead, he proposed treating the stage as a street corner that is naturally predisposed to the gathering of

a crowd.[63] The notion of the missing fourth wall nevertheless had some concrete equivalents in eighteenth-century architectural theories.

The invisible presence of the spectator in Diderot's *Le fils naturel* and the Sultan in *Les bijoux indiscrets* was translated in Le Camus's theory for the *hôtel particulier* into an interesting system of corridors contained within walls, providing a concealed place from which masters could spy on their staff, but potentially also on their guests:

> It would be useful if the Master of the House could pass from one end of it to the other without being seen; it is easy to arrange a device whereby, while seeming to pass through the thickness of the walls, he may traverse them lengthwise. For this purpose all that is required is a passage constructed between the two rooms of any fabric that is two rooms deep. [. . .] One can pass through and see the various parts of one's house at any time without being seen. [. . .] One observes through a little concealed opening at the top of each room.[64]

These devices became especially fashionable in the architecture of seduction epitomized by the clandestine country house known as the *petite maison*, and appeared frequently in the fictional architecture of eighteenth-century libertine novels. In Chevalier de Nerciat's *Félicia, ou mes fredaines* (1786), for example, a network of hidden corridors enables one of the protagonists to spy on Félicia at her evening toilette and to enter her room without her knowledge. In turn, a similar system of niches hidden within walls gives Félicia great power, allowing her to see everywhere without being seen, a "truly feminine pleasure" as she describes it.[65]

These inhabited walls/thresholds were analogous to the proscenium arch in French theatres that remained crowded with spectators until the end of the *Ancien*

4.3
Section through the theatre at Besançon showing a royal box in the thickness of the proscenium arch
Source: C.-N. Ledoux, *L'Architecture considérée sous le rapport de l'art, des moeurs et de la legislation*, 1804
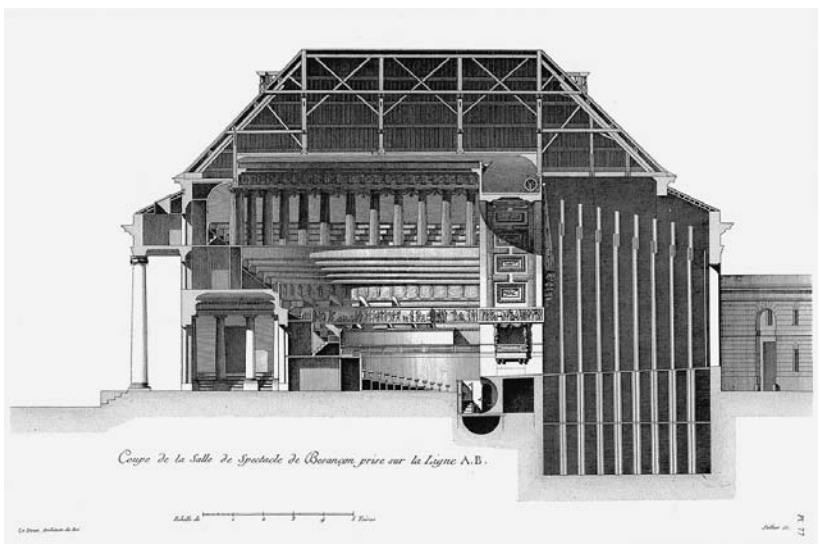
Régime. Even Ledoux's innovative theatre at Besançon built in 1783 still included a royal box in the thickness of the proscenium arch; and the proscenium arch of Victor Louis's Grand Théâtre in Bordeaux (1780) was filled with spectators all the way to the *Paradis*, a fourth balcony at the level of the ceiling. In spirit, this ability to hide within walls to spy on the action anticipated the voyeuristic space of the darkened auditorium that would transform the mode of artistic involvement during the nineteenth century. Moreover, the stage of the *drame bourgeois* appeared to merge public and private life by displaying private scenes to a broad audience. This fundamental transformation began in the mid-eighteenth century and would find its apogee in the nineteenth century. It is clear, however, that the spectators of the late eighteenth century generally did not feel the same need for anonymity as those of the nineteenth or twentieth century. The performance of *Le fils naturel* ultimately was staged for the benefit of a single spectator, hidden yet celebrated: Diderot himself.

Theatre architecture and the role of the proscenium arch

Diderot's *drame bourgeois* changed the mode of participation at the theatre by increasing the level of identification of the spectators with the actors on stage. It also relocated the spectator in relation to the action by implying simultaneously the invisibility of the spectator and the continuity between the space of performance and that of the audience. The transformations brought about by this theatrical genre were intimately linked to the changing role of convention during the second half of the eighteenth century. Such transformations had architectural repercussions that could be seen first in the physical remodeling of French theatres at that time. Those transformations would eventually expand beyond the walls of the theatre.

In the section from *The Genius of Architecture* devoted to exterior decoration, Le Camus de Mézières expresses his ideas about appropriateness (*convenance*) pertaining to architecture. This notion of appropriateness or fitness was at the heart of discussions on public architecture at the time and was a fundamental consideration in the design of public theatres. Le Camus writes that "the part of Architecture that we call by the name of fitness is defined and may be learned not so much by the study of rules as by a perfect understanding of the manners and customs of the age and country in which one lives."[1] The new emphasis given to conventions during the eighteenth century coincided with the emergence of a theatrical mode of interaction (role-playing) in society that helped shape the architectural space of the theatre.

It was in the remodeling of the traditional auditorium – and the reticence of many architects to amend this tradition – that the influence of convention was most evident. The gradual penetration of the acting space into the auditorium, especially with the extension of the apron, and the introduction of *perspectiva per angolo* (the Italian invention of oblique perspective for stage design that projected the virtual space forward into the auditorium) contributed to a reversal of the roles of actor and spectator in the theatre. In projects such as Ledoux's theatre in Besançon,

which framed both the actors on stage and the spectators in the auditorium, the proscenium arch became a reversible framing device.

Many innovative changes in theatre design, however, did not take place in public institutions which were too often frozen in time by the weight of tradition, or restricted by political maneuvers. Even though acting had become a way of life, from the end of the seventeenth century to the middle of the eighteenth century no new public theatre was built in Paris, except for the small theatres of the fairs and the transformed *jeux de paume* or tennis courts. Only the flourishing of private theatres in France throughout the eighteenth century compensated for the limited number of official public playhouses. The general lethargy in theatre construction for almost a century in Paris was sometimes blamed on financial problems,[2] while the absence of innovation in theatre design was attributed to the institutional rigidity of the privileged theatres.[3] The situation, however, was more complex. Even though political and economic circumstances may have affected the ability of troupes to build new theatres, the ones that were built on the boulevards or in the provinces resisted architectural innovation.

The reason can be attributed to the dominating role of conventions at that time. Social conventions in France remained largely unchallenged by the general public during the first half of the eighteenth century. Social behavior at the theatre similarly resisted major transformation to its code of conduct. Only the gradual emphasis given to the action on stage over the hierarchical distribution of the auditorium transformed the conditions of public interaction at the theatre. Until the mid-eighteenth century in France, the architecture of public theatres followed a tradition that had flourished during the previous century. This physical organization of the theatre conditioned certain behaviors, and, in turn, various customs affected design decisions in the construction of new theatres. The strange tension created by an inherited architectural form and a changing mode of social expression led to the physical transformation of the theatre toward the end of the century, thus confirming the radical changes in the social order.

Rethinking the space of the auditorium

Theatre was traditionally considered not only a mode of entertainment but also an institution of social and political interaction. The internal hierarchy of the auditorium emulated the social order from which it emerged and permitted the participation of every individual in the community. Since its origin in antiquity, theatre had been a surrogate ritual involving the entire community in a cathartic process of purification. Large, open-air structures were built to hold almost the entire population of a city. Alberto Pérez-Gómez eloquently summarizes the philosophical implications of the complex and highly symbolic rituals of Greek and Roman theatre:

> The introduction of the amphitheatre [in Greece] poignantly represents the profound epistemological transformation signaled by the advent of philosophy. This becomes a place for seeing, where a distant contemplation of the epiphany would have the same cathartic effect on the observer as was accomplished previously through active, embodied participation in the ritual. This distance is, of course, akin to the theoretical

distance introduced by the philosophers, which enabled a participation in the wholeness of the universe through rational understanding, as a disclosure of discursive *logos*.[4]

Throughout the early development of such structures, from a modified hillside with a circular acting area partially surrounded by tiers of seats (prior to the fifth century BC) to the oldest surviving stone theatres (mid-fourth century BC), the relationship between actors and spectators underwent some fundamental changes.[5] Since their inception, performances probably had not relied on naturalistic acting, as characters were masked and wore costumes that enabled the audience to recognize particular characters from a great distance.[6] As early as the fifth century BC, the circular acting area became the round dancing floor for a chorus, while the actors moved to a slightly raised platform behind it. In the early theatre there was no scenery, although a few props and some mechanical devices may have been part of the ritual.[7] A stone building at the back (*skene*) was eventually added to provide changing rooms and a backdrop for the action.

With the Roman tradition came a more complex construction: the auditorium was usually set on a complex path of corridors and stairs that helped distribute the circulation, and the *skene* rose from the ground and became multi-leveled. When changing scenery was introduced on the *periaktoi* – "triangular pieces of machinery that revolve" behind the openings of a fixed *scena* (as described by Vitruvius) – this probably indicated a more realistic performance. The images represented on the *periaktoi* corresponded to the type of stage set appropriate to each dramatic genre: tragedy, comedy, and satire. Whether this scenery was represented in some form of perspective, however, was greatly debated during the Renaissance and remains a point of contention among scholars interested in the meaning of the word *scenographia*.[8] What is more important for the current discussion is that this movable stage machinery was an early attempt to give a specific character to the stage, to complement the genre of play being performed.

In the Middle Ages, the Roman drama and its performing tradition had completely died out. In its place, a new form of play based on biblical stories began to be performed in churches. A major breakthrough occurred when vernacular languages replaced Latin and "the plays emerged from the churches into the market squares."[9] Staging traditions became diversified throughout Europe. In some countries these "Mystery plays" continued to be performed in churches, while in England they took place on movable carts called "pageants" that were paraded through the streets. In other European countries, Mystery or Passion plays were performed in an acting area (often in the principal public square) surrounded by scaffolds, thus anticipating the auditorium. Stands for the spectators were built around the square, and scaffolds were set up all around to represent places in the story, such as Heaven at one end and Hell at the other. This multiplicity of sets, presented all at once to the spectators, was characteristic of the medieval drama. The actual performing area was the open space in the centre, and was sometimes raised off the ground, but the distance between actors and spectators remained flexible: actors could descend from their platform and share the space of the spectators.

During the Renaissance, the translation and publication of Vitruvius's *Ten Books of Architecture* had a resounding impact throughout Europe. Vitruvius's emphasis on the theatre marked another important turning point in the history of European theatre. In Italy, the renewed interest in Vitruvius gave rise to a new architectural form based on the classical theatre, as evident in the semicircular auditorium of Palladio's Teatro Olimpico (1580–5) and Scamozzi's theatre in Sabbioneta.[10] Throughout Europe at that time, there was a great variety of theatrical forms, not only based on changing styles, but increasingly dictated by new theoretical concerns about the performing arts. In England, for example, new forms of theatrical performance, such as the Elizabethan theatre, gave rise to equally innovative theatre architecture.[11] Even though they remained open-air theatres, performing places such as the Rose (1587) and the Globe (1599) established a new relationship between the place of performance and the spectators, introducing the first elements of a framed stage.

In the rest of Europe, however, the *teatro da sala* – converted halls surrounded by seats on three sides and scenery at one end – remained the most common form of theatre. The Hôtel de Bourgogne, which housed the Comédie française until the end of the seventeenth century and "saw the whole transition of French drama from medieval to modern," is a good example of this architectural distribution. It was installed in a converted room in the palace of the duke of Burgundy in Paris in 1548.[12] The Théâtre Marais, the second public theatre in Paris, was built in 1621 in a former tennis court. Even though little is known about it, it was certainly a long, narrow space with at least one gallery, as the existing structure gave its shape to the theatre. As in the old medieval theatre structures, the spectacle was not entirely confined to the stage, since the actors tended to spill out into the auditorium, using the stage primarily as a point of entry into the theatre rather than a contained acting area.[13]

From the Renaissance onwards, the architectural structure of the theatre explicitly manifested the changing relationship among the theatre patron, the general audience, and the actors on stage.[14] However, the essential features of the "modern" theatre, including the horseshoe-shaped auditorium, the tiers of galleries or boxes, and the "picture-frame" stage, appeared during the first half of the seventeenth century.[15] The proscenium arch was also introduced in the first half of the seventeenth century. With it came the curtain which enabled set designers to unveil their scenery with "dramatic suddenness." The introduction of this single theatrical element had direct repercussions on the art of performing, as well as on the art of stage set design. The proscenium, with its well-contained acting area, seemed to call for all the seats (as well as the walls that divided boxes) to be oriented toward the stage. Although it may seem logical that the acting area would become the main focus of attention once the action had retreated behind the picture frame, it took almost a century (and even longer in France) for the distribution of the auditorium and the disposition of seating to reflect this change. In his *Trattato sopra la struttura de'teatri e scene* (1676), the first "modern" treatise on the architecture of the theatre, Fabrizio Carini Motta advises placing the partitions between boxes along the axes of the sightlines instead of at a right-angle to the balustrade to provide the best view

of the stage, but such considerations were not always argued in rational terms. In fact, in many theatres the most coveted seating places had a poor view of the stage, but a good view of the auditorium. This arrangement of the auditorium clearly reflected the importance of theatres as places for public display.

The court theatre of Philip IV of Spain, built in the summer palace of *El Buen Retiro* by the Italian Cosimo Lotti in 1632, was the first playhouse where special care was taken to improve visibility of the stage and make it into a guiding principle. It anticipated by many decades the most important features that characterized French and Italian theatres of a later period, as well as Venetian playhouses. The *parquet* was provided with benches parallel to the stage, with a central aisle for easy access. It was surrounded with boxes whose divisions were angled toward the stage to improve sightlines toward a raised proscenium stage, and the box fronts were projected slightly beyond the edge of the gallery, again to improve visibility.[16] Thirty years later, the ellipsoidal-shaped auditoriums of Italian theatres, such as Fontana's Teatro Tor di Nona (1660) and Teodoli's Teatro Argentina in Rome, and Benedetto Alfieri's Teatro Reggio in Turin, also tried to improve the visibility of the stage. They heavily influenced neighboring countries such as France, particularly through study trips by young students of the Académie Française in Rome. However, until the second half of the eighteenth century in France, theatres continued to use converted halls such as *jeux de paume* or tennis courts, which explains the usual rectangular shape of the auditorium, excessively deep for the width of the stage.[17] This disposition, which was dictated by existing structures, became identified so strongly with the French theatre that architects such as Charles-Nicolas Cochin (1715–90) doubted that architects building new theatres would easily give up this configuration:

> One can say that in France we haven't built new structures specially for the purpose of theatre yet; that all the existing ones were built in converted halls, narrow and very deep, and that for this reason their shape is inappropriate and contradictory to their destination [. . .] However, despite our knowledge of the theatres of antiquity or those of modern Italy, we should not conclude that if we had to build new ones, too many architects would be prepared to give up our usual layout, for it is too ingrained in our customs.[18]

As late as the end of the eighteenth century, Ledoux criticized this long-standing tradition. It is a mistake to use the shape of tennis courts to model new theatres, he writes, because their function is very different. Not only is the shape inappropriate to provide a good view of the stage, but the partitioned areas promote corruption.[19]

The theatre of the Comédie française, built by François d'Orbay in 1689, indeed reproduced the elongated U-shaped auditorium of earlier converted structures. Benches were placed at the back of the *parterre*, and on the stage for spectators who wished to make a spectacle of themselves (*se donner en spectacle*), while a large part of the auditorium was for a standing audience.[20] Unlike the Italian theatres, the Comédie française did not have a royal box at the back of the auditorium, marking the ideal vantage point for perspective illusion. While Baroque stage sets in most European countries were designed to provide the sovereign with an ideal view of the

PLAN DU PREMIER ETAGE
de la salle de Spectacle
de la Comédie Françoise.
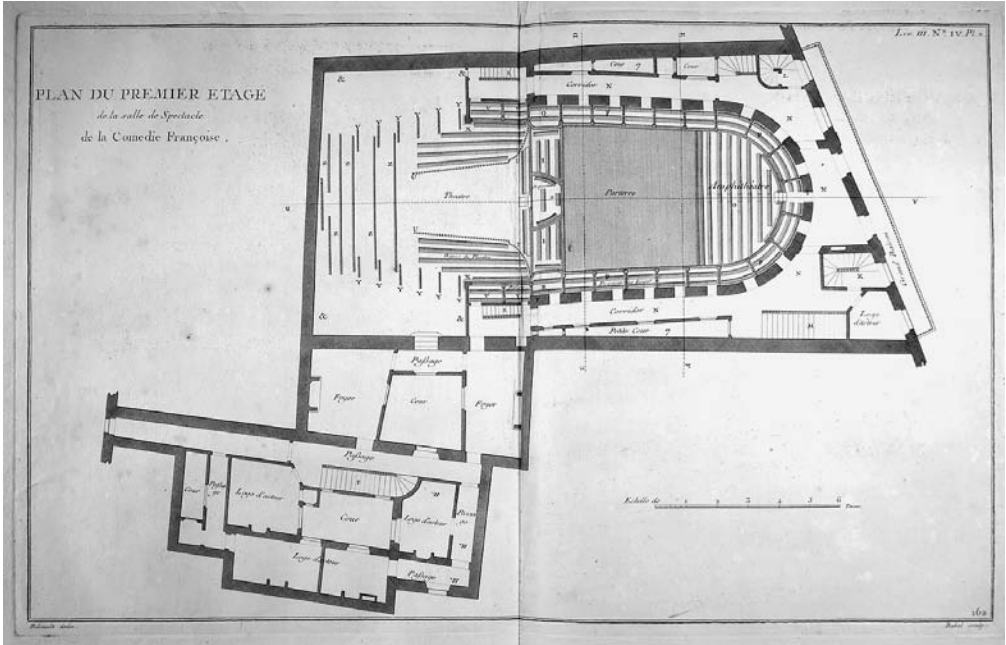
scenery on stage, the French fashion called for seating important spectators directly on stage, as if to display them along with the dramatic action. Instead, private boxes for royalty were provided on either side of the stage, facing the apron.[21] The well-established ritual of going to the theatre followed the prevailing social hierarchy. The seating arrangement on stage and in the auditorium was irrational in terms of visibility and acoustics but was clearly believed to reflect the social order, and no architect dared challenge it before Claude-Nicolas Ledoux in Besançon and Charles De Wailly and Marie-Joseph Peyre in Paris during the last decades of the eighteenth century.

5.1
Plan of the Comédie française with benches on the stage
Source: J.-F. Blondel, *Architecture française*, 1752

The beginning of a new tradition and the relocation of the spectator

U-shaped auditoriums inspired by previous converted structures continued to be built in France until the second half of the eighteenth century. In fact, the first French public theatre to apply the lessons from the Italian theatres was that of Jacques-Germain Soufflot (1713–80), built in Lyon between 1753 and 1756. In Paris, the fire at the Opera in 1781 and the decrepit state of both the Comédie française and the Comédie italienne finally prompted three new public theatres to be built between 1779 and 1783, offering architects an opportunity to develop new architectural forms.

From the mid-eighteenth century to the eve of the French Revolution, theatre architecture experienced some major transformations in its character, as well as technical developments in stage machinery, advancements in lighting for the stage and auditorium, and improvements in acoustics. Considerations of sightlines and speculations on the acoustic qualities of spaces suddenly became an issue, and

theatres were no longer fitted into existing buildings. These major transformations coincided with a renewed interest in the architecture of antiquity. Until then, philosophers, playwrights, and even notorious architects such as Jacques-François Blondel had loudly criticized the absence of a coherent theory for theatre architecture. Blondel sarcastically wrote in his *Architecture française* (1752), that "it is not thanks to buildings of this kind [theatres] that French architecture has won its renown."[22] Voltaire himself echoed this concern in an even more caustic manner: "The good plays are in France, the good playhouses are abroad."[23]

The important changes that occurred in French theatre architecture around mid-century coincided with Madame de Pompadour's appearance on the French political scene as she became the official mistress to Louis XV. She was known as the patroness of the arts, and Louis XV's interest in architecture has been attributed to her own insistence. The successive appointments of her uncle Le Normant de Tournehem, and her brother M. de Vandière (1727–81) (who became marquis de Marigny), as director-general to the Service des Bâtiments du Roi further secured her influence. In 1749, after being promised the post at the Services des Bâtiments, and guided by his sister, Marigny embarked on a preparatory study tour of Italy. Jacques-Germain Soufflot (1713–80), a promising young architect and favorite of Madame de Pompadour, was chosen by the Académie Royale d'Architecture to accompany Marigny on this memorable trip to study the great monuments of antiquity. L'abbé Leblanc (Madame de Pompadour's adviser on purchases of works of art) and C.-N. Cochin (the draughtsman and engraver, employee of the Menus-Plaisirs) were also part of the delegation.[24] Although they went to Italy to study classical architecture, their interest in the theatre led them to visit many contemporary buildings. Their expedition took them first to Turin, where the marquis became acquainted with Comte Alfieri, the designer of the Turin Opera.[25] They then went to Milan, Parma, Reggio, Modena, and Vicenza, where they visited Palladio's Teatro Olimpico. Soufflot also went further south to study the architecture of Naples, Herculaneum, and especially Paestum.[26] He was profoundly impressed by the theatre at Herculaneum, whose semicircular shape seemed to mimic the "natural" grouping of an audience on a hillside.[27]

Soufflot's observations during this trip were immediately put into practice in his theatre for Lyon. The shape of the auditorium was a truncated ellipse, like the Turin Opera. While the ground floor had a traditional standing *parterre*, the vertical section of the auditorium was innovative. Instead of an Italian stack of pigeon-hole boxes, it featured three continuous levels of balconies, stepping back in a way that resembled the theatres of antiquity. Every seat was endowed with good visibility, and the new spatial organization also followed social conventions in France. In the Italian tradition, the boxes were closed on all sides, and even the front could be closed for more privacy. In French theatres, however, it was essential to be seen, so the emerging tradition favored a more open distribution of the auditorium. Soufflot's theatre in Lyon was also the first freestanding theatre to be built in France, anticipating the monumentality of the playhouse as a civic centre.[28]

Cochin also applied his findings to a project for a theatre that was published in 1765. In *Projet d'une salle de spectacle pour un théâtre de comédie*, Cochin
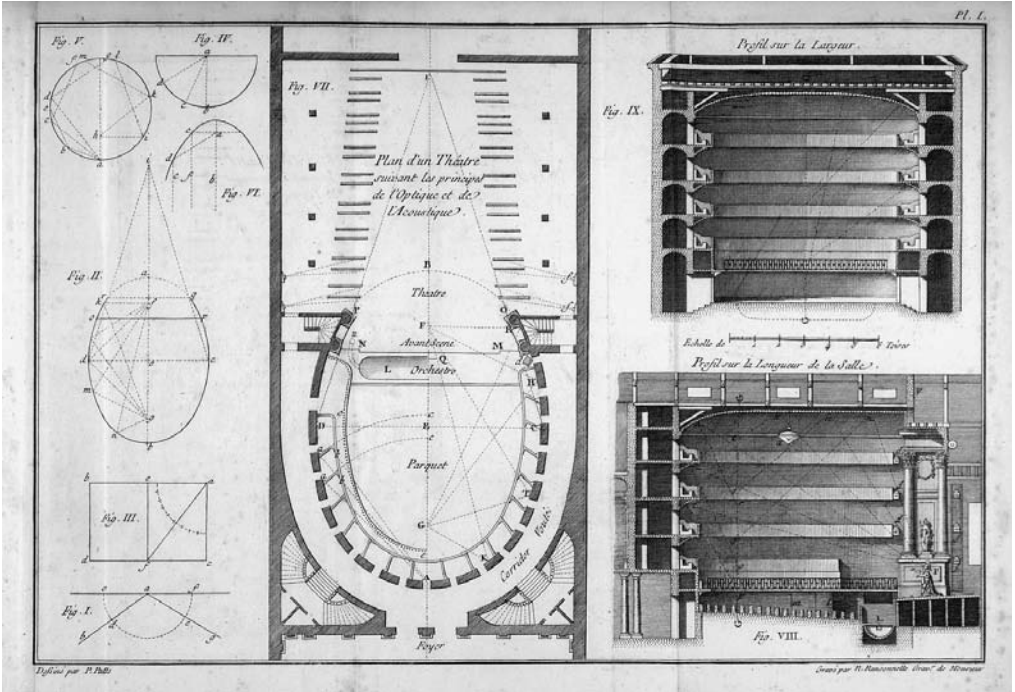
acknowledged Palladio's Teatro Olimpico as his primary inspiration, but although he believed that the Italian model offered great alternatives in the design of a theatre, he was aware that any innovation had to be adapted to French customs and the laws of propriety.[29] He was nonetheless very critical of existing theatres in France. Their principal problem, he argued, concerned their proportions: "Our theatres are too deep; so much so that the boxes in the rear which are the most favorable to see the performance and to enjoy the stage sets and decorations, are too far away to be able to see and hear clearly."[30]

The general configuration of the auditorium remained a hotly debated topic in theatre design and became the subject of many treatises during the second half of the century. In his *Essai sur l'architecture théâtrale* (1782), Pierre Patte (1723–1814) considers various shapes for the auditorium, but, like Cochin, he gives great importance to the rules of propriety. After praising the technical advantages of the theatres of antiquity, and clearly stating that the seating in classical amphitheatres was superior in terms of sightlines and acoustics,[31] Patte concludes that the hierarchy established by the boxes in French theatres had become so customary and socially important that he deemed the ancient examples inappropriate to French society:

> This placing of spectators on the tiers of an amphitheatre would truly form a more imposing whole to the eye than our usual boxes, and the bare surfaces provided close to the front-stage and toward the top of the theatre could effectively enhance the reflection of sound; but as we saw earlier in relation to the theatre of antiquity, would it be possible for our usage and customs to conform with such a layout? How could we prefer to the convenience that the boxes provide, some isolated seats where everyone gets muddled up, and where women go unnoticed?[32]

The idea of a uniform public, in which the identity of every spectator would be merged into a general mass, clearly remained unacceptable at this time, only a few years before the French Revolution. Patte even warns against alternate dispositions for the auditorium. He considers English theatres defective because they tend to have galleries that fan out toward the back of the auditorium, rather than circles of boxes.[33] Most spectators face the stage, he writes, "but nothing is less pleasing and conforms less to good taste than this arrangement." It divides the house into three separate parts, and prevents any contact among members of the audience. Each person sees only those at his own level.[34] Even though Patte invokes the principles of optics in the title of his treatise, and begins by saying that the shape of a theatre must fulfill the double objective of seeing and hearing the action on stage, his seemingly scientific intentions are soon cast aside when they are contradicted by social conventions.

While Patte sought to preserve the interaction among spectators, he did not aim to create greater contact between the audience and the actors. Patte criticizes the use of pronounced forestages (*avant-scène*) – an English invention that was used also in many theatres in Italian cities such as Naples, Milan, and Rome. Cochin had proposed it in his own treatise, and André Jacob Roubo later defended it in *Traité de*

la construction des théâtres (1777). In France, this protruding apron was introduced largely because of the presence of spectators on stage. Since stages were badly lit and overly populated with a well-paying public, the actors had been forced to perform within a very restricted area at the front of the stage. To improve the situation, the front-stage was extended well into the auditorium, even halfway into that space. In his *Essay on the Opera* (1767), Francesco Algarotti criticizes this kind of stage:

> By that expedient the actors were brought forward into the middle of the audience [. . .] The actor, instead of being so brought forward, ought to be thrown back at a certain distance from the spectator's eye and stand within the scenery of the stage in order to make a part of that pleasing illusion for which all dramatic exhibitions are calculated.[35]

Echoing Algarotti's concern, Patte emphasized that a clear separation should be maintained between the realm of the actors and the realm of the spectators. He criticized forestages that advance too far into the auditorium because the actors are removed from the scenery, thus destroying the theatrical illusion.[36] Without such a protruding stage, however, the voices of actors may be lost in the wings. As a compromise, Patte suggested that the apron be a "mixed area" between the auditorium and the stage, thus becoming a permeable boundary.[37] Patte's notion of a transitional space between actors and spectators in fact reflected the design of the new Comédie française being built by De Wailly and Peyre in 1782, and anticipated Ledoux's redefined proscenium in his theatre at Besançon.

Throughout the eighteenth century in France, developments in the acting space, including its fluctuating boundary with the space of the spectators, were never resolved into a single, universally accepted solution. The dimensions of the proscenium arch, the apron, and the stage proper were subject to enormous changes, based on technical and acting considerations, as in the successive proposals for the design of the new Comédie française. In the first project, prior to 1769, for example, the thickness of the proscenium arch was almost 5 meters deep, but in the project approved by Louis XV in late 1769 the depth had been reduced to only 1.5 meters. Eight years later, De Wailly and Peyre returned to their original idea with a proscenium arch that was 5.5 meters deep. On either side, two small boxes were inserted into it, thus returning to the old tradition of playing among the spectators.[38] In an undated *Mémoire*, the architects cite acoustic reasons for an extended apron framed by a thick proscenium arch.[39] To help solve acoustic problems, the orchestra was located between the stage and the spectators. Two years after the official opening of the Comédie française, Ledoux sank the entire orchestra (an early example of an orchestra pit) to control the acoustic effects more carefully and to reduce the visual obtrusion of musicians in front of the stage. This single change had a tremendous impact on both the action on stage and the audience by further emphasizing the unidirectional intention of the performance.[40]

Acoustic problems, however, were attributed mainly to the shape of the auditorium, and many authors had strong opinions on the subject. Patte favored the ellipse, with its long axis perpendicular to the stage, for this shape was the most natural configuration. To prove his claim, Patte introduced notions of sound reflection and wave theory. In nature, he says, everything seems to move, to turn, or to gravitate in circles, in ellipses, or according to certain curves around a centre: "It is said that God used geometry while creating the Universe: consequently, sound must also follow one of its rules."[41] Soufflot also used the ellipse for his theatre in Lyon, but, unlike Patte, he truncated it near one of its focal points rather than through its midpoint, thus preventing awkward reverberations.[42] Unlike Patte and Soufflot, Cochin based the plan of his theatre on an oval shape cut along its main axis, with its short axis perpendicular to the stage to bring the audience closer. This required the aperture of the proscenium to be widened. An extended apron also brought the actors forward into the auditorium. According to Cochin, this would bring the spectators closer to the stage, with a more advantageous angle to witness the action. Although Cochin advocated a respect for conventions, his ideal theatre attempted to move the focus of attention from the auditorium, where spectators traditionally faced each other and acted for their peers, to the stage where the action was taking place. Cochin's rational distribution for the auditorium gave priority to sightlines and acoustics and initiated an important transition toward a new architectural hierarchy.

De Wailly and Peyre implemented the most radical changes in theatre design in their second proposal for the Comédie française, submitted in 1770. This is where a *parterre* with seating first appeared. Previously, the middle class, students, and intellectuals in France had stood in the *parterre* throughout an entire performance. A crowd of standing spectators encouraged commotion in the theatre, and, as with La Morlière's *claque*, it was a fertile ground for all sorts of disturbances. The
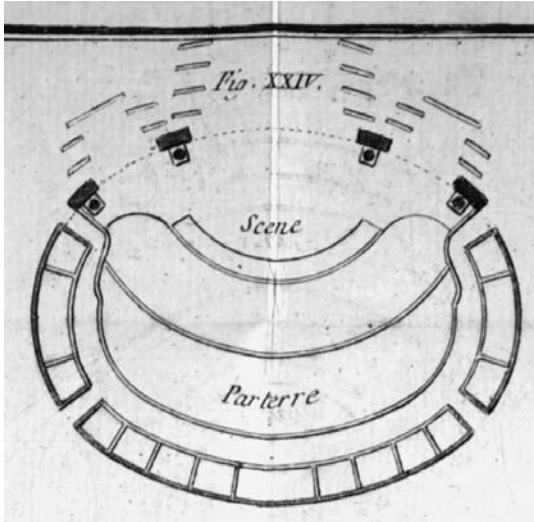
"uncivilized" custom of standing in a section of the *parterre* was still common in the official theatres in France during the 1780s but was criticized by various authors, including Pierre Patte:

> It is obvious that the cabal and the agitators that easily hide in the commotion of a standing crowd would be exposed in a gathering of seated people. There, every person is visible to everyone else and fears to bring dishonor upon his character and judgment. Then the parterre would cease to be a battlefield where opposing factions gather in clusters.[43]

This radical idea to seat the entire audience was carried through to the final project for the Comédie française and was acclaimed by many of their contemporaries. This design decision, however, had direct repercussions on the attitudes of spectators and their customary interaction during performances. Many critics of the time, including Diderot, Sébastien Mercier, and Marmontel, commented on the audience's change in behavior. Although the middle class could now enjoy greater comfort, this brought "deadness" into the theatre. According to contemporary critics, it contributed to the taming – and ultimately the silencing – of the audience. In a letter to Madame Riccoboni, Diderot complains about the cold silence that already paralyzed the spectators, and mourns the tumultuous involvement of the spectators that had characterized the theatres during the first half of the eighteenth century. Even though the play sometimes could hardly start because of the uproar, Diderot writes that this was the most favorable disposition for a poet, because when a passage of the play pleased the crowd, the excitement reached its apex, and the spectators would ask for it to be repeated again and again; it was the true ecstasy of pleasure, Diderot concludes.[44] Seating the spectators in the *parterre* cooled down their acting inclinations, and they began to present themselves more as façades, displaying their social status, wealth, and taste in the way they dressed.

In the new Comédie française the vertical distribution of boxes inherited from the Italian tradition was replaced by a receding and more open series of balconies with low partitions.[45] It was highly praised for allowing spectators to be seen as well as to see the action on stage.[46] The social hierarchy in the theatre was based no longer on one's proximity to the royal presence but on one's view of the stage and vertical position within the auditorium. Individuals from the same social class gathered in predetermined sections of the theatre, and physical dividers reinforced the social order.

A few years after De Wailly and Peyre introduced these hierarchical divisions, Ledoux made a similar spatial segregation in his theatre at Besançon, but his reorganization went even further: the *parterre*, traditionally for people of the middle class, was replaced by a *parquet* reserved for important guests, so they could be seen from everywhere. The public of the *parterre* were sent to the *paradis*, a seating gallery above the third tier of boxes, at the very top of the theatre.[47] To maintain the social order, particular prices were assigned to every category of seats. Ledoux promoted his idea of dividing the auditorium in such a way by arguing that the richer class (those coming by carriage) would no longer be disturbed by the smell of the poorer class, the pedestrians.[48] Unlike traditional theatres, where a basic distinction between order (in the boxes) and disorder (in the *parterre*) embodied the social distinction between nobility and vulgarity, the Comédie française by De Wailly and Peyre and Ledoux's theatre in Besançon placed every spectator in a well-defined social order. Although the king no longer provided a focal point for the architectural composition, spectators could find their place in the social hierarchy and feel they were participating in an order that transcended them.

The new seating arrangements and general distribution of the Comédie française and the theatre in Besançon challenged established social conventions at the theatre. In devising these formal changes – giving greater exposure to spectators by eliminating the boxes, replacing the standing *parterre* by a *parquet* with seating, and emphasizing sightlines – the architects had influenced the social behavior of the spectators. These architectural transformations of the internal space of the theatre did not only affect the interaction of the spectators within the auditorium, however; they established a new relationship between the auditorium and the stage. The proscenium arch that previously was considered as a transitional space between the two realms became a more definite threshold that could no longer be transgressed at the expense of theatrical illusion. Spectators were no longer admitted onto the stage – although the proscenium arch itself could still contain royal boxes – and the actors' position was carefully controlled. An actor could no longer move across the implied line between the proscenium arch and the front-stage without symbolically changing space, nor could he come too close to the sets without interfering with the perception of scale and thus challenging the perceptual coherence of the whole stage set. The quest for a greater illusion on stage during the second half of the eighteenth century was accompanied by a greater segregation of the space of performance from that of the audience.

This separation became obvious when optical devices introduced by Soufflot and Cochin into their architectural projects challenged the traditional position

of the spectator. In his *Projet d'une salle de spectacle*, Cochin considers how to increase the number of spectators in his theatre. He suggests locating additional places behind the first boxes by cutting openings (*lunettes*) into the back of the first boxes so that people standing in the corridors could watch opening-night performances and special productions. These openings would satisfy those who wished to see new productions on opening night only to be the first to pass judgment, and who found it unnecessary to examine the play more seriously before deciding whether it was a success or failure. These places may be uncomfortable, he concedes, but for new plays "one would be happy to have a place whatever it is."[49] Soufflot used such devices successfully in his theatre in Lyon.

This device, however, not only exploited the physical capacity of the theatre to increase attendance. It also introduced a new category of spectators, akin to viewers of the *drame bourgeois*: present yet invisible, watching yet detached from the action on stage. These concealed openings at the back of the auditorium were also closely related to Le Camus de Mézières's system of hidden corridors and peeping holes that enabled the master of an *hôtel particulier* to observe the movements of visitors without being seen. Chevalier de Chaumont, in his treatise on the design of a theatre for the Opera, argued that these *lunettes* in the theatre legitimized the presence of social intruders. Chaumont regarded them as indecent devices for eavesdropping and spying on "distinguished people."[50] However, the eighteenth-century spectator never ceased to be an active participant in the theatre and such devices were never widely used.

Even though actors and spectators in these newly developed theatres were becoming more segregated, the spectators remained social actors in transitional spaces such as vestibules and grand staircases. The design of these transitional spaces added to the spectacle, and clearly extended theatricality into the public realm of the city. As in La Morlière's novel, the arrival and departure of theatrical spectators were significant ceremonies. These social rituals affected the architectural design of theatres. Foyers and salons were expanded, and triumphal staircases replaced narrow stairways to the tiers. The design by De Wailly and Peyre for the Comédie française, for example, treated these architectural elements as places for social performance. The vestibule, stairs, and foyer provided an impressive spatial sequence for displaying spectators, and mirrored the composition of the performing stage itself, thus preparing the audience to enter the virtual world of theatrical representation.

> From a colonnaded ground-floor space with a central opening to the roof, wide stairs diverged to either end of the first floor, where promenades lined with columns led back to the central opening. There a great octagon of coupled columns supported a continuous gallery, an arcade and a painted dome.[51]

Victor Louis's Grand Théâtre in Bordeaux, begun in 1773 and completed in 1780, also embodied the desire of the members of the public to make a spectacle of themselves. Although it was not completely innovative, it did incorporate many new ideas. The basic plan of the house was a circle with one quarter truncated at the line of the orchestra pit. Even though the theatre's standing *parterre* was conventional, the
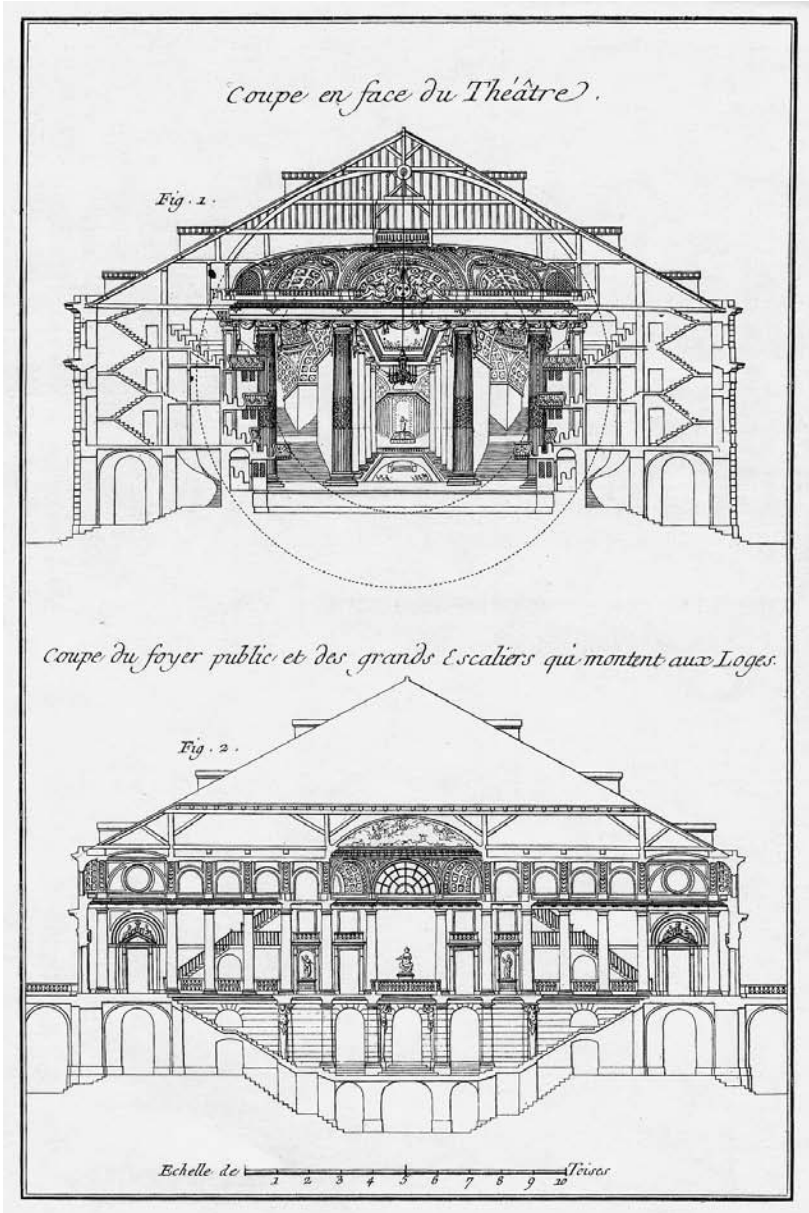
series of transitional spaces in the theatre, including many salons and foyers, had become much larger than the auditorium itself. The monumental staircase had a rusticated ground floor, a detail normally found on the exterior. This suggests an attempt to emulate urban space within the space of the theatre. By providing spectators with an ideal setting where they could see and be seen, the grand staircase served as a stage where the public could perform.

5.5
Plan of the Grand Théâtre in Bordeaux
Source: V. Louis, *Salle de spectacle de Bordeaux*, 1782

PLAN AU NIVEAU DES Pᴿᴱˢ LOGES.   PL. V.
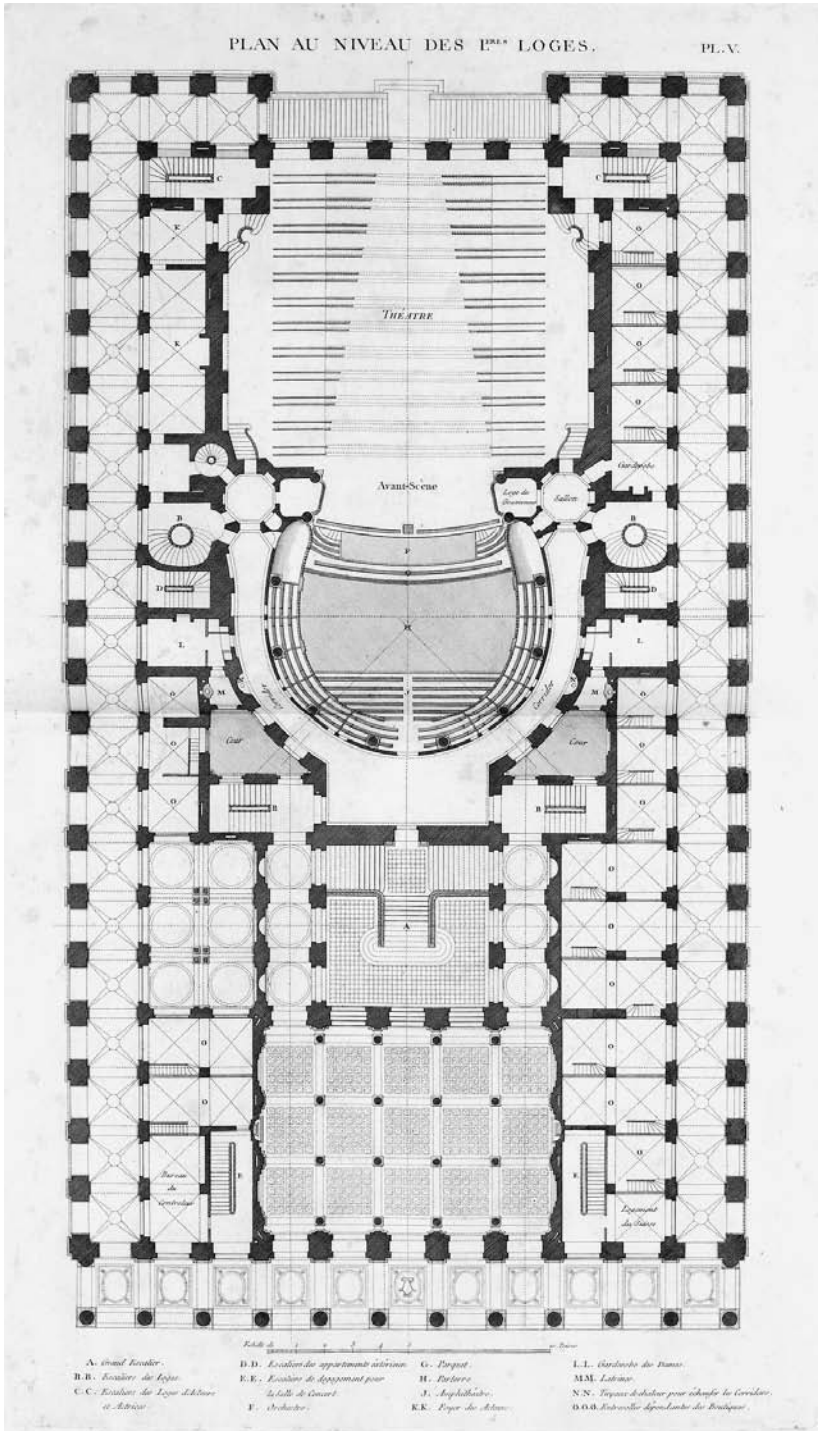
This majestic staircase was equaled only in the nineteenth-century Paris Opera by Charles Garnier, who indeed acknowledges Louis's influence in his own treatise, *Le théâtre* (1871). As in Louis's theatre in Bordeaux, the public areas in Garnier's theatre explicitly extend the theatricality of the event, especially in the hall and the grand stairs. For Garnier, "all that happens in the world [was] in sum only theatre and representation." To be an actor or a spectator had truly become "the condition of human life."[52] However, the spectators who attended the new Garnier theatre at the end of the nineteenth century experienced theatrical events in a space that was qualitatively different from the theatrical space of the *Ancien Régime*. The complete darkening of the auditorium, following Richard Wagner's fundamental innovation at Bayreuth, created a new kind of boundary between actors and spectators.

Wagner's theatre, with its triple proscenium arch encompassing the "mystic gulf" occupied by the orchestra, contributed to further define the physical boundary between actors and spectators. Gottfried Semper, the architect who developed with Wagner the architectural concept for the new theatre, defined the *mystische Abgrund* as an abyss separating the ideal from the real: "It makes the spectator imagine the stage is quite far away, though he sees it in all the clearness of its actual proximity; and this in turn gives rise to the illusion that the persons appearing on it are of larger, superhuman stature."[53] This multiple framing of the stage was repeated within the space of the auditorium, using a series of lateral walls projecting inwards that served as concealed entrances into the auditorium. The space between these successive frames became wider as they receded from the stage. Architecturally, these successive "walls" or frames imply that the spectators occupy the extended threshold, as if hidden within the theatrical fourth wall: the spectator becomes a true "voyeur." By visually isolating its spectators, the nineteenth-century theatre clearly anticipated the private, individual, and unidirectional vantage point of mainstream contemporary theatres.[54]

Until the end of the eighteenth century, however, the spectator oscillated between two different roles: an observing witness and a true social actor. Although the space of the stage may have seemed irremediably dissociated from that of the auditorium in the last decades of the eighteenth century, the architecture of theatres still suggested that these two realms could be unified or inverted. Like Gabriel's Opera at Versailles, the more recent theatres by Ledoux, Victor Louis, and De Wailly and Peyre all used a colonnade around their auditorium that extended through the proscenium into the scenic space beyond, thus continuing the order of the house and suggesting a physical link between the two realms. Moreau used a similar device in his opera house, built in Paris in 1769. The curve of the auditorium ended well within the proscenium, thus promoting an illusion of depth and continuity between stage and auditorium.[55]

This colonnade inside the auditorium appears in Ledoux's engraving "Coup d'oeil du théâtre de Besançon." Paradoxically, it seems to assimilate the space of the audience and the space of performance. The engraving represents the auditorium as it is reflected in the iris and pupil of a gigantic eye. This unusual representation has been interpreted as a manifestation of the hegemony of vision at

Vue perspective de l'interieur de la Salle qui fait voir la partie du Théâtre

the theatre, the eye being the "first frame" through which the world is seen, and the preferred sense being addressed by the performance. Ledoux writes: "In my theatre [. . .] everything is related to the eye, we see everywhere and we are seen from everywhere."[56] Anthony Vidler has pointed out that the complex geometry of the flattened arch of the proscenium in Besançon was derived from the shape of the eyelid sectioning the pupil in the engraving: the *frame* of vision in the engraving "follows a contour exactly that of the proscenium."[57] The contour of the proscenium arch also follows very closely that of the eyebrow in the engraving of the eye, which, if one overlaps the two images, places the lachrymal gland at the inner corner of the eye (the representational center of emotions) in the position of the royal box within the arch, the seat of power in Ledoux's theatre. Moreover, what the eye sees is not the stage but the auditorium, suggesting an implicit reversibility of the roles of spectator and actor. This suggests another interpretation of the *coup d'oeil*: the auditorium, rather than being reflected in the eye of a spectator, is seen from the virtual world, that of the actor.[58] Until the end of the eighteenth century, the word *théâtre* referred to the stage, while the entire building was called *salle de spectacle*. Consequently, *coup d'oeil du théâtre* can be translated as "a glance *at* the stage," or "a glance *from* the stage." The reversibility of the French expression places the audience simultaneously in two positions: observing the place of performance (in "a glance *at* the stage") and being observed by the actors (in "a glance *from* the stage"). Associating the auditorium with the place of performance – *le théâtre* – equates the "real life" of the spectators with the world of illusion and play-acting. This interpretation is further confirmed by Ledoux's insistence that the

spectators – especially women – animate and decorate the auditorium. Ledoux goes as far as to recommend that men not sit in the front rows so that the natural beauty of women may be displayed.[59] In Ledoux's engraving, the "real life" of the auditorium and the theatrical world of the stage are collapsed onto the reflective surface of the eye.

Ledoux also plays on the parallel between the real and illusive theatrical worlds in other instances. Justifying the need for the stage to be of ample dimensions, Ledoux compares it to the space outside, ultimately the space of the city: "The auditorium being to the stage what the inhabited room is to the empty space that one discovers outside, the theatre [i.e. the stage, including the wings and service
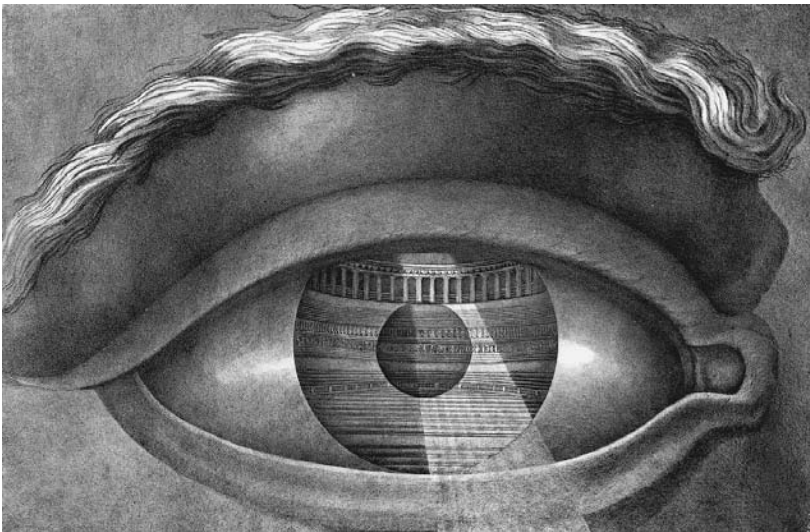
5.7
"A glance at the Besançon theatre"
Source:
C.-N. Ledoux,
L'Architecture considérée sous le rapport de l'art, des moeurs et de la législation, 1804

COUPE DU THÉÂTRE DE BESANÇON PRISE SUR LA LARGEUR.

5.8
View of the stage of the theatre in Besançon framed by the proscenium arch
Source:
C.-N. Ledoux,
L'Architecture considérée sous le rapport de l'art, des moeurs et de la legislation, 1804

areas] must be larger, more vast than the space that contains the spectators. It is the true place for the magical illusions of the stage."[60]

Associations between theatre and architecture were common in the second half of the eighteenth century. Le Camus de Mézières, in his architectural treatise, draws important lessons from this tradition and compares the expressive dimension of architecture to the art of creating emotions at the theatre through changes in scenery. Using Servandoni's innovative optic games as a point of comparison, Le Camus draws an analogy between the production of true emotion in architecture and the use of theatre decorations that imitate works of architecture to evoke specific emotions.[61] Like Ledoux, Le Camus believed it was important to involve the beholder in order to complete the architectural work. While the visibility of spectators in Ledoux's theatre continued to emphasize their role as social actors, however, in *The Genius of Architecture* Le Camus emphasized the complex role of the spectator, oscillating between social actor and peeping "voyeur."

The theatricality of the marketplace

Le Camus de Mézières devoted an entire publication to the design of theatres. The primary concern of his *Mémoire sur la manière de rendre incombustible toute salle de spectacle*, however, was technical, dealing exclusively with problems of fire propagation in theatre buildings and how architects can prevent deadly tragedies. Although in his theoretical writings he does not address the shape of the auditorium and the architectural expression of his incombustible theatre, as an architect Le Camus produced one of the most intensely theatrical structures in Paris at that time: the *Halle au blé* or granary. With its perfectly circular shape inscribed in a dense urban context, this structure also redefined the architectural program in an imaginative manner, fulfilling both the requirements of a new public institution devoted to the exchange of grain and the representational role of a place for public gathering.

The numerous links between the granary and theatre can be traced all the way back to the very site of the building. The land on which Le Camus's granary was to be erected had been seriously considered for the erection of a new opera house, and many projects of that nature were developed, even after the city had bought the land with the declared intention to build the granary.[62] It is likely that Le Camus was aware of this dual destination for the site. While his project responded to the city's need for a granary, it could also be transformed easily into a performance hall, and Le Camus thus provided his building with a second (implicit) public role, acknowledging the theatrical mode of social interaction during the second half of the eighteenth century.

Le Camus de Mézières's commission for the new granary resulted from a competition.[63] It was to be erected on the former site of the hôtel de Soisson, on land that the city of Paris had acquired from the creditors of the Prince de Carignan in 1755. This transaction was made possible by the king's commitment to finance the construction of a new granary, but due to political interference and financial hardship caused by the Seven Years War, the project was delayed until the beginning of the next decade.[64] Although the city had acquired this coveted piece of land, it remained reluctant to endorse the project of a new granary in Paris, claiming that the

existing marketplace, the *halle de la Grève*, was more than sufficient.[65] This constituted the main obstacle to the development of the new granary, but a few years later the city finally recognized that Le Camus's project was a necessity for the public good and the appropriate functioning of the city. Le Camus was given responsibility not only for the design and construction of the granary, but also for the division of the urban fabric around it. A housing development around the new building was supposed to finance the construction of the granary, and this was a major selling point to convince the city. Le Camus started working on this project as early as 1761, and the first stone was laid on April 13, 1763. The official opening took place on January 12, 1767, but the construction of the surrounding buildings prevented access to the new market, and even though the new streets were traced and parcels of land were sold in 1765, the surrounding buildings were not completed until January 1769, delaying the actual opening of the new building.[66]
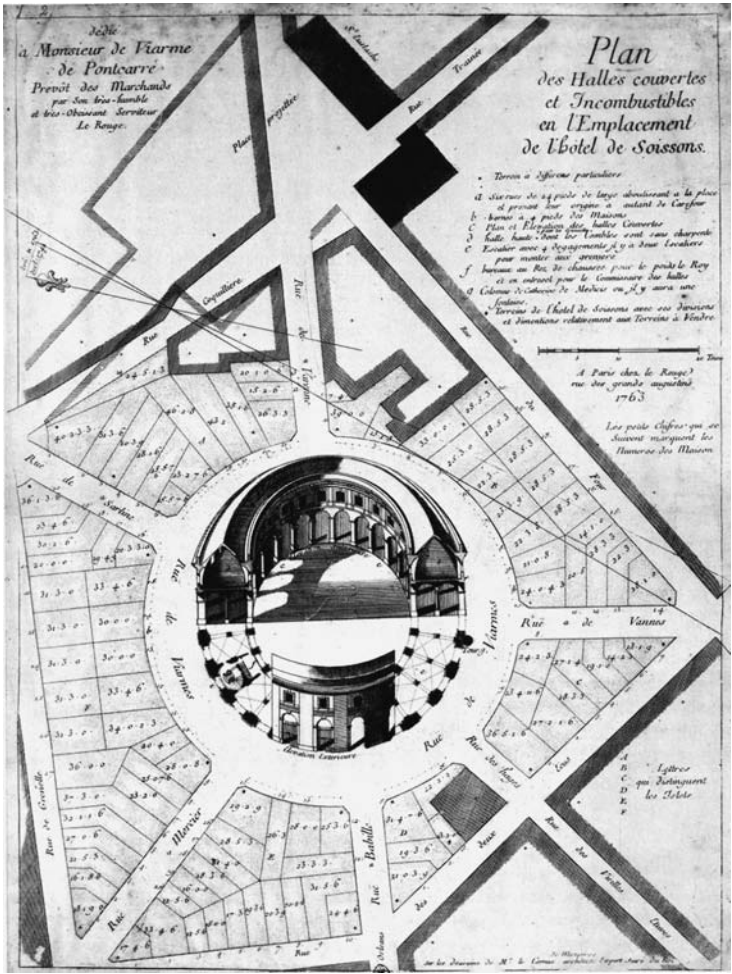
5.9
**Composite
drawing of
the granary in
Paris with its
surroundings;
engraving by G.-L.
Le Rouge (1763)**

The residential development around the new granary was harshly criticized by Le Camus's contemporaries for the meanness of its parcel division and the monotony of its façades. The blame was placed on the private interests of the developers and their greater concern for financial gain than public good.[67] However, the contrast between the new public institution and its surroundings was not based entirely on financial concerns. It reflected an architectural intention: the expression of monumentality. The granary, containing its treasures of subsistence, appeared as a gem in a casket, surrounded by a fortress of massive buildings around it. The plan and exterior composition of the granary reflected Le Camus's preoccupation with conveying the destination of the building. The symmetry, the harmony of proportions, the relationship of masses and parts to the whole, the calculated use of moldings, and the refined contrast between light and shade in protruding and receding parts expressed the grandeur of the monument.[68]

The "typological" antecedents of the granary are usually traced back to the eighteenth-century market, which was typically an open-air public place. The new granary in Paris combined both the traditional exterior area for the exchange of grain (*le carreau*) with a covered area for storage. The ground floor was divided into two concentric arcades which provided cover for receiving and transporting merchandise, while the single vault of the second floor was used for storing grain. The open courtyard was used for "the daily sale of oats, barley, peas, beans, lentils, etc."[69] The two-story building was applauded by Le Camus's contemporaries for the fire-resistance of its brick construction and for the mastery of its stonecutting, particularly in the complexity of its two staircases, but it was the circular shape of this annular

5.10
**View of the
granary in Paris;
drawing by
C. Civeton**

building that was most striking. As a novel form for a civic building in the urban context of eighteenth-century France, it would have great repercussions in the architecture of the last decades of the *Ancien Régime*, and it directly influenced the generation of "revolutionary architects." Its circular plan was used a few years later in various civic buildings, including a hospital project by Peyre, Ledoux's gates, many theoretical projects by Boullée, and various market projects including De Wailly's and Loret's.[70] Even during its construction, famous theoreticians such as Marc-Antoine Laugier and J.-F. Blondel praised this "patriotic monument" for its innovative shape and the harmony of its composition.[71] In his *Observations sur l'architecture* (1765), Laugier applauds the project, and in his chapter on the shape of buildings, he qualifies it as the most innovative building in Paris at the time. He pays tribute to Le Camus's granary for the novelty of its shape in an urban context, and the appropriateness of its expression.[72]

Another important architectural innovation of the new granary was its multiple undifferentiated access: of its twenty-five arches, six were aligned to the new streets and provided access for carriages. No architectural element marked the importance of one access over the others, so there was no monumental entry. Interestingly, this absence of a distinctive sign to mark the access in a circular building became a model for theatre architecture in Chaumont's treatise on theatre buildings published in 1769, the same year as the actual opening of the granary.[73]

Soon after its completion, however, the new granary proved to be too small to accommodate the growing commercial activity, and as early as 1769, Le Camus de Mézières published a project for covering the central courtyard. Within the existing open ring, this project proposed to inscribe a second structure that would support a hemispherical masonry dome on twelve columns. Although this solution showed that the existing structure could not support a significant additional load (the main defect of the new building was attributed to faulty craftsmanship and poor building materials), it was nonetheless consistent with Le Camus's aim to preserve the integrity of the internal spherical space.

The need for a dome on the new granary inspired many competitions during the following decades, and many architects proposed ingenious solutions to the complex problem of covering this circular open space, 36 meters in diameter.[74] The project by J.G. Legrand and J. Molinos was selected for the lightness of its carpentry structure and the originality of its vaulting method, based on the writings of the sixteenth-century architect, Philibert de l'Orme. The project submitted by the two architects was not inspired by a desire to revive Renaissance building methods, but rather by a specific event that took place in the granary on January 21, 1782. To celebrate the birth of the Dauphin, a ball was held in the courtyard. Because of its shape and large internal space, Le Camus's monument was considered most appropriate for such celebrations. For the occasion, the building was temporarily covered with canvas or velum to protect the central space while letting light enter along its perimeter.[75] The day after the celebrations, "Molinos chanced to observe the temporary arrangement, and claimed to have been inspired immediately by its shape to conceive of a similar, but permanent, vault."[76] Legrand and Molinos decided to install a new balcony above the cornice of the new interior space. The balcony,

reached by a staircase in the Medici Column, provided an additional 900 to 1200 places during public celebrations.[77] The construction of the new permanent dome and balcony began in September 1782 and was completed a year later.[78]

This double function of the granary, as the heart of commercial life in Paris and the centre of public celebrations, was not merely a coincidence but was implied in the basic shape of the building. The parallel between Le Camus de Mézières's granary and theatres of antiquity was commonly acknowledged in the eighteenth century, as it was frequently associated with the Roman Coliseum. Blondel had described the new granary as a "circus" because of their formal resemblance. Interestingly, the building was easily converted, and was turned into an improvised Vauxhall (a new form of public entertainment hall imported from England after the end of the Seven Years War) on various occasions during the political upheaval that shook France at the turn of the century. Public events were held in the granary as early as 1770, when the celebrations honoring the marriage of the Dauphin (the future Louis XVI) and Marie-Antoinette that were supposed to take place in the new Vauxhall on the Champs-Élysées had to be relocated because the new hall, called the Colisée, was not yet completed.

Commentators from the eighteenth to the twentieth century have noted the formal similarities between Le Camus de Mézières's granary and Vauxhalls of the same period, especially the Colisée on the Champs-Élysées: both had a central circular area surrounded by a colonnade that supported a balcony or an attic reserved for spectators. Interestingly, in his *Mémoires secrets* (1780–9), a meticulous compendium of gossip about the artistic world and the aristocracy, Bachaumont attributes the construction of the Colisée to "a certain *Camus de Mézières*."[79] Relying on this information, it was assumed that the architect of the granary was also that of the Colisée in Paris.[80] Even though twentieth-century scholarship has challenged this attribution crediting it to a namesake, Louis-Denis Le Camus, it is nonetheless revealing that for two centuries the construction of the Colisée, this innovative theatre in Paris, was believed to be the work of Nicolas Le Camus de Mézières.[81] After the construction of the granary, Le Camus de Mézières had become a renowned architect. The granary itself was not only a vital institution in the economic landscape of Paris, it doubled as a public theatre. In his *Description du Colisée* (1771),[82] George Louis Le Rouge describes the decoration of every room in a way that seems to anticipate *The Genius of Architecture* in its use of mythological figures and its characterization of spaces. A large colonnade surrounded a water basin for naval games and led to a grotto with a concealed statue of Neptune dominating a fountain; the entire composition recalled the nymphs of Villa Maser. Also around the central hall were four circular cafés decorated with motifs of the four continents.[83] Jacques-François Blondel, in his *Cours d'architecture*, even describes the famous Colisée on the Champs-Élysées as a construction whose architectural composition "lent itself to the *genius of architecture*," while referring to Le Camus de Mézières's granary as "the new Colisée."[84]

Various coincidences – Le Camus de Mézières's declared interest in the theatre, the formal similarity between the granary and the Colisée, and the many theoretical affinities between the new theatre and *The Genius of Architecture* – still

raise suspicions that Le Camus de Mézières was involved in the construction of the Colisée. Much circumstantial evidence still seems to link him to the new theatre. Besides the architectural affinities with his own projects, Le Camus de Mézières was closely related to the comte de Saint-Florentin, a minister to Louis XV who would sign the royal decree authorizing the construction of the Colisée in Faubourg Saint-Honoré, and who was also a major investor in the project.[85] In 1769, the year when the construction of the Colisée began, Le Camus de Mézières moved to Rue Verte, Faubourg Saint-Honoré, next to the newly opened Rue du Colisée.[86] It is also interesting that in *Le Guide de ceux qui veulent bâtir*, a treatise by Le Camus de Mézières published in 1781 at the time when the Colisée was being demolished, an entire section is devoted to the demolition of existing buildings. Even though this practice of demolishing existing structures before beginning a new construction was no longer unusual, it is nonetheless surprising that it was discussed in such an extensive manner in a treatise on the art of building, taking into consideration, so to speak, the very finiteness of the life of a building.[87]

Given the complex definition of authorship prior to the nineteenth century and his known practice to publish anonymously,[88] it is very likely that Le Camus de Mézières, even if not directly involved in the actual design of the new building, might have contributed to defining the architectural program of the theatre. Achard et Compagnie, the group that developed the project, was known to have hidden important political figures who fought to remain anonymous throughout the mis-adventure of this controversial project. Given Le Camus de Mézières's difficult financial situation after the bankruptcy of his development around the granary, it probably would have been unwise for him to be directly involved in the development of the Colisée, which was comparable in size and urban complexity to his earlier, ill-fated project.

After the demolition of the Colisée, Le Camus de Mézières's granary became the preferred structure for large gatherings. The most impressive celebration that took place there was in honor of the Peace of Versailles on December 14, 1783. Bachaumont describes the event in his *Mémoires secrets*, and points out the "theatrical" setting of the celebrations. The public was divided into two distinct groups: on the ground floor, the general public danced, entertained by an orchestra in the centre of the circular space. This rejoicing "public" became an improvised performance (*acteur malgré lui*) for an audience located at the level of the attic and balcony.[89] This veritable theatre gallery could receive 1500 people, who were admitted by presenting tickets delivered by the merchants' provost, a privilege reserved to the upper class and courtiers. The distribution and internal decoration of the granary followed the same desire for social differentiation that guided the organization of theatres at the time.[90]

Many commentators compared the transformed granary to the Pantheon in Rome, and noted that the celebrations for the Peace of Versailles had produced the largest gathering in France, most appropriately housed in Le Camus's granary. Descriptions of these celebrations and others during the French Revolution all tended to establish a parallel between the Rome of antiquity and the glorious city of Paris.[91] During the Revolution, this formal association with the architecture of antiquity

acquired an additional meaning due to the patriotic preoccupation of the political power. On July 14, 1790, the celebrations for the *fête de la Fédération* took place in the granary. Interestingly, they reused the decorations created by Legrand and Molinos seven years earlier for the Peace of Versailles. On July 21, 1790, a funerary ceremony was held there following the death of Benjamin Franklin, a renowned freemason.[92] Mirabeau explained that this location was chosen for the ceremony because "we could not honor the memory of Franklin, born outside the Church, in one of our temples."[93] As if to echo Boullée's cenotaph to Newton, the central area of the granary during this occasion was filled with benches and its circumference was lined with black curtains; in the centre, a bust of Franklin was erected on a sarcophagus covered with branches of cypress.[94] Throughout the Revolution, Le Camus's granary was the site of many public manifestations and upheavals.[95] Its dual function, as a centre for the public food supply and for popular celebrations, implied a symbolic meaning that was already obvious to J.G. Legrand who wrote a few years after the Revolution that the needs of the people and national glory were united and literally merged in the powerful concept of the building.[96] While the formal innovation of the granary had a great influence on the architecture of the late eighteenth century, its double function was considered a meaningful model to be followed in other public buildings. An article in the *Journal de Paris* published in 1783 suggested that the granary could become a model for other monuments in the city, such as the custom house, the winery, etc., adding to the primary function of these public institutions the possibility of transforming them into halls for popular celebrations.[97]

Charles De Wailly, who belonged to the same masonic lodge as Le Camus de Mézières and shared his interest in theatre, also proposed two projects for public buildings with a multiple function. One of them, proposed in 1789 (at the beginning of the French Revolution), was a project for a second granary that also took the shape of a ring. It would have been located on the bank of the river Seine, adjacent to a port for direct access by boats. This concept was originally proposed by Oblin and developed by Le Camus de Mézières in their own proposal to the city. The internal space of De Wailly's granary opened onto a vast basin that could receive barges filled with grain. The rotunda of De Wailly's project housed public baths, and could have been used occasionally for nautical games, a form of public entertainment familiar to the French public and reminiscent of the *naumachia* of antiquity.[98]

De Wailly's second project played on urban theatricality. It was a proposed transformation of the public square in front of the Comédie française, remodeled in an attempt to save the theatre which had been threatened with demolition for its monarchic overtones. After the events of July 1789, the Comédie française reopened under the name *Théâtre de la Nation*. The performance of a play not considered patriotic enough by the *Convention montagnarde* caused the theatre to be closed down once again, and the author of the play and comedians to be arrested. They were about to be guillotined when a public petition saved them. The interior of the building underwent many physical transformations to include "all the attributes of freedom." The theatre was reopened under the name *Théâtre du Peuple*, then

renamed *Théâtre de l'Égalité*. It was thereafter devoted to performances "given by and for the people."[99] In an article on the opening night at the end of June 1794 (9 Messidor), a reporter for the *Moniteur* commented on the new arrangement:

> It appears that this time they have had the aim of creating a more popular theatre, one in which the citizens will not be separated from each other in boxes but where they will join together and intermingle in the circular amphitheatres. This arrangement calls to mind equality, republican brotherhood, and justifies the name given to this new theatre.[100]

Further modifications, endorsed by Louis David, changed its basic relation to the city by adding a colonnade and steps (*gradins*) around the semicircular space, covered with velum to transform it into an arena for popular events and public education.[101] In this project, the main entrance to the theatre was transformed into a stage, and the façade was converted into a backdrop for an exterior amphitheatre. The angles of the surrounding streets would have been modified to converge at the central door of the façade, with a tribune for speakers erected in front of the theatre. It is not clear to what extent this project for an outdoor amphitheatre was realized, but it reveals nonetheless the revolutionary objectives. Among the multitude of projects for buildings with new programmatic revolutionary overtones, the theatre, properly adapted to the revolutionary program, was believed to be a potential "school of civic virtue."[102]

This dramatic insertion of a theatrical square in urban Paris would have applied the internal organization of a theatre onto this public place. However, this was not necessarily due to recent political upheavals. Since the middle of the eighteenth century, the city had been transforming gradually into a theatre, and the expansion of the performing space of De Wailly and Peyre's Comédie française onto the square and the connecting streets had already been anticipated by Le Camus's granary. By associating his public monument with the theatres of antiquity, Le Camus helped expand the theatricality of eighteenth-century public life beyond the physical limits of the theatre. Moreover, he initiated a movement in France that would transform the city architecturally, reinforcing its role as a place for public expression and theatrical events.

Le Camus de Mézières's most important architectural treatise published less than a decade before the beginning of the French Revolution was written when his theatrical involvement was at its peak, and this would explain the recurring use of theatrical metaphors in the text. It seems somewhat significant that Le Camus de Mézières's treatise, *The Genius of Architecture*, was read during the meetings of the Académie Royale d'Architecture in May and June 1780, in the presence of some of the architects who most radically transformed theatre architecture during the second half of the eighteenth century, including Soufflot, Peyre, and De Wailly.[103] *The Genius of Architecture*, however, is important not only for its novel way of presenting architectural theory in terms of staging, characterization of spaces, and dramatic progression through successive rooms. It also participated in eighteenth-century aesthetic debates by acknowledging contemporary artistic theories, stating a position

on the nature of architectural theory, discussing concepts such as "genius" and "taste," and defining architecture in terms of eighteenth-century sensationalist philosophy. These issues would have far-reaching consequences for architecture, some of which are still very significant today.

Part 3

Language and personal
imagination: an architecture
for the senses

Chapter 6

Taste, talent, and genius in eighteenth-century aesthetics

> There are barriers that the mind cannot cross when following well-trodden paths. There are times when to stray is to make new discoveries; sometimes the clouds are pierced by rays of light; a subtle genius may receive them, and a noble emulation may perfect their advantages.
>
> Nicolas Le Camus de Mézières, *The Genius of Architecture*

The word genius (*génie*) in eighteenth-century France usually referred to a discipline distinct from architecture. Diderot's *Encyclopédie* defines it as "the science of Engineers," such as military engineering (*génie militaire*). When referring to architecture, it meant "the fire and inventiveness that an architect, a draughtsman, a decorator or any other artists use in the decoration of their works."[1] "*Genies*" in architecture were also ornamental figures of winged children (or cherubs with childlike attributes) that represented virtues and passions: "They appear in bas relief, such as in the thirty-two white marble tympanums of Versailles colonnade, where they are grouped and hold the attributes of love, games, pleasures, etc."[2]

For Le Camus de Mézières, the "genius of architecture" (the first clause in the title of his architectural treatise) certainly included these meanings related to ornamentation, since much of his treatise was devoted to distribution and decoration, but it also included the pre-romantic notion of creative fire, as well as the natural attributes of taste and talent that an architect must have. In the French language, the word génie also indicates a distinct or innate character, as in the genius of a language (*le génie d'une langue*), which refers to the cultural horizon of a language. This linguistic notion of character as a distinctive trait or feature is synonymous with the figurative notion of character. When ascribed to an individual, "character" refers to that person's expression and originality. The concept of character in architecture, as we saw, became a fundamental notion in architectural discourse during the first half of the eighteenth century. For the architects of the following generation such

as Le Camus de Mézières, Ledoux, and Boullée, it would become the basis of their architectural theory.

Theatre theory and the decadence of taste

From their creation under Louis XIV until the end of the eighteenth century, the Academies of architecture, painting, and literature were the major institutions contributing to Enlightenment rationality in the ongoing search for universal principles in the arts. The Académie française, created by Richelieu in 1635, had long been reflecting on the question of taste and the rules of art when, in 1761, a project to publish an annotated collection of the classics proposed to include seventeenth-century texts, thus raising authors of the *Grand siècle* (the seventeenth century) to an exemplary level that had always been reserved for the authors of antiquity. In a letter to one of the members of the French Academy, Voltaire writes: "I am pleased to learn that the *Académie* will render a great service to France and Europe by publishing an anthology of our classical authors, with annotations that will fix the language and taste."[3] Even though the project was never seriously developed, this proposal from the Académie itself suggested that a level of perfection in art appeared to have been reached and should be perpetuated. This new attitude gave credence to a system of conventions that was established to regulate the art of poetry.

Many authors argued, however, that the rules inherited from previous generations had ceased to be a springboard for the creative imagination and become more of a mental obstacle. To some extent, the growing importance of conventions led to the mummification of the past as an absolute model to be imitated. This was how some eighteenth-century writers diagnosed the cultural context in which many treatises on theatre theory were written. Louis Charpentier's *Causes de la décadence du goût sur le théâtre* (1768) begins precisely with an evaluation of the art of poetry, arguing that the decadence of taste was caused by the same thing that led to its progress: the predominance of rules. "A man of genius, guided by a pure emotion, by an instinctive enthusiasm, follows the principles of his art even though their influence might be imperceptible," he writes.

> Homer knew all the rules of the sublime and of poetry, because he had the idea of the beautiful, but he seems to have been concerned only with the latter. All great men that came after him and who gave way to their enthusiasm produced masterpieces. Those who sacrificed this divine inspiration to observe the precepts, or those who, enlightened by the rules, lacked inspiration produced no more than cold compositions.[4]

According to Charpentier, the danger in relying on rules to produce a work of quality lies in the illusion that theory can rule over experience. He was well aware of the potential for theory to become prescriptive, and warned that an excessive respect for rules would repress even the most brilliant genius:

> What do rules produce in an author? Nothing, or mediocrity. Nothing: if they do not prevent him from devoting himself entirely to his genius. Then the rules are to him what they were to Homer. Mediocrity: when these

> meticulous pedants enslave the genius with a dull precision, with a cooling attentiveness, plaguing the author with deterring scruples.[5]

The historical times marked by the decadence of taste abounded in principles, Charpentier continues, but lacked in works of genius. He blames the desire to perpetuate the great works of a previous era by blindly following their example, and by giving priority to theory over experience and talent. The mind of a genius does not require rules to attain excellence. Paradoxically, a work of genius, with its inevitable flaws, is more desirable than perfection itself. Like the interlude in a theatrical play or the irregularities in a landscape, imperfections in poetry are necessary to confirm the genius in its making.

To illustrate his point that imitating great works from a previous era and relying blindly on their rules leads to the decadence of art, Charpentier compares Greek and Roman theatre and demonstrates that the latter is inferior. While the intention in both cases was to fight boredom (an eighteenth-century more than a classical concept), he writes, Roman tragedy was inferior because it imitated the art of the Greeks from such a close proximity:

> In order to take advantage of imitation, there must be centuries between the imitator and the model. Then, the change in circumstances provides fortunate applications, different interests, new situations that make a change of scenery, distort so to speak the objects and erase the traits of a literal resemblance.[6]

While the Greeks invented tragedy first and arrived at comedy later, the Romans began with comedy and even surpassed their predecessors in this area.

In Charpentier's view, until Louis XIV and the writings of Corneille, theatre in France had been only a pale reflection of what it had been for the Greeks. Writing only a few years after Charpentier, Louis-Sébastien Mercier confirmed his predecessor's diagnosis in *Du théâtre, ou nouvel essai sur l'art dramatique* (1773). Similarly, Mercier explains that the decadence of theatre in France was rooted not only in its mystification of the seventeenth century and its inheritance of rules and principles, but in its very origin in Greece. Mercier was very critical of the theatre in France during the second half of the eighteenth century, criticizing its origins in the burlesque and its transplantation from Greece into a soil that had led to its degradation:

> Our theatre . . . conceived in a gothic manner in a half-barbarian century, parasitic offspring engendered by chance, has maintained the imprint of its burlesque origins. Our theatre never belonged to our soil, it is a beautiful tree from Greece transplanted and degenerated in our climates.[7]

Mercier complains that the real objective of theatre should be moral edification, but, unfortunately, poets too often neglect their moral role by trying to please the more frivolous taste of the time. He warns, however, that theatre should not move to the other extreme: the dogmatic moralism of classical tragedy. In fact, Mercier was one of the most passionate defenders of the *drame bourgeois* that flourished in France during the second half of the eighteenth century. Like Charpentier, Mercier believed

that the art of poetry and theatre communicated best through the senses, touching the emotions of the spectator instead of relying on pre-established rules. Dramatic art, Mercier writes, is the art that most excellently addresses our sensitivity, "opens the treasures of a human heart, augments our mercy, our commiseration, and teaches us to be honest and virtuous."[8]

Both Charpentier and Mercier were convinced that only by relying on one's intuition and artistic passion could this role of theatre be fulfilled. No treatise on poetry can teach a man of genius how to write; it can communicate only common knowledge and trivial truths, and burdens real talent with useless rules. "Follow your spirit," Mercier advocates, "it knows more than the rules."[9] The dogmatic rules criticized by Charpentier and Mercier during the second half of the century were not unique to poetry, however. A similar phenomenon appeared in architecture as a reaction to the rigidity of mid-century neo-classical architectural theory.

Genius and the complex relationship between rules and talent

While Charpentier and Mercier were challenging the blind reliance on established rules at the theatre, during the second half of the eighteenth century in France, architects were equally concerned with the potential mediocrity that plagued uninspired works that relied solely on imitation of proportions established by the ancients. Jacques-François Blondel, for instance, distinguishes between talent, taste, and genius in architecture in the introduction to the fourth volume of his *Cours d'architecture*. The man of talent, he writes, is an individual who is well versed in the theory of architecture and in the practice of building construction, but who produces nothing that might depart from principles and proportions established by traditional authority. Most of his productions are fine in terms of composition, but tend to be "cold and monotonous" and often fail to attain "the perfection and sublimity of the art." The productions of a man of talent should be considered as nothing more than works of imitation.

The man of taste must not only be familiar with the secrets of his art, he is the one who can integrate into his creations the modulations determined by appropriateness, or cultural conventions. He knows when needed how to go beyond the limits prescribed by rules while remaining within the boundaries of good taste.

The man of genius, Blondel continues, also needs to be familiar with all the rules of the art, but is guided in his choices by a higher form of inspiration and an enthusiasm that will free him from enslaving rules. He knows how to create the different genres and assign the proper character to a building; he will take advantage of the natural conditions of a site and the available materials. Most importantly, the man of genius will produce creations that surpass the masterpieces they were meant to imitate. Blondel warns, however, that the enthusiasm that drives the man of genius, if not guided by principles, might lead to perversion and decadence. It is particularly revealing therefore that Blondel recommends reserving the expression of the "genius of architecture" to the decoration of theatres and some interior spaces of apartments.[10]

The definition of taste, talent, and genius was a highly discussed topic in artistic circles at the time. Published only a few years after Blondel's treatise, Le

Camus de Mézières's echoed his predecessor's fascination for the expression of genius and the subtle modulation of the importance of rules in architecture. Moreover, Le Camus was certainly familiar with Blondel's work and seems to have borrowed the title of his architectural treatise from Blondel's definition. Shortly after its publication, some chapters of *The Genius of Architecture* were read at a session of the Académie Royale d'Architecture. In the same session, the article on "taste" by Montesquieu, written for the *Encyclopédie* more than two decades earlier, was also discussed.[11] It is significant that the academicians read these two texts in parallel since they do have some important points in common, particularly their emphasis on the role of sensations in architecture. In his article, Montesquieu defines the object of taste as "the pleasures of the soul" (variety, symmetry, surprise, etc.), and describes the importance of sensuous perception in the discernment of taste. He believed that the appropriate level of ornamentation in architecture was dictated by the acuity of our senses:

> If our sense of sight was weaker and more confused, there should have been less moldings and more uniformity in the different parts of archi-tecture; if our sight had been more distinct and our soul capable of embracing more things at once, there should have been more ornaments in architecture.[12]

Le Camus's understanding of the relationship between sensations and the external world is indeed very close to that of Montesquieu. He defines taste as "that which attaches us to something through feeling" and thus, like Montesquieu, allies his position to the sensualist philosophy of Locke and Condillac. Montesquieu, however, was concerned mainly with "natural" taste. Unlike acquired taste, he writes, natural taste does not require theory, since it is "a prompt and exquisite application of unknown rules," placing taste and genius in a similar category. Another objective of taste, however, is order, and here Montesquieu reintroduces the importance of rules: it is not sufficient for the soul to be presented with a great number of beautiful objects; they must be ordered so that we can remember what we saw and begin to imagine new combinations. In this way, order is not a hindrance but a prerequisite to imagination.

In an additional section of the *Encyclopédie* on "taste in architecture," J.-F. Blondel specifically addresses the notion of "acquired taste" and distinguishes between genius and taste. He argues that they are equally necessary to an architect, but genius comes from a natural disposition whereas taste can be acquired, educated, and ultimately perfected. Similarly, Le Camus believed in the importance of both natural and acquired taste. Natural taste is common to all humans and enables a work of art or architecture to be shared by all. Acquired taste, on the other hand, provides a necessary limit to the excesses of frivolous imagination. It is his emphasis on *genius*, however, that distinguishes Le Camus de Mézières from the other archi-tectural theoreticians of his time.

Even though Le Camus recognized the importance of acquired taste, and thus the role of rules in architecture, unlike most previous treatises on the subject, the architectural orders are given little importance in *The Genius of Architecture*; Le

Camus devotes only a few paragraphs to the proportional relations among the five classical orders of architecture. Describing their subdivisions, Le Camus reiterates the traditional rules governing the diameter of a column, its height, the proportions of its pedestal and its entablature, but he is mostly concerned with placing *The Genius of Architecture* in the lineage of architectural treatises from past centuries. Like most of his predecessors, he acknowledges the natural foundations of architecture, stating that the proportions of the architectural orders are analogous to those of the human body. His emphasis, however, is on their specific character and their ability to be combined with other elements of decoration to characterize diverse architectural spaces for appropriate human habitation, rather than on their numerical proportions. The Doric order, for example, is analogous to the body of an elegant man because its composition is rich and male, while the Ionic order is graceful like a beautiful woman. The proportions of a column, chosen for its specific character, determine the proportions of all the other architectural elements.

In the introduction to *The Genius of Architecture*, Le Camus criticized Claude Perrault for challenging the harmonic foundation of architecture. Le Camus, however, later granted every architect great liberty in establishing the exact proportion of architectural elements: "As for the subdivision of each member," he writes, "they vary according to the Orders and to the taste of the Artist concerned."[13] Ensuing from this new freedom, Le Camus questioned why the orders of architecture should be restricted to five. Like many of his contemporaries, he considered the possibility of a French order. Although the proportions of any new order would tend to fall within the range of the existing orders (since the Tuscan order was already very massive and the Composite order was as slender as possible without being frail), Le Camus suggested giving free rein to the imagination by breaking the bounds of custom. Paradoxically, Le Camus's prime example was Perrault's attempt to establish a new French order. Nothing is more ingenious than the French order conceived by Perrault, he writes, even though its proportions are the same as a Composite order, and therefore would result in no new sensations. Le Camus concluded that a new order could vary only in its ornaments and its height. More important than the desire to create a new order for the French nation, however, was the license given to the imagination:

> There are barriers that the mind cannot cross when following well-trodden paths. There are times when to stray is to make new discoveries; sometimes the clouds are pierced by rays of light; a subtle genius may receive them, and a noble emulation may perfect their advantages.[14]

When Le Camus criticized Perrault in his introduction to *The Genius of Architecture*, it followed his discussion on music and the importance of harmonic proportions. His aim was to ally himself with traditional treatises on architecture, to give legitimacy to his own theory. His discussion of the architectural orders nevertheless points to a new role for the architect's imagination. Beauty, he writes, appears in the purity and harmony of proportions, but is evident only to the genius: "Only Genius can be our guide. Genius is a ray of Divinity, whose faintest glimmer recalls the blaze of its source."[15] Unlike his contemporaries who wrote on the creative power of the genius

in poetry and in theatrical writing, and who warned that rules limited the truly creative mind, Le Camus regarded rules as a complement to the creative flame that inhabits the genius: "Let us endeavor, through constant inquiry and through our own reflections, to form our own taste. Taste often serves to develop and rectify Genius and often, indeed governs and determines it."[16]

As we saw earlier, Le Camus provided a new modulation to the importance of rules in his section on exterior decoration, when he introduced the notion of *convenance* or appropriateness. Customs and (cultural) conventions are more important than fixed (natural) rules, he explains. This part of architecture that we call appropriateness or fitness "is defined and may be learned not so much by the study of rules as by a perfect understanding of the manners and customs of the age and country in which one lives."[17] This new modulation of the role of conventions in exterior decoration refers to the public dimension of architecture: its ability to communicate its use and the status of the owner. In giving priority to conventions over rules, Le Camus acknowledged the possibility of social and cultural change, and thus allowed for innovation in architecture. This fundamental transformation in the architectural theory of the second half of the eighteenth century in Europe originated paradoxically in Perrault's initial subversion of traditional theory. As became even more explicit in the theories of Ledoux and Boullée, the understanding of history as a series of human-generated changes allowed humankind to transform its future, and every individual to reinvent their social condition. This new belief in the power of human actions to change the course of things was manifest most clearly in the emergence of the bourgeoisie, which created for itself a new social status above that of the mercantile tradition.

Giving more importance to changing human customs than to rigid rational rules also seemed to justify the use of innovative forms in public buildings. Le Camus's granary in Paris and its surrounding development, for example, inscribed a perfectly circular building and a circular street in one of the densest areas in Paris, and became the first freestanding circular architectural monument in the city. Anticipating the projects of Ledoux and Boullée, Le Camus de Mézières's innovative design demonstrated the important role of the architect's imagination and his power to challenge established rules.

Génie and the *Encyclopédie*

By the middle of the eighteenth century in France, the expression "fire and genius" had become a "cant term of praise" in architectural discourse.[18] Despite its complex meaning, in Le Camus de Mézières's treatise the term *genius* mainly addressed the nature of individual creation and the status of imagination. The article "Génie" from the *Encyclopédie* describes a mind of genius not in its rationality or its ability to formulate complex abstract concepts, but rather in its great sensitivity. A mind with a fertile imagination combines ideas to create new concepts, by transcribing abstract ideas into sensitive ones. The philosophical constructions of a mind of genius do not rest on reason, nor can they be appreciated in terms of truth or falseness. They are more akin to poems, revealing their meaning through the beauty of proportions.

The article "Génie" also traces the origin of the word in classical mythology. The *genies* were beings whose bodies were made of an aerial substance and who inhabited the vast realm between the sky and the earth. These subtle spirits were considered to be ministers sent by gods to mediate in human affairs, since the gods were unwilling to be directly involved but did not wish to neglect the human world entirely. As inferior divinities, the genies were immortal like gods but felt passions like humans. They were assigned to protect specific humans during their life and to guide their souls after death. From this interpretation, *génie* came to mean the human soul delivered and detached from the human body. Once supernatural constructs became suspect during the Enlightenment, the notion of freedom of the mind remained the most powerful attribute of the genius: "The extent of the mind, the strength of imagination, and the activity of the soul, there lies the *genius*."[19]

With the surge of Newtonianism and empirical philosophy, eighteenth-century philosophers such as Condillac investigated the mind, the body, and the process by which ideas were carried from one to the other through the senses. In his article on *génie* for the *Encyclopédie*, the author insists that how we receive ideas affects how we remember them. Humans receive their ideas about the world through sensations, and for most people sensations will be vivid only if they are immediately related to one's needs, taste, passions, etc. Everything else will not make a significant impact and will be forgotten. The man of genius, on the other hand, is touched by every sensation in nature: "The man of *genius* is he whose soul is more extended, who is touched by the sensations from all beings, interested in everything in nature, every idea awakens in him a feeling."[20]

When the soul is affected by an object, perception is intensified by the memory of specific events related to that object. This is one of the basic principles of Condillac's empirical philosophy. Memory behaves as a sixth sense, a bridge between sensation and understanding. In the act of remembering, imagination plays a crucial role because it combines different memories of sensations and creates new meanings according to the changing context. For a person of genius, this faculty is intensified:

> He remembers these ideas with a feeling more intense than how he received them, because these ideas are merged with thousands more, that all contribute to arouse a feeling. The genius, surrounded by objects that concern him, does not remember, he sees; he is not restricted to seeing, he is moved. In the silence and darkness of his study, he takes pleasure from the joyful and fertile countryside; the whistling of the wind freezes him; the sun burns him; he is scared by storms.[21]

The genius not only uses memory and association to create new meanings for a particular object, but also engages her/his mnemonic faculty to transform the tragic into the terrible and the beautiful into the sublime, to animate matter and to color the mind by reenacting every sensation: "In the heat of enthusiasm, [the genius] does not rely on nature, nor on the continuity of his ideas; he is transported into the situation of the characters he has created; he becomes these characters."[22] In the arts, as in the sciences and business, the genius seems to change the nature of

things, as it casts its light beyond past and present to shine into the future. Similarly, in the article on the adjectives *éclairé* and *clairvoyant*, Diderot expands on the discerning quality that distinguishes the genius from the enlightened (*éclairé*) and the perceptive (*clairvoyant*) person. While an educated individual knows things, an enlightened one knows how to apply them in an appropriate way. Both have acquired their knowledge (*lumières acquises*) through education. The discerning or perceptive person, on the other hand, knows how to read the human mind and is *clairvoyant* through natural wisdom (*lumières naturelles*). However, a man of genius is superior to both an enlightened person and a discerning one because of his ability to interpret knowledge and create new things:

> A man of genius creates things; a perceptive man deduces principles from them; an enlightened man applies those principles; an educated man does not ignore the things that have been created, or the laws that have been deduced from them, or their applications; he knows everything but produces nothing.[23]

The process of association and interpretation with which the genius creates a new world and new meanings is free from dogmatic or external rules. No rule of judgment, such as those dictated by taste, can restrict the creative ability of a man of genius, since he perceives and creates directly from nature. Taste, on the other hand, must conform to a model of beauty that is dictated by acquired rules. Therefore, genius is often distinct from taste because rules governing taste often hinder the free expression of genius.

This mutual exclusion between genius and reason (embodied by rational rules) was pervasive in eighteenth-century artistic discourse. It also found an equivalent in philosophical debates. Comparing two great thinkers of the previous century, John Locke (1632–1704) and the earl of Shaftesbury (1671–1713), the article "Génie" from the *Encyclopédie* praises Locke for the vastness of his sharp and just reasoning. Shaftesbury, however, is regarded as a genius:

> There are very few errors in Locke, and too few truths in the Earl of Shaftesbury: the first one, however, is only a broad, penetrating and just mind, while the latter is a first rate *genius*. Locke saw, Shaftesbury created, built, erected; we owe to Locke some great truths coldly perceived, methodically followed, dryly enunciated and to Shaftesbury brilliant systems often unfounded, but full of sublime truths, and in his moments of error, he pleases and convinces again by the charms of his eloquence.[24]

Anthony Ashley Cooper, earl of Shaftesbury, was known as a great defender of morals of sentiment. He advanced concepts such as enthusiasm, the sublime, and disinterested pleasure as foundations of ethical behavior, and "fashioned the rudiments of a doctrine of creative imagination."[25] He is also considered to be the first link in the lineage of romantic sensitivity that developed in the eighteenth century.[26] Locke, on the other hand, was a leading figure in Enlightenment philosophy, and believed that sensations were objective and homogeneous, and that moral judgment,

aesthetic judgment, and happiness were based on a rational comparison of levels of pleasure and pain. Paradoxically, Locke played an active role in Shaftesbury's education. Although Locke rejected the notion of "innate ideas," Shaftesbury did not embrace his master's position uncritically. Instead, he questioned some of Locke's fundamental assumptions, arguing that even his master who "denied the principles of religion to be natural," and claimed the ideas of beauty to be vain, was tacitly forced to admit that "they were yet in a manner innate, or such as men were really born to, and could hardly by any means avoid."[27] Even though he respected his master, Shaftesbury understood that the logical consequences of Locke's position were untenable, since for Locke, good and bad would appear to be completely arbitrary:

> [V]irtue, according to Mr. Locke, has no other measure, law, or rule, than fashion and custom; morality, justice, equity, depend only on law and will, and God indeed is a perfect free agent in his sense; that is, free to anything, that is however ill; for if He wills it, it will be made good; virtue may be vice, and vice virtue in its turn, if he pleases. And thus neither right nor wrong, virtue nor vice, are anything in themselves; nor is there any trace or idea of them naturally imprinted on human minds.[28]

Shaftesbury's criticism of Locke's arbitrariness of moral judgment casts some light on the changing role of customs and the status of conventions throughout the eighteenth century. The great influence of empirical philosophy, in which all knowledge is acquired from the world via the senses and imprinted rationally onto the mind, as on a clean slate, assumed that conventions were a form of rationalized behavior inherited from the seventeenth-century worldview. Although conventions were raised to the status of acquired nature and could overrule some innate human behaviors, they originated not from nature but from a rational concept of social situations.[29]

Until the seventeenth century, it was believed that all humans were born with an instinctive knowledge of natural laws. Locke's refutation of innate ideas led to a depersonalized view of the human being. In their place, Shaftesbury proposed the notion of a secular "inner light," a "natural light" that reinstated the importance of the subject – not only as a thinking subject, but also as a feeling subject. This inner light was a crucial notion for writers on aesthetic experience, from Abbé Du Bos to Alexander Baumgarten (1714–62). Baumgarten's treatise, *Aesthetica* (1750), was the first work to define artistic sensitivity as a philosophical discipline. In the context of Enlightenment philosophy, it restored unity and originality to individuals. The word "aesthetic" itself came from Baumgarten, who defined it as an inferior, indistinct knowledge of things.[30] The objective of the new philosophical discipline was "the perfection of sensitive knowledge in itself, it is to say beauty."[31]

Baumgarten's position is complex, and in some ways contradictory. Its high level of abstraction presumes a belief in the intelligibility of rational discourse. The most original part of Baumgarten's work was its defense of the absolute autonomy of art, the notion that beauty is not based on utility, or on its capacity to be pleasing or good. Art carries in itself its own justification. He also strongly opposed the traditional theory of imitation in the arts. Regardless of the historical details surrounding its development as a discipline, aesthetics defined a new mode of being

in the world and marked a reversal of values that enabled art and beauty to be regarded as the very meaning of life.

The aesthetic path toward an inner sense led the individual to a new form of absolute, to an ontological restoration. This new absolute was no longer defined in terms of what was identical in every individual (that had become instead the scientific, rational absolute), but by what was different and original. Jean-Jacques Rousseau, in his *Confessions* (published posthumously in 1782 and 1789), epitomizes this quest for otherness when he writes: "I am made like none who I have seen; I dare think that I am made like none who exists. If I am not worth more, at least I am different."[32] The epigraph of the first book read "*Intus et in cute*," which means "inwardly and under the skin," indicating his aim to explore the interiority of the individual. In architecture, this new importance of the self and the personal imagination marked a new role for innovation as a productive rather than a reproductive form of imagination.

Chapter 7

Newtonian empirical sciences and the order of nature

In *Discours sur la nécessité de l'étude de l'architecture* (1754), Jacques-François Blondel writes that the architect cannot limit himself to the rules of his art. He must be familiar with the rules and theories of everything related to architecture, including mathematics, perspective, sculpture, painting, gardening, stonecutting, carpentry, and structures. Following the Vitruvian tradition, Blondel thought that the architect should also have a general knowledge of philosophy, experimental physics, medicine, and music.[1] He should have a general education and be a man of letters (*homme de lettres*). Le Camus de Mézières's wide range of interests, from the strength of materials to play-writing, exemplifies Blondel's description of the ideal architect. What is remarkable, however, is the manner in which his interest in subjects such as theatre, gardening, and literature converged toward a new, expanded theory of architecture.

The breadth of Le Camus's written work has often been overlooked, yet it clearly exemplifies the complexity of the decades preceding the fall of the *Ancien Régime*. On the one hand, Le Camus's technical studies, manuals, almanac, and interest in freemasonry are in complete agreement with the Newtonian empirical science and natural philosophy that dominated the Enlightenment. On the other hand, his novels, plays, description of picturesque gardens, and attention to sensations in *The Genius of Architecture* all point to a new romantic consciousness in the eighteenth century. The great variety of Le Camus de Mézières's work seems difficult to reconcile; his obsession with technical concerns of construction in *Traité de la force du bois* and *Le guide de ceux qui veulent bâtir* is hardly evident in his more poetic works. However, this contradiction is apparent only from our current standpoint; during the eighteenth century, the poetic and technical aspects of Le Camus's architectural treatises shared the language of empirical science and natural philosophy.

After the financial failure of the granary in the early 1770s, there were very few signs of Le Camus de Mézières's architectural activity. He did not withdraw

from society, however. From 1770 to 1781, he animated the Société dramatique de Charonne, a society theatre that met in a pavilion he had erected on Saint-Blaise Street in Charonne. Following this transitional period, Le Camus de Mézières, the author, became most prolific. Le Camus may have spent much of this time, between 1770 and 1780, writing or at least laying out his architectural ideas, for within the next four years, he published a great number of works impressive for their variety of subjects. In 1780, he published his most innovative architectural treatise, *The Genius of Architecture; Or, the Analogy of That Art With Our Sensations*. Within the next two years, he published three books dealing with technical problems of construction: *Le guide de ceux qui veulent bâtir* (1781), *Traité de la force du bois* (1782), and (anonymously) *Mémoire sur la manière de rendre incombustible toute salle de spectacle* (1781). At the same time, between 1781 and 1784, he also produced a number of works of an apparently different nature, publishing part of the repertoire presented at the Société dramatique de Charonne in *Mes délassemens ou les Fêtes de Charonne* (1781); *Description des eaux de Chantilly et du hameau* (1783), a narrative description of a garden designed by the architect Le Roi for the Prince de Condé; *Aabba, ou le triomphe de l'innocence* (1784), a mythological love story of Aabba, a Greek girl, and her lover Hilas, a shepherd; and, fueling the controversy over his identity and the attribution of his works, *L'esprit des almanachs* (1783) under the pseudonym Wolf d'Orfeuil. This period of great literary activity also coincided with a renewed spiritual quest, indicated by Le Camus's involvement in freemasonry.

Le Camus de Mézières was an active freemason, member of the lodge of L'Étoile Polaire from 1773 to 1774, and of Les Coeurs Simples de l'Étoile Polaire from 1776 to 1783.[2] These lodges included other important architects such as Jean-Baptiste Paulin, architect of the king; Charles Dumont, professor of architecture; and Charles De Wailly, architect and inspector (*contrôleur*) of the king. As we have seen, De Wailly shared le Camus's interest in the theatre, and was directly involved in the construction of many theatres, including the Comédie française, which he designed with Marie-Joseph Peyre. Le Camus's and De Wailly's involvement in the lodge of Les Coeurs Simples de l'Étoile Polaire overlapped for at least two years, from 1776 to 1778, when the final drawings for De Wailly and Peyre's new Comédie française were being produced.

Toward the end of the eighteenth century in France, freemasonry attempted to preserve a balance between the primacy of rationality and the growing search for truth beyond rational understanding.[3] The masonic doctrines were closely related to Newton's natural science and philosophy. Jean Théophile Désaguliers (1683–1744), who became Great Master of the Lodge of England in 1719, was a famous promoter of Newtonian philosophy and author of *The Newtonian System of the World, the Best Model of Government* (1728). This dual interest in empirical science and esoteric religion led to the creation of a "natural religion" that provided freemasonry with its particular ideology.[4] In architecture, the new perception of geometry in nature led to developments in architectural language.[5]

The expression of nature in architectural theory

Newtonian empirical science was based on a new metaphysical approach to nature. Throughout the eighteenth century, Newton's *Mathematical Principles of Natural Philosophy* (1687) dominated scientific thought, and led to a new natural science that sought to establish laws and consequences of natural phenomena from observation and mathematical analysis. With the growing influence of Newton's theory, nature itself was believed to follow a coherent order that could be observed directly. As a devout Christian, Newton believed that experience and calculations could unveil the presence of God in the world. Nature was essentially a "revelation" imbued with a divine power that preserved the cohesive order of the universe. Newton's distinction between "causes" and "laws" became the point of departure for Auguste Comte's positivism in the nineteenth century.[6] Unlike Descartes, who believed he could demonstrate how the Creator constructed the world by speculating on its causes, Newton was content to look for mathematical laws regulating the universe, using experimental methods.

Newton's experimentation provided science with evident certainty, a degree of "absolutism" that all other fields tried to reproduce in analogical ways.[7] His theory of gravitation, for example, was translated in the field of biology as "attraction theory." In his *Opticks* (1704), Newton himself tried to rationalize the physiology of vision and the phenomena of sensitivity and movement by devising explanations based on other physical situations. In experimental philosophy, the triumph of empiricism over the classical philosophy of the seventeenth century was achieved by John Locke, who believed that all ideas are acquired first through the senses, in direct opposition to Descartes's notion of innate ideas. Locke's theory of knowledge acquisition was based on an objective observation of the world, again directly influenced by the growing impact of the natural sciences. Locke published his *Essay Concerning Human Understanding* in 1690, three years after Newton's *Mathematical Principles of Natural Philosophy*. In his *Essay*, Locke traces all knowledge to sensations, heightened by reflection. His intention, clearly, was to oppose ideological constructions based on innate ideas and, like Newton, he anticipated the positivist philosophy of the nineteenth century. D'Alembert would eventually compare Locke's accomplishment in philosophy to Newton's in science: "He created metaphysics almost like Newton had created physics."[8]

Under the influence of Newtonianism, eighteenth-century architecture also sought rules extracted from nature. This was especially evident in the late eighteenth-century theories of Étienne-Louis Boullée[9] and Claude Nicolas Ledoux, but was also present in Le Camus de Mézières's architectural theory, with its analogy between architecture and human sensations. Toward the end of the seventeenth century, Claude Perrault's architectural theory had shaken the metaphysical foundations of the discipline by questioning the Vitruvian canon and the very possibility of universal principles. Perrault's distrust of optical corrections expressed his general doubt of what could not be measured and calculated in the physical world, thus anticipating the Newtonian principles that would dominate science and philosophy throughout the eighteenth century. Like contemporary philosophers such as Locke, Perrault rejected the principle of innate beauty and harmony. Absolute beauty resulted

from a rational application of the rules of construction, while arbitrary beauty was based on custom and convention. To counter the latent relativism implied by this new concept of "arbitrary" beauty and the conventional status of the orders, architects such as Boullée and Ledoux grounded their architectural theories in the implicit order of nature. Criticizing Perrault for challenging the natural foundation of Vitruvian principles, Boullée asks: "Is architecture no more than an art of fantasy and of pure invention, or do its constitutive principles emanate from Nature?"[10]

In his own architecture, Boullée himself dispensed with the Vitruvian orders but introduced a theory of characterization based entirely on nature. His belief in a "universalism" was based on a conviction that a primitive architecture, anterior to classical antiquity, was "immutable in its forms and symbols." This exaltation of the primitive, inspired by Jean-Jacques Rousseau's "good savage," was animated by a desire to return to nature.[11] Boullée's architectural doctrine was indeed based on the imitation of nature, and his theory of the bodies (*De l'essence des corps*) classifies the forms of nature according to their specific character. His position, explicitly Platonic, considered regular and symmetrical forms to be superior to irregular ones, with the sphere being the most perfect. The empty spherical space that would symbolize the infinity of the universe in his cenotaph and other architectural monuments was a direct extrapolation of Newton's cosmos, in which, unlike Descartes's Baroque universe, the void was an important component. As this reliance on the character of natural forms became a fundamental part of Boullée's architectural theory, "the search for pure and fundamental forms was unquestionably related to natural philosophy's search for truths of universal validity."[12]

Boullée's theoretical position, like that of Le Camus, was greatly indebted to the sensationalist philosophy initiated by John Locke, but the impact of this philosophy on eighteenth-century theories of art and architecture was due mainly to its development by Étienne Bonnot de Condillac, for whom the arts had a common origin in expression. To symbolize nature in their architectural creations, Boullée and Le Camus used "natural forms" as a basic language to announce the destination of the building.[13] Describing the character of Greek temples, Boullée associates the volumetric forms with the divinities to which they are dedicated (Jupiter, Venus, Minerva, Pluto, etc.), without explicitly referring to the Vitruvian orders. Unlike J.-F. Blondel and Boffrand, for whom the classical orders provided the primary narratives to guide the architectural decoration in particular kinds of buildings, Boullée and Le Camus de Mézières believed that the qualities of architectural forms were perceived directly through the senses, and thus could convey the characters of specific divinities. The Temple to Jupiter, in Boullée's words, presents a noble and majestic form; the Temple to Venus is made of soft and rounded shapes that seem to be the work of Love herself; the Temple to Minerva is characterized by its regularity, perfect symmetry, and noble simplicity; and the Temple to Pluto, god of Hell, presents a hard and angular form.

In addition to this formal description, Boullée describes the quality of light that contributes to the specific emotion in each temple.[14] Like Boullée, Le Camus believed that natural form could express particular character and evoke specific emotions in the soul. In the decoration of a boudoir, for example, masses may vary

but the guiding principle should be to keep to a circular plan, he writes, for this form is appropriate to the character of the room devoted to Venus.[15] Le Camus also insists that each monument calls for a specific sentiment, a particular feeling: the prison inspires fear and sadness, while festive places such as theatres invite pleasure. Le Camus, however, did not dispense altogether with the classical orders, as did Boullée. On the contrary, their traditional character offered another way to express the destination of a building:

> The Tuscan Order, in its proportions, proclaims strength and solidity; it represents a robust and well-sinewed man. The Doric shows us a man of a noble and well-favored build. The Ionic has the general proportions of a beautiful woman, with a little more bulk than the slender girl who supplies the proportions of the Corinthian Order. As of the fifth Order, the Composite, it is composed of the other four, and this is the source of its name. In the progression of these five Orders, we thus see strength, elegance, grace, majesty, and magnificence.[16]

Boullée relied even more directly on the signs of nature to express architectural character. He drew his inspiration from movements of nature, such as the seasons. Boullée describes the specific character of every season, and associates them with programs for specific buildings. The joyful images of fall, for example, convey the appropriate character for monuments such as Vauxhalls, fairs, public baths, and theatres. Boullée devotes entire sections of his *Essai sur l'art* to such entertainment and public halls. With Boullée, the program is no longer conveyed by the conventional Vitruvian orders but rather uses the natural effects of masses and volumes to create its images. Boullée goes further and states that architecture is the only art form that can truly make use of nature (*mettre la nature en oeuvre*).[17] The ability of architecture to implement the principles of nature accounts for the sublimity of the art, he says, while the use of symmetry, based on order and perfection, confirms that the architect is perpetuating the project of the divine creator.

In *The Genius of Architecture*, Le Camus de Mézières also alludes to Newtonian science and looks to nature for the guiding principles in architecture. Describing the inanimate objects of nature, Le Camus associates their non-verbal effect on our senses with that of architecture, using the analogy of attraction/repulsion theory from physics: "A structure catches the eye by virtue of its mass; its general outline attracts or repels us."[18] But it was in his more technical studies that Le Camus expressed his debt to the natural sciences most explicitly. While Le Camus states in *The Genius of Architecture* that the objective of architecture is "to move our souls and excite our sensations" and that "this could be achieved only through the use of harmonic proportions," the intention of his *Traité de la force du bois* was much more technical, aimed at extracting rules from nature. In it, he compiled results from various experiments on wood, and drew some conclusions for designing wooden structures efficiently. Such divergent interests, however, are not contradictory when understood in an epistemological landscape configured by Newtonian natural philosophy, with its empirical emphasis and its implicit metaphysics of number.[19] The apparent contradiction between Le Camus's more philosophical and speculative theory in *The*

Genius of Architecture and his technical interest in the dissertation on wood was not an anomaly in the eighteenth-century context; both were discussed at sessions of the well-established Académie Royale d'Architecture. Our current understanding of disciplinary autonomy and the antithetical nature of poetry and technique is obviously a more recent condition.

Traité de la force du bois may appear to be an entirely technical treatise concerned with the composition of wood and the strength of materials, but its scientific focus is complemented by a highly sensitive and even sensuous perception of the physical world. Le Camus introduces the treatise with an initial promenade through a forest. Understanding the strength of material in a wooden structure enables one to penetrate the "secrets of nature" and the laws that regulate it, Le Camus writes, yet the sensuous experience that fills one with delectation as one enters a forest is no less powerful. The majestic grandeur of nature invites one to reflect and meditate. The filtered light, the various shades of green in the foliage, the height of the trees, and the depth of the silence are the causes of such sensations. A subtle wind that causes the leaves to shiver can suddenly fill us with overwhelming emotions, "shuddering at the sacred horror of the woods."[20] Interestingly, Le Camus uses the same expression to describe the expressive power of architecture in *The Genius of Architecture*. Comparing the effects created by a work of architecture to those of a stage set of an enchanted forest by Servandoni, he writes: "At the sight of the forest of Dodona, the soul is moved; we are seized with the sacred horror of the woods."[21] The very smell of freshly cut wood on a building site can bring back all these emotions:

> What pleasure, what charm do we taste as we penetrate in early morning in these places! What sweet and delectable smell! We would be inclined to believe that we are discovering a sixth sense, and that we are feeling the first flavors. All the wonders of nature contribute to this enchantment. Dew penetrates through the pores of leaves, reanimating their perfumes: the freshness of the earth condenses them and renders them more perceptible; Dawn put them in motion, and spreads them in the air. A poet would say that it is the ambrosia of the Gods that is being prepared. If we enter in a place where trees have been cut down, scattered or piled up, as on a building site, one is struck by a particular freshness: it seems that the air of this place is different from that of the vicinity where there is no wood. The reason of this phenomenon can be explained naturally, if we consider the humidity that penetrates the wood.[22]

This is the extent of Le Camus's poetic description of wood. He then leaves the sensuous smell of freshly cut wood to concentrate on the more pragmatic concerns of drying beams and joists prior to construction. At least seven years are needed, according to M. de Buffon, to dry joists 8 or 9 inches (20 or 23 cm) thick, and more than double this time is required to dry hewn beams 16 to 18 inches (40 to 45cm) thick. Most of the treatise is devoted to distinguishing among different kinds of wood and describing experiments and calculations by various natural scientists, concluding that oak should be used for most construction.

When Le Camus defines what constitutes architecture in the introduction to his treatise on wood, however, one promptly recognizes the author of *The Genius of Architecture*. In his "Discours préliminaire," Le Camus reiterates what he says is a daily complaint: construction is too expensive, and contemporary buildings don't seem to last as long as those of previous centuries. However, construction should not be understood as part of architecture:

> Architecture in France is the art that most closely approaches perfection. The beauty of its proportions, the purity of its profiles, the harmony of its masses excite our sensations. The eye is content; our soul is moved. Such is the power of what we call decoration. If we look at distribution, we will see that the most sensuous man tastes a sweet satisfaction. His demeanor announces that he is completely fulfilled; he is delighted; he finds everything that can contribute to his well-being; he encounters in every apartment what responds to his caprices, to his fantasies. The most sumptuous luxury, the most refined taste inhabit his delightful abode. Art that imitates the beautiful nature fixes them and attaches them there. Theory and practice of architecture have reached a level of completeness such that it would be difficult to add anything. It is a different story with construction.[23]

As in *The Genius of Architecture*, the role of architecture is to "excite our sensations," to please the eye and to touch the soul. Through combined attention to decoration and distribution, architecture conveys the perfection of nature. For Le Camus de Mézières, the theory and practice of architecture are concerned strictly with decoration and distribution; the construction and solidity of buildings (the classical *firmitas*) are not part of architecture, but an autonomous discipline. Le Camus even claims that architects were never concerned with this discipline, always neglecting it as a lower, mechanical art. When Le Camus describes the source of all problems of construction by the fact that this discipline was left in the hands of subordinates, he is not so much posing a historical diagnosis (which would, in any case, be totally inaccurate) as describing a more recent condition: the very possibility of understanding *firmitas* as a separate discipline which in the eighteenth century coincided with the emergence of engineering as an autonomous profession. The condition that Le Camus describes, in which the historical and cultural roots of architecture have been disconnected from the scientific rules of construction, has led to irreconcilable contradictions.

Newtonian empirical science and the role of tradition

Traité de la force du bois was written in memory of Babuty Desgodets, master and long-time friend of Le Camus de Mézières, with whom he wrote *Dissertation de la compagnie des Architectes Experts des Bâtiments à Paris* [. . .] *sur la théorie & la pratique des gros bois de charpente dans leur exploitation & dans leur emploi* (1763). Because of the great cost of wooden structures and their relatively short life – in 1762, the École Royale Militaire had to replace the beams of its structure only six or seven years after its original construction – Le Camus de Mézières and Babuty

Desgodets searched for the causes of this rapid deterioration in natural phenomena. The *Dissertation* begins with a general introduction to botany, followed by a discussion of the impact of soil on the quality of wood, and the appropriate age at which to cut trees to maximize their strength. Commenting on Vitruvius's advice to ring the trunks of trees several months before cutting them, to dry them out by preventing the entry of new sap, Le Camus and Babuty Desgodets suggest instead to float the trees on water. New discoveries in the field of physics, particularly the invention of the microscope by Galileo, could now disprove Vitruvius's method as being dangerous.[24] Their direct criticism of Vitruvius clearly shows that the new science had overthrown traditional authority.

In his later studies on wood, Le Camus also considered experiments by natural scientists such as Duhamel, Parent, and Buffon. One of his crucial conclusions from their research was that beams and joists would be more efficient with their widest dimension positioned vertically. He also concluded that beams could be divided along their length so as to reduce the amount of wood and its weight on supporting walls. Le Camus de Mézières applied his findings on splitting wood to the construction of military barracks in Faubourg Saint-Marceau on Rue Mouffetard in Paris. Since the financial enterprise seemed somewhat precarious, Le Camus suggested that the structural members for each floor be split, so that every joist would be only 2 inches (5cm) wide, 6 inches (15cm) deep and 9 feet (2.75m) long, thus saving almost two-thirds of the wood. He also made the beams half as wide. The savings were significant, and Le Camus was pleased that his theoretical findings were finally being put into practice. The project, however, was badly received by the master-builders, who vehemently protested and demanded to have the project stopped.

The issue, in fact, was a dispute between traditional practice and a new theory based on mathematical calculations. Indeed, the floors of the new barracks were said to deflect even before the building was occupied, thus confirming the objections of the master-builders. Le Camus de Mézières did not escape the repercussions of letting mathematical calculations take precedence over traditional practice. Faced with the dilemma of the military barracks on Rue Mouffetard, Magistrate M. de Sartine appealed to the Academies for advice. Two reports were produced: one by MM. de Parcieux and Perronet for the Académie Royale des Sciences, the other by MM. Camus and Desmaisons for the Académie Royale d'Architecture. Since his theories were increasingly coming under attack from master-builders and other practicing architects, Le Camus de Mézières attempted to legitimize them by invoking these two reports from the Academies, even though their conclusions tended to undermine his theoretical speculations.

The report of the Académie Royale des Sciences described the deflecting floor structures, but also praised Le Camus's intention to minimize unnecessary loads on the walls and to prevent excessive expenses caused by the rarity of timber. The report also agreed that beams and joists with a vertical profile were structurally more efficient, as in Le Camus's building. The designated members of the Academy confirmed many of the calculations on which Le Camus based his project, but also warned that the advantages of splitting wood have limitations, mainly because cutting

through the grain weakens the wood. Referring to Buffon's *Mémoire* (1741), the authors of the first report agreed that joist dimensions usually are unnecessarily large, but noted that the distribution of a building can change with a new owner, so it is customary to provide a stronger floor structure. The report concluded that, despite the great advantages in reforming the excess in using unnecessarily large timber, one should not move to the other extreme.

The report of the Académie Royale d'Architecture agreed with the report from their colleagues at the Académie Royale des Sciences, and also concluded that they could not approve the wooden structure of the floors because it did not respect the rules established by experience, nor the principles of mechanics.[25] Le Camus remained confident that time would prove him right, and the preface of his *Traité de la force du bois* concludes on an optimistic note, stating that since the Academies have filed their reports, his method of splitting wood has become the norm: "The progress of the arts can only be the result of a multitude of observations that cannot be the work of a single man or of a narrow-minded time."[26]

The debate between science and tradition had arisen two years earlier with the construction of Ste. Geneviève, the French Pantheon in Paris, by the architect Germain Soufflot (1713–80). In 1764, Soufflot initiated a structure that its detractors would soon accuse of defying traditional rules. The very slender structure of the dome and its supporting piers was based on precise mathematical calculations that minimized the use of stone. Unlike Le Camus, however, Soufflot's argument for reducing the thickness of his structure was both scientific (the efficient use of materials) and aesthetic; he believed that structural stability and aesthetics were interdependent. Pierre Patte (1723–1814), author of *Mémoire sur les objets les plus importants de l'architecture* (1769), was very critical of Soufflot's construction and predicted the eminent collapse of the dome. Patte claimed that Soufflot had challenged natural proportions by basing Ste. Geneviève on calculations rather than on empirical observations of architectural precedents.[27]

The dispute between those who believed in mathematical calculations and those who believed in traditional examples remained unresolved until the end of the eighteenth century. In 1800, Charles-François Viel perpetuated the controversy in his *Décadence de l'architecture à la fin du dix-huitième siècle*, and sided with Patte in the debate over the dome of the Pantheon. He criticized Soufflot for resting the fate of his building on mathematical demonstrations rather than on practice and experience. Some have argued, Viel says, that many ancient and modern buildings are over-dimensioned in some parts and under-dimensioned in others, if considered from a scientific standpoint. Their very existence after many generations, however, is the best proof of their legitimacy, he concludes, since even "mathematicians do not seem to agree among themselves on the precision of their respective theories applied to architecture!"[28] Rules alone cannot determine the appropriate way to build solidly, nor can they dictate the form and disposition of buildings.

Viel's seemingly reactionary position opposed not only scientific experimentation but also other new tendencies such as looking to sources other than ancient Greece for architectural principles, taking great liberty in exploring new fashions, and letting the imagination forge new principles. The causes of the decadence

of architecture have never been as virulent as they are today, he writes, and true principles are necessary to counteract the frivolity of fashion. He was fiercely opposed to those who suggested studying buildings that belonged to every age and from different nations in order to take advantage of different genres of composition and to extract more general principles of architecture: "As if there could be principles in the capricious productions of the barbarous nations, and outside those of the Greeks," he concludes sneeringly.[29] Viel was criticizing the very notion of innovation and identified two fatal periods for architecture. The first, described as a false taste, was epitomized by the work of Lajoue and Oppenord. The second, closer to the end of the century, was marked by the work of two "infamous" architects: "One famous by the extravagance of his ruinously expensive projects; the other, by his numerous drawings, produced by a wandering and unruly imagination."[30] Without naming them, Viel was attacking the architecture of Soufflot and Ledoux. A return to real beauty in architecture can happen only if we carefully study the precedents of classical architecture, Viel writes, and by uniting the genius of the art with the science of construction. These two branches of architecture, united by the experience of practice, cannot be divided because "there is a real dependence between the proportions that constitute the beautiful composition of buildings, and those that the solidity of construction demands."[31]

Viel promoted the idea that science alone could not resolve the problems of construction, and that only the architects who knew both sides of architecture (the genius of the art and the science of construction) and who relied on the experience of their predecessors could succeed in building appropriately. This desire to reconcile the two aspects of the profession was not uncommon at the end of the eighteenth century. Even Le Camus de Mézières, whose treatise on the strength of wood was breaking new ground at a scientific level, never denied the importance of the architect's experience. This is particularly evident in his other treatise on building construction, written this time for clients rather than for the building trades. *Le guide de ceux qui veulent bâtir. Ouvrage dans lequel on donne les renseignemens nécessaires pour se conduire lors de la construction, & prévenir les fraudes qui peuvent s'y glisser*, as the title indicates, was written with the intent of preventing common mistakes by clients and potential frauds one could expect from contractors. After listing everything that an owner ought to consider before contracting a project, including the choice of architect, Le Camus goes into great detail on the process of construction, from borrowing money to choosing a good contractor who won't indulge in wine and waste his time and the client's money. He meticulously describes every kind of building material, from the wide variety of wood and stone to the various types of nails. He provides recipes for varnishes, and indicates how to produce different colors.[32] The intent, however, is still to educate clients and not architects or builders, and Le Camus warns his reader against trying to practice architecture without proper training.

Even though *Le guide* attempts to cover every aspect of construction, the training of an architect requires assistance from an experienced master. Whereas *Traité de la force du bois* promoted science to ensure "progress" in the art of construction, *Le guide* insisted on the importance of experience in training an architect; together, they indicate the complex balance between science and tradition, as well

as the status of theory in the eighteenth century. While the teaching of architecture had been sanctioned by the creation of the Académie Royale d'Architecture in France under Louis XIV, and Jacques-François Blondel's school offered a new form of architectural education during the first half of the eighteenth century, even architects who were committed to the scientific development of the discipline were not ready to accept theory as a potential replacement for practice and experience. While theory could extract clear principles and lead to a more rational practice, the example of an experienced master was considered the only reliable way to educate an architect. Le Camus insists on the importance of choosing a good architect, and describes the qualities that a client should seek. He warns against architects who are more interested in decoration than in making sure that the cost of the project will not ruin the client. He also warns against architects with no experience, and those who draw very well without knowing the art of building: "Good will is not enough," he writes. "Experience is indispensable, and can be acquired only through time and continuous practice."[33]

In *Le guide*, Le Camus revisits some themes developed earlier in *The Genius of Architecture*. Sensuous language is again used to describe some aspects of architecture, and he reformulates the theory of expression that characterizes his previous work. *Le guide* is written in the form of letters to a friend, the first one devoted to the pleasure of building. It seems that everyone feels this need to build, Le Camus writes, even if only to remodel one's house, for what we build reflects who we are. As might be expected from the author of *The Genius of Architecture*, the analogy between architecture and theatre is also extended to the process of construction in *Le guide*. For Le Camus, construction is not unlike theatre, since it is "an ideal means of relaxation and entertainment that occupies our attention entirely, providing each day with new scenes, new sensations, new ideas, new pleasures."[34]

Le Camus's ever-present interest in the theatre took a different turn in his *Mémoire sur la manière de rendre incombustible toute salle de spectacle*, a pamphlet published anonymously in 1781, the same year as *Le guide de ceux qui veulent bâtir*. Its main concern was to present concrete ways to prevent deadly fires in entertainment halls.[35] By then, many significant fires in theatres had struck the city of Paris. During the second half of the eighteenth century, numerous fires plagued the Paris Opera, two of them destroying it completely. After the fire of 1763, Soufflot was called to Paris to restore the Salle des Machines of the Tuileries that would temporarily house the Opera. In 1781, a second fire destroyed the opera house by Moreau that had been built only a decade earlier, in 1770. The Opera was then housed in a temporary structure erected in seventy-five days on Boulevard St-Martin.[36]

The numerous fires at the Opera and other public theatres prompted architects to apply their ingenuity to make theatres incombustible, to provide easy escape in case of a fire, and even to stop fires once they had started. For example, following the 1781 fire at the Opera, then located at the Palais Royal, Boullée designed a project for a new opera house in which safety and fire prevention were the main concerns. The site he chose was the place du Carrousel, between the Louvre and the Tuileries, now occupied by the Arc de Triomphe. Boullée praised this location for its easy access and fluid circulation, as well as its proximity to the

warehouse for the sets. He also justified the monumental setting of the building because it would prevent a fire from spreading. Exits were carefully considered, and building materials were restricted mainly to brick and stone. Only the floor and some wooden decorations could burn, but to reduce the risk that fire would spread, a water reservoir was placed below the floor of the entire theatre to extinguish the first flames. Boullée's preoccupation with fire reflected a general concern among architects for public safety in such entertainment buildings filled with burning candles, volatile fumes, and flammable sets.[37] Pierre Patte, in his *Essai sur l'architecture théâtrale* (1782), complains about the great fire hazard in the theatres of the time. He claims that there was at least one accident every week in which paper-lined sets could have caught fire. Long after the invention of light reflectors, the stages continued to be lit with open candles, usually manipulated by drunken men. To hinder the spread of fire, Patte suggested building the boxes against a masonry wall (either stone or brick) to protect the exit corridors.

Inspired by the same desire to prevent these all-too-familiar tragedies, Le Camus de Mézières examined the architecture of theatre buildings. Like many of his contemporaries, he carefully considered the ideal location for a new opera house, as well as the appropriate distance from any surrounding construction. As for Boullée, aesthetics and rational design decisions were indivisible. Le Camus's suggestions for making theatres incombustible went far beyond those of Boullée and his other contemporaries, however. In his *Mémoire*, Le Camus proposes to eliminate the very cause of these tragedies. No combustible materials were to be used in *any* part of such public buildings. His granary in Paris, acclaimed for its incombustibility, served as a powerful example to demonstrate the feasibility of his theatre project. Stone would be the favored structural material, and the attic would be made of brick. Bridges and doors would be made of iron, and the space inside doors could be filled with copper or tin. Like the attic, the ceiling above the auditorium would be made of brick, with a minimal curve that would be imperceptible from below. The ceiling would be strengthened by an iron structure and the entire surface would be covered with plaster. The floors of the boxes would be made of stone, either in arches or slabs, as was currently done for balconies. The supports and balustrades would be iron, covered with copper instead of canvas. Le Camus even speculated that such materials might favor the voices of actors, making the space of the theatre more "resonant." The Romans used a similar device, he said, placing bronze vases under the amphitheatre. His use of material was meant to improve this ancient tradition. If the auditorium became too resonant, he suggested, the panels of the balustrades could be doubled and some sand could be added in between. The entire theatre was thus conceived as a musical instrument that could be tuned as needed.[38]

Le Camus's acoustical theory appears to be based on tradition, referring to the resonating vases described by Vitruvius, but it soon exceeds that tradition by speculating on the eventual sonority of an auditorium in which the balustrades would be lined with sheet metal. Obviously, the science of acoustics was still in its infancy. Although wood and other flammable materials would help reduce reverberation, they were systematically excluded from the auditorium furnishings and the stage sets. The floor of the entire theatre would be made of stone or brick. Because dancers

required a wooden surface on which to perform, Le Camus made a single exception for the floor of the stage, but suggested placing it directly on the vaults so that any fire would be easily contained. The stage machinery would be made of iron, copper, or lead. The borders of stage sets would be made of very thin copper painted like canvas, with all sharp edges finished with a fold to prevent accidents. Le Camus also noted that this finishing detail would give some thickness to the sets and look more dignified than the thin edges of canvas. He continued describing every component to show that his ideal theatre contained no combustible material. Even the curtain could be made of copper. Le Camus concluded that theatre fires could be prevented in thousands of ways if the owners were willing to pay the expense. Moreover, it was particularly important not to skimp on the cost of public buildings, since they were meant to last for posterity.

Le Camus's treatises all indicated his genuine interest in the theatre and its various applications to architecture. Strangely, when Le Camus directly confronted the issue of theatre design, he focused on a single technical problem, leading to a proposal that was ultimately impossible to realize, with little basis on precedent. Although Le Camus de Mézières's technical treatises may suggest that he emphasized science and theory over other considerations, his entire body of work indicates no such dichotomy between technical rationality and the expression of cultural values.

Chapter 8

Empirical philosophy and the nature of sensations

In *The Genius of Architecture*, Le Camus de Mézières defines a theory of expression that assumes that all shapes, colors, light, and textures employed in the design of a building act upon the senses to induce "certain predictable sensations in the observer."[1] Although he makes no explicit reference to the empirical philosophy that was transforming the very nature of knowledge in the eighteenth century, the subtitle of his treatise, *The Analogy of That Art [architecture] With Our Sensations*, suggests a connection to the sensualist philosophy of John Locke and Étienne Bonnot de Condillac. For them, knowledge was directly tied to sensory perception because the senses reacted consistently to particular forms, just as particular combinations of musical tones were associated with different moods. They also rejected the existence of innate ideas in the mind that would provide a pre-understanding of objects. Like Locke and Condillac, Le Camus de Mézières believed that knowledge is acquired through sensory perception. He obliquely acknowledged the influence of empirical philosophy in the introduction to his architectural treatise, writing that the "principles concerning the analogy between the proportions of Architecture and our sensations are founded on those of the majority of the Philosophers. We cannot go astray by following nature."[2]

Étienne Bonnot de Condillac and the nature of imagination

In 1754, Étienne Bonnot de Condillac published his *Traité des sensations*, an account of Pygmalion's statue coming to life, in which he maintains that all human understanding, from our first impressions of the external world to our very ability to think and imagine, relies on the five senses alone. Impressions recorded by the senses are preserved and compared by memory. Imagination is a subtle form of memory in which various sensory impressions are combined to create new ones.[3] This definition of imagination echoes architectural theories of the time, in which the creation of new works relied on history. Building on his two previous works, *Essai sur l'origine des connaissances humaines* (1746) and *Traité des systèmes* (1749), Condillac proposes

in *Traité des sensations* a mental exercise that enables one to return to a state of complete ignorance, the *tabula rasa* postulated by Locke. Condillac demands that we imagine ourselves as a statue whose mind is like an empty box, devoid of innate ideas. He then guides the reader through a journey in which the statue acquires, one by one, the senses that make it aware of its surroundings, and integrates various impressions from the external world to acquire knowledge of itself and of otherness.

The acquisition of knowledge through individual senses was widely studied from mid-century until the last decades of the eighteenth century. Diderot himself reflected on the question in his *Lettre sur les aveugles*, published in 1749 and translated into English the following year as *An Essay on Blindness*. The controversial work of Julien Offray de La Mettrie, *L'homme machine*, published in France in 1748, also explored human dependence on the senses for knowledge of the external world. La Mettrie believed that the states of the soul were related to those of the body, and, like Locke, he claimed that it would be impossible for a man deprived of all his senses to acquire a single idea.[4]

The new empirical model for acquiring knowledge, however, was not without opposition. Many resisted its rational premises and claimed instead that innate desire and passions are the true motors that incite the acquisition of knowledge. Jean-Jacques Rousseau, for example, refused to admit that intellectual faculties were independent; he believed in the reciprocity of different modes of knowing. He thought that without passions or the desire for pleasure, no one would even feel the need to think.[5]

Condillac, on the other hand, believed that desires and passions, including love, hate, hope, worry, and will, originated from our capacity to compare different sensations. The motor that incites us to acquire knowledge, he claimed, was activated by the three natural needs: feeding oneself, avoiding accidents, and satisfying one's curiosity.[6] In his *Essai sur l'origine des connaissances humaines*, published almost a decade before his *Traité des sensations*, Condillac first noted the affinities between his empirical philosophy and that of Locke. Condillac was familiar with the French translation of Locke's *Essay Concerning Human Understanding* (1690), in which the English author compares the human mind to an empty cabinet pierced with some small openings to let in images or ideas of the external world. Locke suggested that if we could classify such images or ideas that penetrate inside this dark cabinet, there would be a great resemblance with human understanding in the way images and ideas affect the mind.[7]

Using a similar analogy, Condillac conceived his statue as having an empty mind on which every new sensation would make a fresh impression. Georges Gusdorf explains the extroverted attitude of the Enlightenment mind in part through its affiliation with Locke and Condillac. Because empirical philosophers no longer believed that truth was accessible intuitively but proceeded from the external world to the interior of the individual, intrinsic personality characteristics and intuitive moral knowledge disappeared along with innate ideas. This new experimental philosophy moved the ground of convictions from the internal to the external world, and thus transformed moral matters into rules of customs. Conventions in the eighteenth

century thus became a way to control social behavior, compensating for the loss of innate moral convictions.[8]

Although, in *Traité des sensations*, Condillac does not recognize the role of conventions in acquiring knowledge, he certainly insists that any awareness of one's existence is induced originally by an external stimulation. Exploring the impact of each individual sense, Condillac's statue is first given the sense of smell. A flower brought to its nose creates a new sensation but the experience of this single smell cannot generate a desire for the smell to disappear or to continue, even if it creates suffering or pleasure, because the statue has no point of comparison: it has no idea of change, succession, or duration. The statue thus exists without the ability to create desire, Condillac explains. It is with memory that the statue can compare and make judgments; memory becomes another way of smelling. This ability to compare and judge creates two kinds of pleasure or suffering: the first one is more "sensitive" and pertains to the physical body; the other is more intellectual or spiritual and it belongs to the realm of memory and affects the soul. Condillac warns that this distinction is not simple, however, because only the soul truly can feel; the body is only its "occasional cause."[9]

Memory itself has different modulations, imagination being its most refined aspect. Condillac defines memory as the infancy of imagination that in turn becomes a third mode of awareness, in addition to smell and memory. Its purpose is to fix the impressions of the senses and to combine them in new ways in the absence of the action of external objects. Condillac's statue, endowed with the single sense of smell, has not learned to discriminate between a sensation and the imagination of a sensation, since it has no other sense to warn it of the absence of the object it is imagining. Thus the statue has no concept of doubt toward the senses, and it can imagine freely, but Condillac was convinced that, with the sense of smell alone, the statue already possessed a soul, and through this single sense, the soul had the faculty of knowing and desiring.[10]

Condillac argues that his reasoning could be extrapolated to the other senses because they behave in a similar fashion. The sense of hearing, however, can move the statue more powerfully than smell or taste ever could, since sounds can affect the body directly and can convey sadness or joy without relying on acquired ideas. Throughout the eighteenth century, the sense of hearing was believed to give direct access to emotions, for music could move the soul. In *The Genius of Architecture*, Le Camus de Mézières writes:

> Alexander, inflamed by the over passionate strains of music, slew Clytus, one of his favorites. There is, in Switzerland, a very common air called the *danse des vaches* (cows dance), which no soldier is permitted to sing when he is out of his own country on pain of imprisonment, for otherwise the malady comes upon him, and he deserts. Aristotle mentions a custom, prevalent among the Greeks, of softening the horrors of an execution with music. The celebrated Tyrtaeus, by passing from the Lydian to the Phrygian mode, gave Sparta its victory over the Messenians.[11]

Sounds also create a very strong sense of duration because the pleasures of hearing are created mainly by melody, which is a succession of harmonic sounds to which time provides a specific character. When the statue identifies with sound as it did with smell, it will not be satisfied with a single note and will want to experience an entire melody. Even though the sense of hearing does not contribute more than smell or taste to indicate the presence of an external realm, combining different senses will enable the statue to perceive that it has acquired a more complex existence.

Of all the senses, Condillac gives predominance to touch because it is the most spatial of the senses, and it distinguishes most clearly between the body that perceives and the outside world. He refutes the Cartesian notion that sight is our primary means of perceiving the world.[12] To demonstrate this primacy of touch over sight, Condillac recounts an experiment of a person who had been blind since birth, and to whom the sense of sight was given by removing cataracts. After the operation, the patient perceived that objects were touching the surface of his eyes. This was because his organ of vision had not learned to discern the distance of objects, as could his sense of touch. This person, newly endowed with sight, could not distinguish visually between a cube and a sphere, but relied instead on his tactile knowledge of the world to educate his sense of vision.[13] Condillac thought that touch indeed could teach the other senses to recognize external objects. It instructs the eye to perceive distances, shapes, sizes, and movements, whereas sight alone would perceive the external world only as an extension of itself. When he began to distinguish shapes and sizes, Condillac says, the objects that gave the patient most pleasure must have been those that best reflected light, and those whose composition could be grasped most easily. This preference for simple forms seems to foreshadow the developments of neo-classical art and the architectural innovations of Boullée, for whom simple forms were superior because they were more natural.

Condillac explains that the statue which is given the sense of sight in addition to the other senses does not need to learn how to see, but it needs to learn how to look. In other words, sensations need to be analyzed in order for ideas to be formed. For Condillac, this capacity for analysis appears to be innate in humans. It indicates an interesting complexity in which the mind remains analytic and Cartesian, but despite his emphasis on touch, Condillac is not yet describing an embodied consciousness processing sensory information.

This analysis of tactile observations leads the statue to develop some kind of geometry, as well as an understanding of dimensions and places. The statue which relates to the external world only through touch perceives that all of its sensations are merely a modification of geometric extension. Unlike the other senses, tactile perception is more powerful because it lasts longer and cannot be forgotten as easily, for the statue endowed with touch is always aware of its body and can never be entirely deprived of all sensations. With touch, imagination not only enables the statue to remember and imagine a known sensation, it develops a reflective faculty with which the statue can combine previous sensations to create new ones. Imagination, therefore, is "a faculty that combines the qualities of objects to create combinations that do not exist in nature."[14] Nature, however, is not being challenged or dispensed with. On the contrary, nature remains a model of perfection that must guide any

process of creation. Condillac emphasizes that no greater perfection can be achieved than what is found in the very organs of perception, since they are naturally perfect. The organs of touch, for example, could not be improved; twenty fingers instead of five would be more confusing than helpful, since the complexity of an external object can be perceived only through contact with our *simple* perceiving organs.

If the statue were given only the sense of touch, Condillac continues, it would gradually recognize the extent of its body by touching itself and by recognizing the acts of both touching and being touched. It would then recognize the extent or the otherness of the world by touching but not being touched in response. With the sense of touch, the statue develops curiosity and this becomes one of the principal motives for action. The statue also learns to recognize the shapes of figures that sight alone cannot grasp, and to understand principles such as duration, immensity, and eternity. The statue acquires "ideas," which are a remembrance of sensations, but it cannot develop more theoretical ideas because it lacks language. It is only through language that notions such as good and beauty, which express qualities that contribute to our pleasure, can be developed.

Good is what pleases smell and taste; beauty is what pleases sight, hearing, and touch. This ability to formulate judgment through language and to base this judgment on sensation was to be Condillac's most important contribution to the discourse on art and architecture. It is precisely what enabled Le Camus de Mézières to use empirical philosophy as a model for his architectural theory. Moreover, it is through language that the appreciation of good and beauty could become a shared ground of experience. Even though some may appreciate the taste of honey while others despise it, Condillac explains, all would agree on its sweetness. In Le Camus's theory it was crucial that architecture could convey specific emotions to the observer by acting directly upon the senses. As honey would invariably convey the sensation of sweetness, the analogy between architecture and our sensations assumed that all external stimuli that can affect the senses, such as shapes, color, light, and even textures and smells, would induce specific sensations in the observer, and that the senses consistently responded to specific forms in specific ways.

In legitimizing the analogy between sensuous perception of harmonic proportions in architecture and in music, empirical philosophy contributed directly to Le Camus de Mézières's architectural theory: "The sound of the trumpet animates the warrior and even his horses; and the tone, the proportions, and the harmony of Architecture have the same power over our souls."[15] In a section of his treatise "On the Art of Pleasing in Architecture," Le Camus declares that harmony is the only way to please in architecture, and, as in painting, these principles are derived from *beautiful nature*. Harmony of proportions in the elevations, in the volumes, and in the relations among all of the parts and the whole leads to pleasure and intellectual enjoyment, which is the ultimate goal of the fine arts. A lack of harmony among the parts of a building "offends the eyes, as the ears are offended by a false note in music."[16] Harmony can induce a wide range of emotions in both the listener and the beholder. It can even affect human behavior.

Le Camus clearly believed in the common origins of architectural and musical harmony in nature. He also defended the importance of rules of architectural

proportion in parallel with similar rules of harmony in music. His primary examples were René Ouvrard's *Architecture harmonique* (1679) and Father Castel's color harpsichord. Like Ouvrard and Castel, Le Camus assumed that proportions in architecture are guided by natural principles of harmony that affect the sense of sight as music affects the ears. Father Castel's color harpsichord was undeniably the most direct application of this principle. Applying some very complex and ingenious calculations, Le Camus explains, Father Castel devised a musical instrument that could produce a simultaneous chromatic concert: "Colors succeeded each other harmonically and struck the eye with the same enchantment and, to a man of education, a pleasure as great as any that the ears can enjoy in sounds combined by the most able Musician."[17] Le Camus saw in Father Castel's experiment a proof of his own theory: that harmony is natural and therefore universal. Consequently, harmony could be perceived directly through different senses, and could be applied in analogous ways to various art forms.

Like Le Camus, Ouvrard also believed in the importance of harmonic proportions in architecture, without which the architectural orders would be little more than "confused piles of stones without order or rules."[18] Ouvrard in fact produced the most literal application of musical harmony translated into architectural proportions. He explains that an octave combines two sounds produced by chords whose lengths have a proportion of 1: 2, the fifth has a proportion of 2: 3, and the fourth has a proportion of 3: 4. Ouvrard reiterates that sounds that do not follow these harmonious proportions are unpleasant to the ear, and in architecture the forms that do not follow these proportions are shocking to the eye. Vision is less discriminating than hearing, he admits, but if the totality of architectural proportions were in harmonious relation, we would most certainly *feel* the beauty. Ouvrard distinguishes further between sounds and formal proportions, saying that in music, harmony concerns only the sounds that touch the ear simultaneously, while in architecture, sight can capture more than one thing at a time and composition is therefore more complex. Yet, the direct applicability of musical harmony to architecture remains a priority for him. Ouvrard provides specific examples of proportions in buildings that translate literally into musical sounds:

> In order to make visible harmony perceptible to the ears, we could carve the intersecting wooden members like the pipes of an organ, and put at each end some sort of open gutters following these proportions by a reverse order, putting the C every 32 feet, and the other chords in proportion. Since this house is exposed to the air, we would certainly hear these harmonies when the wind would blow in its pipes.[19]

For Le Camus de Mézières, this striking *literal* connection between sound and vision was precisely what related the late seventeenth-century writings of Ouvrard to the mid-eighteenth-century experiments of Castel, confirming his theory that harmony is not sense-specific, but truly universal. Le Camus admits that Ouvrard's work was not received without criticism, since that is the fate of many geniuses, and Perrault was probably one of his leading opponents. An acknowledged Cartesian, Perrault rejected all forms of association between architectural proportion and musical

harmony because he believed that the senses were totally autonomous and that proportions in architecture were based on conventions produced by a consensual agreement among architects.

Le Camus's defense of Ouvrard's position was in direct opposition to that of Perrault, for he assumed a direct correspondence between the different senses. In comparing architecture to music, Le Camus insisted that architecture could induce passions in the soul in a manner similar to music. In this sense, his discourse repeated a familiar concept in European architectural theory since the Renaissance: the natural rules that guide musical harmony also apply to architecture, determining the harmonic relation of the parts to the whole. For Le Camus, the proportions in architecture were like rules of musical harmony that could be combined in an infinite number of ways, while continuing to follow the predetermined rules. His architectural theory was based on the assumption that as every mode in music corresponds to a specific character, the expression of every order in architecture would be unequivocal.[20]

Throughout *The Genius of Architecture*, Le Camus insists on intimate connections between architecture and music, and between colors and sounds, since all forms of harmony induce passions and affect the soul in similar ways. However, unlike his predecessors, such as Ouvrard, these associations remained at an analogical level. Le Camus did not look for a one-to-one connection between sight and hearing, nor did he attempt to translate the theory of harmonic proportions in architecture into a systematic method as Briseux tried to do in the *Traité du beau essentiel dans les arts* (1752).[21] Instead, Le Camus was interested in the general principles that linked the two senses, and retained the narrative implications of such an association. Recalling the legend surrounding the foundation of the city of Thebes, for example, he emphasizes that it was built "to the strains of Amphion's lyre: a fiction that teaches us, at least, that the Ancients felt how intimately Architecture was allied to harmony, which is none other than the combination of different parts to form a concordant whole."[22]

Although Le Camus was indebted to empirical philosophy, there are important differences that should be pointed out. Unlike Locke and Condillac, Le Camus was less concerned with determining how individual senses would respond to external stimuli than how the various senses interacted with each other. He was interested in how architecture could affect all the senses so as to create a unified character: shapes, colors, and smells should all combine to offer a spatial experience that encompasses all the senses, thus explaining Le Camus's fascination with the work of Ouvrard and Père Castel. Le Camus does not explicitly acknowledge his allegiance to Condillac or Locke in his architectural treatise, because his notion of an analogy between architecture and our sensations was derived not from a scientific analysis of the senses, as carried out by Condillac, but from an analogical and sometimes even metaphoric comparison among the different senses. As musical harmony could correspond to the need for visual proportions in architecture, so could the other senses. Le Camus's primary aim in basing his architectural theory on an analogy with human sensations was to ensure that the resulting architecture would not speak to the rational mind only but would also move the very soul. Architecture would thus become a new metaphysics.

The meditation on "sensations" in *The Genius of Architecture* differs from the systematic scrutiny of sensory perception by the empirical philosophers. Le Camus's intention was to recover architectural meaning not only through the sensory experience of the external world, but also through the emotions (*les sensations*) and passions created in the observer. This search for meaning in the emotional *sentiments* of the individual was in fact one of the foundations of romanticism, which had been latent in France since the beginning of the eighteenth century. Unlike Condillac's statue whose knowledge of the world was acquired exclusively through the senses, Le Camus's description of architectural experience did not presume the absence of an a priori. The judgment of architectural proportions and character in *The Genius of Architecture* is not elaborated from a purely rational framework either. It comes instead from a natural innate sense, common to all men. Describing a Chinese garden in England, Le Camus emphasizes that the expression of such a construction is never equivocal because everyone can easily read the character that nature presents: "she is within everyone's reach. The sensibility that almost all men share is enough to make them feel her influence to the full."[23]

The notion of *sensibility* described here by Le Camus, and what Gusdorf associates with the "birth of romantic consciousness" during the Enlightenment, is not yet the romantic "inner sense" that would emphasize the individuality and originality of every human being in the nineteenth century. The distinction is an ontological one; it opposes the belief that one can attain a universal and absolute truth by returning to a natural sense that links all individuals ("the sensibility that almost all men share") to the belief that would preserve the difference of every individual and would lead to relativism in the nineteenth century. This distinction is crucial and constitutes an important modulation in the emerging concept of a romantic consciousness prior to the French Revolution, yet it also adds a new dimension to eighteenth-century art and philosophy: beyond the scientific objectivity, beyond the general submission to conventions under the *Ancien Régime*, it announces the emergence of a new subject, different from Descartes's transparent *ego cogito* and its innate ideas.

Edmund Burke and the materiality of light and shadow

The main objective of sensualist philosophy was to understand how knowledge is acquired through the senses, and how sensation leads to judgment when mediated through language. Three years after the publication of Condillac's *Traité des sensations*, the English philosopher Edmund Burke (1729–97), directly influenced by the sensualist doctrine of Locke, investigated some aspects of human perception that would become relevant to the discourse of art and architecture during the second half of the century. In *A Philosophical Enquiry into the Origin of our Ideas of the Sublime and Beautiful*, published in England in 1757 and translated into French in 1765, Burke tries to isolate the psychological causes of emotions that produce the effects of the sublime and the beautiful. His new epistemology would draw a correspondence between the notion of taste and absolute judgment.

Even though there seems to be a great "diversity of tastes both in kind and degree" when comparing different individuals, Burke explains, taste is

nonetheless based on principles that are the same for everyone. These principles are based on what he calls the "natural powers in man" that establish a connection between human understanding and the external world; these natural mediators are the senses, imagination, and judgment. Like Condillac, Burke assumed that since the organs of the senses are nearly the same in all humans, so is their perception of external objects. If similar senses produced different images of the external world, Burke continues, the resulting skepticism would make "every sort of reasoning on every subject vain and frivolous,"[24] thus implicitly criticizing Malebranche and the Cartesian philosophy of doubt. Burke admits, like Condillac, that there are acquired tastes (such as a preference for vinegar over milk), yet these acquired tastes do not prevent one from distinguishing between sweetness and sourness, which is a natural form of taste or judgment.

Unlike Condillac, Burke does not attempt a meticulous analysis of the senses but instead elaborates on general concepts such as taste and delight, as well as pleasure and pain, to determine the sources of the sublime and the beautiful. For Burke, taste is a refined form of judgment that is initiated in sensory perception. The impressions made on the senses are mentally recognized and associated through the imagination, and they lead to a form of discernment that characterizes taste:

> What is called Taste, in its most general acceptation, is not a simple idea, but is partly made up of a perception of the primary pleasures of sense, of the secondary pleasures of the imagination, and of the conclusions of the reasoning faculty, concerning the various relations of these, and concerning the human passions, manners and actions. All this is requisite to form Taste, and the ground-work of all these is the same in the human mind; for as the senses are the great originals of all our ideas, and consequently of all our pleasures, if they are not uncertain and arbitrary, the whole ground-work of Taste is common to all, and therefore there is a sufficient foundation for a conclusive reasoning on these matters.[25]

In this way, taste recovers a natural ground by claiming its origin in the senses that are common to all. If taste varies among individuals, it only depends on sensibilities that can fluctuate.

Also subject to great variation is the perception of pain and pleasure. These two feelings and their many variations dominate the wide array of human passions. Most of the ideas that are capable of making a powerful impression on the mind are derived either from pain or from pleasure, Burke writes, and are dictated by two general categories of human reaction: the instinct of self-preservation and the behavior of man as a social and sexual being towards procreation. The passions that most powerfully incite man to self-preservation are imbued with pain, since the ideas of suffering, danger, and death fill the mind with strong emotions of horror. The ideas that answer the purpose of procreation, on the other hand, induce passions that originate in pleasure.

Delight also originates in the senses, but is distinct from pleasure, and even opposed to it in nature. To explain the distinction, Burke suggests that both pain and pleasure are positive characteristics: the abrupt termination of pleasure leads to

disappointment or grief, not to pain, for pain is not the absence of pleasure. Similarly, distancing oneself from pain results not in pleasure but in delight; this awareness is essential to appreciate the painful and terrifying in artistic productions.[26] Since delight depends on a relation to an external context, it is a *relative* form of pleasure. This definition of pain and delight is crucial for understanding Burke's notion of the sublime. The source of the sublime, he writes, can be found in "whatever is fitted in any sort to excite the idea of pain, and danger, that is to say, whatever is in any sort terrible."[27] The sublime explicitly addresses death, horror, and danger; it is produced only by the strongest emotions, and only from pain can such emotions arise. The sublime, however, is not all that is terrible, but rather a form of terror that can be appreciated from *certain distances*, so as to create delight. Sources of the sublime, therefore, include not only terror but also power and all "general privations" such as vacuity, darkness, solitude, and silence "because they are all Terrible."[28] It also includes vastness and infinity.

Burke's definition of the sublime as a transmutation of pain into delight is not unlike the dramatic distancing of Greek tragedies. In his *Poetics*, Aristotle had already defined this phenomenon: "Objects which in themselves we view with pain, we delight to contemplate when reproduced with minute fidelity: such as the forms of the most ignoble animals and of dead bodies." For Aristotle, the pleasure derived from observing painful events from an artistic distance comes from the potential to learn: "To learn gives the liveliest pleasure, not only to philosophers but to men in general [. . .] Thus the reason why men enjoy seeing a likeness is, that in contemplating it they find themselves learning or inferring, and saying perhaps, 'Ah, that is he.'"[29]

For Burke, however, the creation of intense, sublime emotions did not necessarily aim to teach other individuals the consequence of their action; sublimity became an end in itself. This obsession with creating sublime effects was not restricted to poetry and the art of tragedy; it pervaded every field of artistic production. In his *Philosophical Enquiry*, Burke indeed devotes some thoughts to the sublime in architecture. Succession conveys the idea of progress beyond limits, and uniform parts continue that unbroken progression: these are what constitute the "artificial infinite." The noble effect of regular and especially circular shapes in architecture is due to this notion of artificial infinity. The rotunda, for example, is a clear manifestation of this effect because it has no boundary:

> Turn which way you will, the same object still seems to continue, and the imagination has no rest. But the parts must be uniform, as well as circularly disposed, to give this figure its full force; because any difference, whether it be in the disposition, or in the figure, or even in the color of its parts, is highly prejudicial to the idea of infinity, which every change must check and interrupt, at every alteration commencing a new series.[30]

Interestingly, this description of the sublime in architecture seems to anticipate Le Camus de Mézières's granary, the first freestanding circular structure in Paris, built shortly after the publication of Burke's treatise. The predominance of regular geometrical figures that create "sublime" effects in architecture came to mark the

last decades of the *Ancien Régime* in France, particularly through the work of Étienne-Louis Boullée. Boullée's debt to sensualist philosophy and to Le Camus de Mézières is pervasive. Only a few years younger than Le Camus, Boullée elaborated his theory of natural bodies (*la théorie des corps*) that gave predominance to the notion of the sublime. His theory, based on the foundation of sensualist philosophy, assumed that proportion and harmony in architecture were established on natural principles. Since they were based on the analogy with our human body, proportion and harmony had a direct power on our senses. For Boullée, architecture was no longer controlled by social conventions but used the natural effect of masses and volumes to create its images. Since "our emotions are born from the effect of the whole rather than from details," it is therefore through masses and shapes that held the greatest expressive power that the architect could convey the appropriate character of a building:

> The art of producing images in architecture comes from the effect of volumes (*corps*) and constitutes its poetry. It is through the effect that their masses produce on our senses that we distinguish the light bodies from the massive ones. And it is through a precise implementation that can come only from the study of bodies, that the artist succeeds in giving his productions their proper character.[31]

This attention to the unity of masses and their expressiveness echoed Le Camus's concern in *The Genius of Architecture.* Various combinations of masses obviously could produce different effects. To create softness and tranquility in a building, Le Camus writes, the architect will combine similar masses to avoid excessive projections and recesses. If more harshness is needed to express the character of a different kind of building, the succession of masses will be less regular, and transitions will be more frequent. Simplicity is expressed by avoiding divisions, while many masses and subdivisions render the effect of richness and profusion. A character of vivacity and gaiety may be imparted in a similar way, by using string-courses and cornices to increase variety. A majestic character is conveyed by a grand style with imposing dimensions.[32] For Burke, magnitude was another way to express the sublime in architecture. He stresses "greatness of dimensions" but notes that dimension alone does not necessarily lead to the sublime, and excessive length in buildings can even have the opposite effect, for "the perspective will lessen it in height as it gains in length; and will bring it at last to a point; turning the whole figure into a sort of triangle, the poorest in its effect of almost any figure, that can be presented to the eye."[33]

Burke gives some specific examples, comparing "colonnades and avenues of trees of a moderate length" to those that "run to immense distances," and concludes that the former are much grander. A true artist, he says, should create the noblest design not only by using vast dimensions, since this is always "the sign of a common and low imagination." Rather, he should use his art to "put a generous deceit on the spectators."[34] Le Camus de Mézières was also opposed to immense distances in architecture. His argument, however, was based on the principle of proportions: there cannot be proportional relations among elements of incommensurable size, and since beautiful proportions occur only where precise relationships

exist, the use of immense dimensions in architecture would lead to visual confusion.[35] Echoing Burke's concern for magnitude, Boullée criticizes the basilica of St. Peter's in Rome for looking smaller than it really is. Instead, a temple to God should produce precisely the opposite effect, Boullée argues: "This temple must provide the image of the most striking and largest existing things; if it were possible, it should appear as the universe. To lower oneself to demands of necessity in designing a temple is to forget its subject."[36]

Boullée considers immensity to be an essential quality of this kind of monument. Like Burke, he associates immensity and horror with the sublime: "The image of greatness has such an influence over our senses that if we suppose it to be horrible it always arouses in us a feeling of admiration. A volcano that belches forth flames and death is a horribly beautiful image!"[37] Le Camus de Mézières also adheres to this association between terrifying horror and the sublime. In his chapter on exterior decoration, he discusses various characters in architecture, including that of terror, which is produced by a combination of magnitude and force. The terrible in architecture, as in nature or a dramatic scene, can shake the soul, he writes, but the sensations it produces will be pleasing only if the terror is not shocking. Like Burke before him, Le Camus emphasizes the need for an artistic distance to transform terror into delight. The resources of art will then be used to heighten the sensations caused by terror. In composing a façade, an architect can evoke the character of terror through great contrasts in masses and lighting. A modulation of projecting bays and "recessions terminating in a dim obscurity, into which the eye can scarcely penetrate," will contribute to create the character of terror.[38]

Lighting was indeed a crucial element to evoke a wide range of emotions in the spectator and to convey a feeling of horror that could ultimately become sublime. Both in paintings and at the theatre of the "famous Servandoni," it was used to qualify spaces and to convey specific emotions. Le Camus understood this power of light and shadow and postulated it as a crucial tool for the architect, stating Servandoni's optic plays as a precedent to his architectural theory. Le Camus believed that different degrees of contrast between light and shadow could expressively convey different characters of a building, from softness to terror. He also believed that the architect was the ultimate creator who mastered the laws of nature – in this case, light – to evoke a wide range of emotions in the visitors to his monuments.

For Le Camus, however, the terrible and the sublime in architecture remained complex concepts that could be conveyed only through analogy. Their effect on the senses needed to be illustrated with images from nature, and mediated through language. Contrary to his predecessors such as J.-F. Blondel, Boffrand, and Briseux, however, for Le Camus de Mézières this mediation through language did not lead to a system of signs that could be read unambiguously. Instead, the modulation of light and the variation of shapes in architecture conveyed various emotions in a mode that was analogous to the translation of the forces of nature into a play of light and shadow in stage sets. The images of a dark forest, of a blazing sun, or of raging mountain streams thus served as inspiration to evoke the expression of the sublime.

The power of light in architecture was well known to Burke, for whom darkness is "more productive of sublime ideas than light," since in architecture, darkness is "known by experience to have a greater effect on the passions than light." Therefore, all buildings destined to "produce an idea of the sublime, ought . . . to be dark and gloomy." Burke, however, also emphasizes contrast in creating a sublime effect. During the day, darkness is important when one enters a building because "you cannot pass into a greater light than you had in the open air"; the opposite rule applies at night, when "the more highly a room is illuminated, the grander will the passion be."[39] Burke's emphasis on light and darkness had a major impact on Le Camus de Mézières and other late eighteenth-century architects. It was in Boullée's
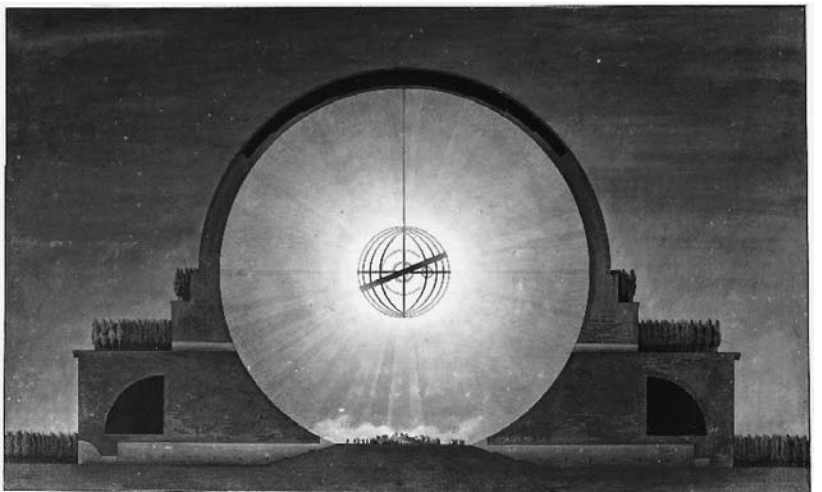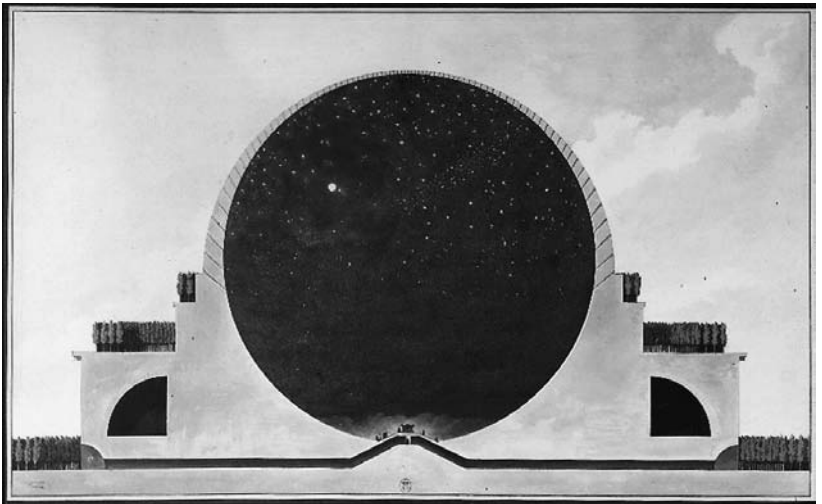
8.1a and b
Contrasting lighting effects in the Cenotaph for Newton, by Etienne-Louis Boullée (1784)

cenotaph for Newton, however, that the effects of light and darkness were most striking. Two monuments in one, the cenotaph attempted to recreate the effect of a starry sky during the day and the all-powerful light of the sun at night. For Boullée, architecture was "the art of moving the soul through the effects of light." The artist who could master lighting effects, creating fear through darkness and delight through brightness, could dare say: "I create light!"[40]

The power of light to convey emotions incited Boullée to develop what he called his architecture of shadows, exploiting the theme of death to evoke terror and the sublime. His funerary monuments or cenotaphs, as ultimate dwellings of death, suggested a buried architecture. Their simple and pure volumes echoed Burke's definition of the sublime in architecture. However, the architecture of death that epitomizes Boullée's fascination with the sublime is again his cenotaph for Newton. Boullée started from Newton's scientific accomplishment, using the shape of the earth as his point of departure. The spherical shape exemplifies Burke's definition of the sublime, using a perfect volume that does not allow the eye to fix the boundary. The inside of the monument responds to the law of universal attraction, as if gravity forced the spectator to remain at the centre, "a distancing that favors the creation of illusion effects."[41]

Opposite the sublime in Burke's theory is the beautiful. Whereas the sublime inspires terror and admiration, Burke argues, beauty can be found in the qualities "in bodies by which they cause love, or some passion similar to it." Nevertheless, beauty is comparable to the sublime because it also relies primarily on the senses and induces passions in the soul. For Burke, however, beauty in architecture was distinct from proportions, for it did not rely on reasoning but was recognizable at first glance. "Proportion relates almost wholly to convenience, as every idea of order seems to do; and it must therefore be considered as a creature of the understanding, rather than a primary cause acting on the senses and imagination."[42] Burke even ridicules the notion of beauty in proportions, as illustrated in the drawing of the Vitruvian man: "Men are very rarely seen in this strained posture," he writes, "it is not natural to them, neither is it at all becoming." Burke argues that the attempt to establish a proportional analogy between a man's body and architectural elements is a post-rationalization intended to validate the works of architecture.

> These analogies were devised to give a credit to the works of art, by shewing a conformity between them and the noblest works in nature, not that the latter served at all to supply hints for the perfection of the former [. . .] The patrons of proportion have transferred their artificial ideas to nature, and not borrowed from thence the proportions they use in works of art.[43]

Burke also opposes the idea that "utility" or "fitness" is a source of beauty. If this were the case, he argues, "the wedge-like snout of a swine, with its tough cartilage at the end, the little sunk eyes, and the whole make of the head, so well adapted to its offices of digging, and rooting, would be extremely beautiful." Furthermore, "if beauty in our own species was annexed to use, men would be much more lovely than women; and strength and agility would be considered as the only beauties."[44]

Instead, the real causes of beauty can be found in what inspires love, such as smallness, smoothness, gradual variation, delicacy, and color. Smallness is not only a cause of love, it is also its manifestation in language: "The objects of love are spoken of under diminutive epithets," Burke says, and he provides examples in various languages, in which diminutives are used to address loved ones. Admiration and love, however, should not be confused: "The sublime, which is the cause of the former, always dwells on great objects, and terrible; the latter on small ones, and pleasing; we submit to what we admire, but we love what submits to us; in one case we are forced, in the other we are flattered into compliance."[45]

The opposition between the sublime and the beautiful recalls the dual nature of Eros the bittersweet, for Burke argues that the former is founded on pain, and the latter on pleasure. Also, the properties that Burke considers a source of beauty, such as "smoothness" and "gradual variation," are described in very sensual terms, using the body of a beautiful woman as an example. The smoothness of skin and the absence of angular parts and straight lines are for him sure indications of beauty.

> Observe that part of a beautiful woman where she is perhaps the most beautiful, about the neck and breasts; the smoothness; the softness; the easy and insensible swell; the variety of the surface, which is never for the smallest space the same; the deceitful maze, through which the unsteady eye slides giddily, without knowing where to fix, or whither it is carried. Is not this a demonstration of that change of surface continual and yet hardly perceptible at any point which forms one of the great constituents of beauty?[46]

Moreover, beauty affects the beholder in concrete physical ways, comparable in every way to the effects of love. The gestures of a body affected by a beautiful object, like those of a body transformed by love, betray an "inward sense of melting and languor." Like love, "beauty acts by relaxing the solids of the whole system." This relaxation, below what Burke calls the "natural tone," is for him the physical manifestation of "all positive pleasure."[47] If true beauty causes pleasure as the sublime induces a terrifying pain, however, Burke rejects the notion that they could be reconciled in the same subject. Instead of heightening their dual status, the beautiful and the sublime would mutually lessen their effect, since they stand on foundations that are completely different.[48]

Although beauty was a requisite of *all* the genres in architecture, whether terrifying, majestic, or voluptuous, Burke's theory of the sublime and the beautiful nonetheless had great repercussions. His expression of these concepts in formal and spatial terms, such as immensity and smallness, harshness and softness, angular and curved lines, explicitly influenced late eighteenth-century architects. The qualities that Burke attributed to the sublime and the beautiful were recombined in architecture to create specific genres and characters that would in turn suggest the destination of a building or the character, personality, and social role of a client.

Denis Diderot and the importance of language

In his *Lettre sur les aveugles*, Denis Diderot reflected on the process of acquisition of knowledge through the senses, commenting on the story of the blind person that was originally raised by Locke and subsequently criticized by Condillac. Diderot was already aware of the limits of the sensualist philosophy promoted by Condillac, and, like Burke, he understood that language was a prerequisite to judgment. Moreover, he argued that only through analogy could complex emotion be communicated. In the eighteenth century the notion of analogy perceived at a formal, proportional, or functional level, underlay the entire system of knowledge, enabling fundamentally different objects to be compared. In the article "Analogie" from the *Encyclopédie*, for example, the authors, M. du Marsais and M. l'Abbé Yvon, compare the "foot of a mountain" to the foot of an animal, and admit that they are fundamentally different but nonetheless inform each other through analogy. In the natural sciences, birds and butterflies were grouped together because of their formal resemblance. Various elements were also grouped according to their function: again in the *Encyclopédie*, the gills of fish were said to be analogous to the lungs of land animals.

In the subtitle of Le Camus de Mézières's architectural treatise, *the Analogy of That Art With Our Sensations*, the analogy between architecture and our sensations suggests a similar functional analogy, since both architectural proportions and sensory perceptions can affect human feelings and induce passions. By substituting the word "art" for "architecture" in his title, and by comparing art to "our sensations," Le Camus was in fact positioning himself in the contemporary debate on the status of art and its relation to natural phenomena.[49]

Although Le Camus de Mézières did not acknowledge Diderot's philosophical contribution any more directly then he acknowledged Burke's or Condillac's, Diderot's use of analogical language certainly echoes the theoretical foundation of *The Genius of Architecture*. Diderot was also interested in the notion of the sublime in the arts, and carefully read Burke's work on the sublime and the beautiful. The *Philosophical Enquiry* had the greatest impact on Diderot's aesthetic writings in the years immediately following its French translation in 1765.[50] Diderot understood that the effect of sensations on human understanding needed a form of mediation. Similarly, he realized that the sublime could no longer be experienced directly from nature, but needed to be mediated through language and the creative imagination of the artist. His descriptions of paintings for the Salons of 1765 and 1767 are especially eloquent on this matter.

The tradition of accompanying paintings with a written text began a century earlier, at the inception of the Académies in France. In 1663, Jean-Baptiste Colbert, minister of Louis XIV, instituted an "artistic state monopoly" in creating the Académie Royale de Peinture et de Sculpture, distinct from the guild that previously had held a monopoly over this craft. Under the directorship of Charles Le Brun, the Académie became intensely concerned with the relationship between painting and language. This interest became explicit in 1666, when Le Brun introduced a monthly practice by which the members of the Académie publicly discussed a painting from the royal collection. This Discourse marked a radical break from the earlier guild tradition of teaching through practical examples. These oral debates were transcribed

by the official stenographer and later published in the *Livrets*, complex explanatory pamphlets that accompanied the paintings.[51]

Speech would not be entirely subordinated to the written text until the end of the eighteenth century, however.[52] As apparent transcriptions of spoken discourse, these explanatory pamphlets retained the temporality of life and led to a form of aesthetics that celebrated the importance of language. Eighteenth-century critics no longer judged works according to pre-established canonical principles, but instead focused on the experience of a given work and sought to define how art can reveal the human condition. The French institution of the Salons contributed greatly to raising the level of discourse on art, from the first exhibition in 1667 by the Académie Royale de Peinture et de Sculpture to the regular event held every two years from 1737 to 1795 in the Salon Carré of the Louvre. It even promoted a new literary genre, art criticism, by publishing critical reviews of the Salons, including La Font de Saint-Yenne's account, as well as Diderot's writings for Grimm's *Correspondances littéraires* from 1759 to 1781. These critical reviews of paintings gradually addressed the spectators' imagination, and eventually were raised to the status of creation itself.

For a few years between 1765 and 1769, Diderot's use of language in the Salons created a tension between paintings and their literary description. Diderot's texts not only described the paintings exhibited at the Louvre but were also "verbal scores" that awaited their performance and were designed to produce original mental images almost autonomous from the paintings themselves. The most famous texts were fictional promenades through pictorial landscapes that transformed the spectators at the Salon of 1767 into active participants in the creative process. Diderot even wrote literary descriptions of imaginary paintings: word-paintings that described in detail how he would have depicted certain scenes. This narrative description prior to the making of a painting would become a model for the elaboration of architectural programs that would emphasize the temporality of architectural experience. As we shall see in the next chapter, Diderot's narration of paintings would find an equivalent in Le Camus de Mézières's description of architectural spaces in *The Genius of Architecture*, for they both addressed the reader's *sensibility*.

Michael Fried has described the process by which Diderot was drawn into the world of a painting and could express his sensibility as a phenomenon of "absorption." In a painting such as Jean-Baptiste Greuze's *Young Girl Crying Over Her Dead Bird* (Salon of 1765), for example, a young girl is completely absorbed in her own drama and entirely oblivious to everything else. Diderot observes her profound pain and remarks that she is completely absorbed by her own misfortune, apparently the loss of her pet bird. In turn, this complete absorption compels him to become personally involved with the subject of the painting.[53] Diderot engages in a conversation with the young girl; he consoles the child over her loss and speculates that her grief is due not merely to the fate of her bird, but perhaps also the loss of her virginity:

> Is it the loss of this bird that causes you to withdraw so strongly and so sadly within yourself? . . . You lower your eyes; you do not answer me.

> Your tears are ready to run down. I am no father; I am not indiscreet or
> severe . . . Well, I understand he loved you, he swore to you he did for
> so long . . . That morning, unfortunately your mother was absent. He
> came; you were alone: he was so beautiful, so passionate, so tender, so
> charming! He had so much love in his eyes! . . . He was holding one of
> your hands; from time to time you felt the warmth of some tears running
> down from his eyes, and dripping along your arms. Your mother still was
> not returning. It is not your fault; it is the fault of your mother . . .[54]

When the subject portrayed in the painting is absorbed in her personal condition, the beholder of the painting is often denied or left ambiguous. In another painting by Greuze, *Young Girl Blowing a Kiss Through the Window, While Leaning on Flowers That She Crushes*, the girl faces the beholder but looks through him, ignoring his very presence, and instead blows a kiss to her lover. Although the beholder's presence is denied, he is compelled to participate (by consoling the girl who lost her bird or by witnessing a lover's kiss). In many ways this ambiguous position of the beholder is similar to the status of the spectator described by Diderot in *Entretiens sur le fils naturel* a decade earlier. As a transparent voyeur of a private performance – ignored by the actors, yet sitting on the stage of a family drama – the spectator of the *Entretiens* was not deliberately expelled from the action. Instead, the complete absorption of the actors/characters in their own drama was intended to make the spectators believe that the emotions unfolding before their eyes were authentic. Only through this appearance of authenticity (whether performed on stage, in a painting, or in a sculpture) could art truly reach the human soul; appreciating it was the ultimate sign of sensitivity.

In *De la manière*, written as an appendix to the Salon of 1767, Diderot contrasted this expression of authenticity in the arts to the artificial politeness or behavior that often betrays an affectation. False expression was not restricted to the arts, but was in fact borrowed from society itself. In both art and society, Diderot writes, there are false expressions such as mincing ways, preciosity, ignomiry, false dignity, false gravity or pedantry, false pain, and false piety that betray affectation. Only the expression of innocence can appear more truthful than the grimacing, the mannered, and the theatrical, and Diderot characterizes it as being very close to the sublime.[55] This notion of naïvety was itself related to the truthfulness of nature. In the arts, it implied a complete return to a natural state. For example, although the figures in Poussin's and Raphaël's paintings belong to the category of "history painting," the highest form of painting, they were imbued with this natural naïvety that made them appear authentic.[56]

In *The Genius of Architecture*, Le Camus formulated this notion of authenticity as a principle of naturalness in a work of architecture: "Art must not be evident at any point; all must have an easy, simple, natural form," he writes. Moreover, the labor should not be apparent in great works of architecture. They must seem so natural as to have cost little or no effort. "The nature of great Art is to conceal itself."[57]

Although Diderot and many of his contemporaries admired Greuze's paintings for the truthfulness and intensity they conveyed to the beholder, they were

classified as "genre paintings," a category inferior to "history paintings" according to many eighteenth-century authors such as Abbé Du Bos, La Font de Saint-Yenne, Laugier, and Grimm. This distinction between history painting and genre painting was challenged by Diderot's suggestion that Greuze and other painters such as Joseph Vernet (1714–89) ought to be considered at the same level as history painters because they succeeded in representing the human soul. Vernet, a landscape painter, became famous for the authentic light portrayed in his paintings and for the intense emotions engendered by his depiction of sea storms and shipwrecks. The hierarchy of painting genres in the eighteenth century was greatly influenced by André Félibien's *Conférences* of 1667. In it, landscape painting was described as an inferior form of art, far below history painting and even portraiture. Toward the end of the eighteenth century, it had been elevated to a position only slightly below that of history painting, due partly to Diderot's insistence on the "expressive powers of the sublime effects of nature."[58]

Diderot indeed believed that work by landscape painters such as Vernet, Loutherbourg, Hubert Robert, and Casanove could stimulate spectators' creative imagination by presenting pictorial sites for exploration and by evoking emotions. Diderot's descriptions, such as the famous "Vernet stroll" written for the Salon of 1767, took the form of imaginary walks through pictorial worlds where the paintings themselves seemed to disappear. This use of fiction to "enter" a painting was consistent with Diderot's plea for absolute realism in the arts. The frame and the physical surface of a painting dissolved as the spectator entered its represented space and engaged in the scene through virtual inhabitation. The beholder would become literally "absorbed" in the painting and in the emotions it induced, and become an active participant in the creative process.

This use of fiction as a form of art criticism is most brilliantly expressed in Diderot's description of Vernet's landscape paintings, where instead of enumerating the elements that composed these landscapes, Diderot narrates a fiction in which he visits the pictorial spaces. He tells the reader that he had intended to describe a painting by Vernet when he left for the country close to the sea and renowned for the beauty of its landscapes. His journey will take place within the frame of Vernet's paintings. Accompanied by the house teacher and two of his students, Diderot writes, "I was going to visit the most beautiful sites of the world. My project is to describe them to you, and I hope that these paintings will be as good as others."[59]

Diderot, accompanied by an abbot, begins his journey by describing a landscape that we recognize as *The Overflowing Spring* by Vernet. The scene is so authentic that Diderot's companion refuses to admit that any artist could have imitated nature so perfectly. Which artist, asks the abbot, could have imagined such harmony, such charm in breaking the continuity of a stony road with a clump of trees; who could have rendered the warmth and effervescence of this light that fondles the tree trunks and branches; which genius could have recreated the immensity of space that vanishes into the distance? Diderot replies that this work of nature could be equaled only by Vernet, and says that an intelligent artist could not have dispensed with any detail of a composition so perfect. Although clouds for many artists only

darken the sky, here they serve to push back the sky and establish a new plane in front of our eyes. Vernet certainly would have recognized the importance of these details in nature. Still incredulous that nature's perfection could ever be equaled by a work of art, the abbot objects to Diderot's praise of Vernet: "Even though you say Vernet, Vernet, I will not leave nature to run after its image; however sublime man might be, he is not God. – All right, but if you saw the artist more often, he might have taught you to see in nature what you do not see."[60]

For Diderot, the true work of art is not simply an imitation of nature but a translation that reveals hidden sensations and induces emotions in the soul that would otherwise remain unknown. The work of art, like the work of nature, can move not only the soul, but also the physical body of the beholder. Approaching a new site as admirable as the first one, Diderot is entranced by the spectacle of nature in front of his eyes: "I lost my voice, my ideas were confused, I remained stunned and speechless."[61] Diderot's evaluation of the artistic value of a painting indeed emphasized its capacity to touch and to involve the spectator. His literary descriptions of virtual promenades through landscapes were almost as evocative as Vernet's paintings themselves, and thus potentially raised art criticism to a new art form.

As Diderot and the abbot continue their journey, Diderot uses his companion's admiration for the scenes of nature as a pretext to expand on the notion of beauty in the arts. Diderot notices that every time a detail of the landscape touches his friend, he goes into ecstasies over the charms of nature and refers to the object he admires as "beautiful." The steep rock, the finicky forest that covers it, the torrent that whitens the shore and makes the gravel quiver – all receive the epithet "beautiful." Diderot points out to the abbot that he ascribes the term "beauty" equally to humans, animals, plants, stones, etc., yet there is no physical quality common to them all. This is because different physical attributes can evoke similar sensations in the soul, Diderot explains, but the sensation that leads to the idea of beauty is not a simple one. It is made of a subtle balance between admiration and pleasure, he explains:

> If you look carefully, you will find that the objects that cause amazement or admiration without pleasing are not beautiful, and that those that please without causing surprise or admiration are not either. The spectacle of Paris burning would horrify you; after a while, you would enjoy walking on its ashes. You would feel a violent pain to see your friend expire; after a while your melancholy would guide you to her tomb and you would sit there.[62]

Unlike Burke, for whom beauty and admiration were two different kinds of emotions, Diderot believed that the sublime and the beautiful could merge into an intensely engaging artistic expression and intensify their emotional effect on the beholder. As we shall see, this is closer to Le Camus's architectural space of desire. However, this apparently contradictory combination of horror and admiration was inspired directly by Burke's notion of delight, including the necessary distance that enables pain to be transformed into a relative pleasure and the most sensitive person to appreciate the overwhelming effect of the sublime.[63] In the *Philosophical Enquiry*,

Burke discusses at length the importance of a physical or temporal removal from the terrifying event to appreciate its sublimity. The combination of admiration and horror, however, is expressed most eloquently in Vernet's depiction of sea storms and shipwrecks, and in Diderot's retelling of these events. Recounting a dream inspired by landscapes visited the previous day (but later acknowledged as Vernet's paintings), Diderot describes a scene of horror caused not only by reckless nature but also by human cruelty, and again imagines himself in the painted scene:

> As I stood on the shore, I was overcome at the view of a burning ship. I saw a lifeboat approaching the ship, get filled with people and leave. I saw the poor wretches the lifeboat could not take in become agitated, run on the upper deck of the ship, cry out; I heard their screams, I saw them plunge in the waters, swim towards the lifeboat and grab it. I saw the lifeboat on the verge of being submerged, and it would have been if those inside it – O terrible law of necessity! – had not cut off the hands, broken the heads, thrust the sword into the throat and chest, killed, massacred mercilessly their fellow men, their travel companions, that in vain held out their imploring hands from the middle of the waves, from the edge of the lifeboat, and addressed to them their prayers that remained unanswered.[64]

Although Diderot confesses that the scene is not real but the work of a great artist, the impact of its effect is in no way diminished by this admission. Diderot is terrified at the sight of this commotion and mourns the fate of these unfortunate travelers. Through sympathy, he feels their suffering and desperation in his own flesh, yet he cannot take his eyes from the painting due to this intense experience of the sublime.

The effort to embrace a painting's subject and surrender to its illusion is similar in many ways to Diderot's plea for a perfect illusion at the theatre. In Diderot's novel *Les bijoux indiscrets*, Mirmoza advocates realism in the theatre, stating that a perfect performance requires its actions to imitate reality so exactly that the spectator, uninterruptedly fooled, imagines himself to be witnessing the real action. Diderot is in fact applying to the theatre the same criterion he uses to valorize landscape painting. The aim is to transport the spectator into its illusion. Diderot's concept of an invisible fourth wall of the stage, through which the audience witnesses the action as in the *drame bourgeois*, is also similar to his theory of painting, in which the figures in a painted scene are unaware of the beholder. The notion of illusion in eighteenth-century painting and theatre, however, is not a simple concept. Diderot often remains indifferent to minor imperfections in depictions of nature or in constructed stage sets. The illusionism he advocates is not intended solely to deceive the eye, but to reach the spectator's heart. This relies more on the authenticity of the emotion than on the reproduction of a visual image. His promotion of the *drame bourgeois* over heroic plays is consistent with his aesthetic convictions at that time. As we have seen, he defended the *drame bourgeois* because a spectator can relate more intimately to the hardship of an ordinary person than to the imminent defeat of a king or an emperor. This marked the victory of empiricism – of what is knowable through the senses and emotions – over ideal concepts.

For Diderot, language remained an important mediator because art, whether a theatrical performance or a landscape painting, was not only a copy of nature, but man's own creation *from* nature. Although the description of a painting and the experience of the real world seemed to be equivalent in Diderot's writings for the Salons from 1761 to 1767, a distance was always maintained between painting and nature, and language (narrative) helped define this distance. Similarly, in the second half of the eighteenth century, architecture again reassessed its relationship to nature. In Boullée's terms, architecture was defined not as a copy of nature but as a translation, an implementation of the principles of nature (*la nature mise en oeuvre*). The new vocabulary of sensualist philosophy made architects such as Boullée, Ledoux, and Le Camus de Mézières aware of a wider range of nuances and emotive responses that architecture could convey to its inhabitants. As in Diderot's narrative description of paintings, the new terminology of emotions introduced to the architectural language enriched the perception and the very experience of architecture.[65]

Toward the end of the 1760s, after having radically transformed art criticism, Diderot abandoned this narrative description of paintings intended to address the reader's sensibility. From 1769 onwards, he was more interested in what resists translation into discourse. This progressive self-alienation from the Salons coincided for Diderot with a renewed interest in the theatre. Coincidentally, the *Paradoxe sur le comédien*, which marked a change of ideology in his theatre theory, was initiated precisely during that period. Written over a period of ten years, the *Paradoxe* seemed to overturn Diderot's previous insistence on emotion and authentic expression. It seems that Diderot's post-1769 aesthetic was based on a belief "that nature knows neither perfection nor imperfection," an idea first argued in his *Essais sur la peinture* (1766). Therefore, the idea of beauty in the arts could not be derived from nature, and must be a human concept.[66]

From Le Brun's *Conférences* to Diderot's Salons, the status of text in its relationship to painting was radically transformed. It had become less important for structuring and explaining paintings. Diderot's texts for the Salons marked the beginning of a new form of discourse that was less concerned with the translation of a codified image, as in Le Brun's notion of physiognomy, and more open to interpretation, exploring a wide range of meanings. In architecture, Nicolas Le Camus de Mézières brought the debate on the importance of language to a new level. His theory of architecture as an expressive language relied not only on sensuous perception, but also on mythological stories and shared narratives to ensure its communicability. The major innovations in his architectural treatise were his use of language to reconfigure qualitative space and his use of narrative to restructure the architectural program.

Part 4

Plotting an architectural program: the space of desire

Chapter 9

Staging an architecture in words

> Architecture is like a beautiful woman: she should please in herself; she needs few ornaments.
>
> <div align="right">Nicolas Le Camus de Mézières, The Genius of Architecture</div>

The theatre as an art form and as a metaphor had a determining influence in Le Camus de Mézières's life and work. As previously suggested, his treatise on the architecture of the *hôtel particulier* proposes a distribution of architectural spaces and a gradual increase in the level of ornamentation that are inherently theatrical. The decoration of each room is meant to convey a specific character, with the entire set expressing a great range of human emotions. The progression of ornamentation is reminiscent of how dramatic action is built up in a play. By using architecture to evoke certain emotions in the users of these interior spaces, Le Camus conceived architecture as an active component in social interactions, as a "silent partner in the action."[1] This active role of architecture is brilliantly illustrated by Jean-François Bastide's *La petite maison*, originally published in 1758 and translated as *The Little House*, an example of a genre somewhere between an erotic novel and an architectural treatise.[2] In it, architecture is conceived as a powerful device for seduction.

The space of seduction

The story of *The Little House* begins as a wager between the marquis de Trémicour and Mélite, an educated young woman who is sensitive to beauty in artistic works and proud of her virtuousness in resisting libertine advances. The marquis, who has been unsuccessful in seducing Mélite, invites her to his little house, a clandestine country house, wagering that she will be unable to resist the architectural charms of the place.[3] As in *The Genius of Architecture*, the fundamental assumption of the novel is that architecture has the power to create feelings in its inhabitants that are equivalent in essence and intensity to sensations induced by a lover. Because of the gradual increase in ornamentation, "each room makes us desire the next; and this

agitation engages the mind, holding it in suspense, in a kind of satisfying bliss."[4] Another basic parallel between these two works is the temporal unfolding of action that gradually leads the reader to an emotional climax. The admitted objective of architecture, in both *The Genius* and *The Little House*, is indeed to create this culmination.

Bastide's novel is staged in an isolated house on the bank of the river Seine. The setting is so varied and the openings disposed so ingeniously that visitors feel compelled to explore every room and every garden of the property. Mélite is no different, but she resists Trémicour's eagerness to take her to his private apartments because, she says, she wants to savor all the beauties that the place offers. She is also careful to conceal her desire to proceed any faster on these dangerous grounds of Trémicour's illicit love abode, aware that the little house has a reputation for sheltering its master's deceitful love affairs. From the start, it is clear that the little house is an extension of the marquis's wit and a materialization of his charms, and Trémicour soon becomes exasperated that Mélite is lingering too long in the gardens, delaying the entry into his lair, and he accuses her of not playing fair. "You told me your house would seduce me; I wagered it would not. If I now fall prey to its charms, am I unfaithful to our agreement?" she answers.[5]

As Mélite finally catches a glimpse of the principal courtyard, the elegant proportions and the fragrant vegetation that surrounds it attract her, and she is drawn to the entrance of the first vestibule. From there, Trémicour guides her to a living room facing the garden. With its circular shape, its painted vault, and its sensuous ornaments, this living room is so voluptuous, Bastide writes, that it inspires feelings of tenderness while making the visitor believe they are prompted by its owner. The calculated placement of light is most important in this lovers' abode, for it heightens the emotions of its inhabitants. As the day is coming to an end, a black servant comes into the room to light thirty candles on a porcelain candelabra reinforced with golden supports. This new brightness is reflected in the mirrors and makes the place look more spacious; it also reminds Trémicour of "the object of his impatient desires."[6] Mélite also remembers why she is here in this house, and troubled at the idea that she may lose the wager, she refrains from confessing to Trémicour her true feelings; she keeps to herself any compromising compliments. The young lady, sensitive to the subtleties and artistry of the decoration, nonetheless tells her host that his little house is a real "temple of genius and taste."

She stands up to continue her visit, and the marquis, pleased to see how touched she is by the living room alone, becomes increasingly confident for he knows that he has much more to show her. He takes her hand and together they enter a room on the right: a bedchamber. Square in shape, this room is covered by an arch painted with a scene of Hercules in the arms of Morpheus, awakened by Love. The bed, covered with a most colorful fabric, is placed in a niche facing the garden. Mirrors are situated in every corner of the room, while various carefully chosen objects and pieces of furniture inspire tenderness and sensuousness. Mélite no longer dares to praise the marquis and even fears her own emotions.

In an attempt to escape this threatening territory, she enters the next room, only to find herself in a boudoir, "a place that needs no introduction to the

woman who enters, her heart and soul recognizing it at once."[7] Bastide again describes at length the spatial qualities and ornamentation of this temple of love. Here, more than anywhere else before, the lighting effects are carefully controlled to create the magic and optical effects of a natural grove enhanced by art: candlelight provides a modulated luminosity diffused by various layers of gauze more or less tightly folded and reflected in mirrors. All the senses are simultaneously stimulated in the boudoir, and Bastide describes a method, attributed to Danrillon, by which the paneling is made to smell like violet, jasmine, rose, or any fragrance appropriate to a given room. The walls of the boudoir are thinner than the partitions in the rest of the house, and in a wide corridor surrounding the boudoir the marquis has placed musicians who have been waiting for the marquis's signal to begin playing. Mélite is surprised to hear a charming concert beyond the walls. Disconcerted and deeply touched by the unexpected music, she listens for a moment, but soon looks for an escape from this place where she fears for her virtue. The marquis could have stopped her and taken advantage of her ecstasy. Instead he lets her proceed into the next room, hoping that the architectural charms of the following apartments will persuade her to concede his victory: "he would rather that his victory progress at the pace of pleasure."[8]

The new room she enters is the bathroom. All is drawn in curves and arabesques, and made of marble, porcelain, and muslin. Amidst the sea plants, shells, and crystals in this room, there are two niches for a bathtub and a bed covered in embroidered Indian muslin. The wall paneling is painted with fruits, flowers, and exotic birds, intermixed with medallions of amorous subjects. Erotic paintings frame the door thresholds, and the well-chosen furniture completes the festive character of the room. Mélite is overwhelmed by these wonders and is forced to sit down. Visibly moved by the artistic beauty of the place, Mélite confesses that she is seduced by the charms of the little house. Although Trémicour senses his victory, he delays Mélite's defeat and lightens his tone. Mélite is allowed to retreat once more, but only after proceeding through a series of closets, a dressing room, a vestibule, and a lobby. As in Le Camus de Mézières's description of hidden passageways concealed within the walls of the *hôtel particulier*, Trémicour's little house has numerous secret corridors and stairs that lead down to mysterious mezzanines.

Mélite and the marquis return to the living room, where he opens the door to the garden. Although Mélite hoped to enjoy a few moments of fresh air in the garden and regain control of herself, she is astonished to find a garden in the shape of an amphitheatre lit by two thousand candles. The vegetation of the garden takes on an entirely new dimension under this glinting light. Water fountains and expanses of water reflect the sparkling candlelight and increase its effect exponentially. Tremblin, a former decorator at the Opera and at the *petits appartements* in Versailles, is credited as the author of these theatrical lighting effects. Under the spell of this extravaganza, Mélite remains speechless. She can only utter cries of admiration while the garden itself is filled with music of all sorts: a band can be heard in the distance, while elsewhere a voice sings some known arietta. Here, a charming grotto echoes the movement of impetuous waters; there, the cascade of a small stream produces a touching murmur. The entire garden presents itself as a theatre of

seduction, offering various hiding places for those who wish to indulge in the pleasures of love.

Trémicour guides his guest through the garden like a playwright directing spectators through a dramatic sequence. Nothing is spared to impress his young prey, including fireworks by the famous Ruggieri, which introduced the gleam of a tender and submissive love into the eyes of the marquis. As Mélite realizes she is falling for the charms of Trémicour, she anxiously rushes back inside to escape the enchanted garden. She quickly passes through some cabinets decorated with Chinese lacquer and Japanese and Dresden china, before entering the dining room, where a meal is waiting for them. By now, all of Mélite's senses are stimulated, and the room literally becomes a stage where she becomes most vulnerable to the seductive powers of the place – and to the marquis de Trémicour himself. The servants are excluded from the room to create the perfect intimate scene, and the change of courses is operated by complex machinery worthy of the most sophisticated opera set: "Suddenly, the table dropped down into the kitchen in the cellar, and from above, a new table descended to take its place. It promptly filled the gap left in the flooring, protected by a balustrade of gilded iron."[9] This astounding event prompts Mélite to once more lower her defenses and enjoy the spectacle staged for her.

A similar theatrical device was known to exist in the château de Choisy, the residence where Louis XV received some of his favorites, such as Mme du Barry. In fact, this château is thought to have been one of the contemporary inspirations for Bastide's little house. As in Bastide's novel, every room of the château was adorned with famous paintings and refined objects. The dining room also resembled that of *The Little House* in a striking way: it was adorned by a similar kind of "flying table" providing absolute privacy to the diners; the servants being kept at a distance during the meals, they could not spy on the guests who wanted to remain incognito. One version of this contrivance was described in the *Mercure de France*:

> When the guests enter the room, not a single trace of the table would be visible; they see only a very even parquet with an ornamental rose at the center. At the slightest signal, the petals withdraw under the parquet and the served table springs up, accompanied by four dumbwaiters which rise through four openings at the same time.[10]

This mechanical device, directly inspired by theatrical machinery of the time, was most fashionable in libertine houses, for it transformed these clandestine meeting places into private theatres where the inhabitants were simultaneously actors and spectators.

Another similar device was introduced into the residence of La Popelinière (1692–1762), a farmer general who acquired the domain of Passy and built a private theatre there. His guests were diverse: from the painters Latour and Carl Vanloo to Marmontel and Rameau. More interesting, however, was the illicit guest of his wife, the duc de Richelieu (1696–1788), her official lover and libertine *par excellence* during the eighteenth century. Together, they devised a secret entrance to her bedroom so that the duc could come and go unnoticed. Using a false name, Richelieu

rented the hôtel next to that of the farmer general. A mere wall separated it from the room of Mme de La Popelinière, and an opening was cut to correspond precisely to the location of the fireplace in her bedroom. A system of hinges enabled it to revolve and open a passageway for the duc. It became known as "the trick of the revolving chimney," and for some time the husband was apparently the only person in Paris who was unaware of its existence. In his *Mémoires*, Marmontel describes how it was discovered. Warned by an anonymous letter that the duc de Richelieu had found a way to smuggle himself into his wife's apartments through a mysterious trap door, the husband turned to his friend Vaucanson, a renowned engineer of automatons and stage machinery, to help him find the secret entrance. After inspecting the entire house, they arrived in Mme de La Popelinière's bedroom, and Vaucanson sat for a moment in front of the fireplace:

> Ah! Monsieur, Vaucanson suddenly exclaimed turning toward La Popelinière, what a beautiful work this is! It is the work of a master. This plate is mobile, it opens, but its hinge is most delicate! . . . No, there is no snuffbox better detailed. This is a skilful man! – What! Monsieur, replied La Popelinière turning pale, are you sure that this plate can be opened? – Absolutely! I am certain, I see it, Vaucanson said, delighted with admiration and pleasure; nothing is more wonderful. – And what do I care about your wonder? What is there to admire? – Ah! Monsieur, such craftsmen are really rare! I surely have some good ones, but none that . . . – Forget about your craftsmen, La Popelinière interrupted . . . and let's blow up this plate. – What a pity to break a work of art as perfect as this one, Vaucanson replied.[11]

The revolving chimney became the subject of many stories and even inspired a new trend: there were fans, snuffboxes, and even hairstyles in La Popelinière fashion. This unusual device is interesting because it shows how theatrical tricks and magic from stage design were used in architecture, and how they came to influence the theatrical imagination of an entire society. It is also significant that La Popelinière did not turn to the police or potential witnesses to solve the intrigue, but instead relied on a theatre mechanic.

On the stage, a *coup de théâtre* performed with the assistance of complex machinery often marked an important turn of events where dramatic tension was resolved. In Bastide's story the descending table in the dining room marks the final defeat of Mélite's defenses. Suddenly aware that she can no longer resist the charms of the place and of its owner, Mélite attempts one last escape, but in her confusion, she takes the wrong door and finds herself in a green boudoir. Even though the boudoir was known as a place of seduction, it must be emphasized that the erotic tension occurs rather in the journey through the entire house and in the progression that leads from one room to the next. The totality of the little house, including its entrance courtyard and outdoor garden, becomes an extended threshold that gradually leads Mélite to the final boudoir where she ultimately loses the wager.

It is in this second boudoir that the story ends, in the second and most widely known version of *The Little House*, published in 1763. Its original version,

published in 1758, concluded on a different ending with the triumph of virtue over seduction. In that earlier version, Mélite escapes from the house, only to confess in writing her love for the marquis, who in turn professes to be transformed by this revelation and swears his devotion to Mélite.[12] Because the dramatic action in the original version unravels only after Mélite's departure from the house, in an exchange of letters, the story's unity of time and place breaks down. However, this unity is recovered in the final version, whose structure more closely follows the rules of theatre in use at the time.

The space of desire expressed in Bastide's novel was representative of a body of literature that expanded rapidly throughout the eighteenth century in France, where marital unions, if not "arranged," were often carefully calculated. Until the fall of the *Ancien Régime*, the choice of a life partner was very much a political decision: both parties tried to ensure for themselves fortune or nobility, while love, either "real" or libertine, was often relegated to illicit relationships. This practice expressed the political aspect of the union between man and woman, but mostly it revealed the complex relationship between the public and social realms, especially in matters of love and seduction. Under Louis XV, with his openly acknowledged mistresses and the growing importance of individual and personal emotions, libertine novels portraying illicit love flourished in France.

The spatial settings of these libertine novels often played a significant role in the art of seduction. More than a decade after the second edition of *The Little House*, Bastide produced another piece of a similar nature; this time he worked in collaboration with the well-known architect Jacques-François Blondel to produce *L'homme du monde éclairé par les arts* (1774). In this book, the main character, the comte de Saleran, is a connoisseur of art and architecture who becomes involved with two women who personify passion and reason, the marquise de Galeas and the comtesse de Vaujau. The tension between the three characters becomes the pretext for an exchange of letters in which the protagonists convey their emotions and taste in architecture by discussing some of the best-known works of the time. Even though the literary quality of *L'homme du monde* is somewhat compromised by the predominantly educational agenda, the story concludes with Blondel's overt desire to unite passion and reason and thus prevent the need to choose between the two women: "My hope is to one day reunite these two women, so worthy of one another. I would live as their friend. [. . .] I would be faithful without restraint, sharing without inconsistency, & sympathetic without deviation."[13]

Vivant Denon's *Point de lendemain*, first published in 1777 and translated as *No Tomorrow*, is another remarkable example of a boudoir novel where the architectural setting and the spatial progression play a crucial role. The story begins at the opera, where the narrator – who is identified with Denon himself at an early age – finds Mme de T. waiting for him in her box. She invites him to her country house, where he meets her husband and, later, her official lover. The narrator, nonetheless seduced by his beautiful hostess, follows her as she lures him to her picturesque garden with its love pavilion. Throughout the novel, the architectural settings contribute to create an erotic tension that progresses toward a narrative climax as the characters approach the love pavilion. The narrative structure is

definitely similar to Mélite's progression toward the fateful boudoir in Bastide's story, as the garden of seduction is a metaphor that illustrates the emotional wandering of the main characters. The roles, however, are inverted and it is Mme de T. who guides her young suitor through the winding paths of the garden. Denon's desire increases as they gradually approach the love pavilion, but Mme de T. prolongs the tension as she claims not to have the key to this jewel of the night. This delay of fulfillment only contributes to increase Denon's enjoyment as they arrive at this abode of love and find the door unlocked . . .

As with her calculated approach to the love pavilion, Mme de T. periodically excites Denon's anticipation of being taken to her private cabinet; this makes him desire the place even more than he desires his actual lover: "It was no longer Mme de T. whom I desired," he writes; "it was the cabinet itself."[14] As they return to the house, Denon discovers that her secret cabinet constitutes the utmost device for architectural seduction. As the story unfolds, Denon realizes that he was no more than an actor in a performance staged by Mme de T. herself. *No Tomorrow* in fact describes how the illusions of an elaborate stage set and the carefully controlled demeanor of a social actress could fool the narrator and ultimately the reader.

Similarly, throughout Bastide's novel the reader is seduced along with Mélite: both are led through a succession of rooms, each more richly decorated than the last. Mélite compares this gradual increase in ornamentation to the notion of "gradation," an important term in both eighteenth-century aesthetics and the erotic novels of the time. In his *Dictionnaire des moeurs* (1773), Bastide devotes an entry to this central concept: "Gradation: Necessary method to prevent longing, and to perfect love. By reaching gradually the seat of fortune and the fulfillment of pleasures, one prepares a more quiet possession and a sweeter enjoyment: it is the science of the heart and of the mind."[15]

The Genius of Architecture and the distribution of an *hôtel particulier*

In boudoir novels of the time, architecture often played an active role in portraying the state of mind and emotions of its inhabitants. In La Morlière's *Angola*, discussed earlier, the disarmingly naïve Prince is led to the most suggestive places by women who wish to seduce him. Similarly, La Morlière entices the reader into a series of linked rooms (*en enfilade*) that are voluptuously furnished and charmingly decorated with numerous mirrors and lascivious panels. Their succession seemed to have been imagined to give a natural idea of all the different *gradations* of sensuous delight, he writes, through the different kinds of voluptuous pleasures that were specific to the various rooms. Le Camus de Mézières compares this gradual progression of architectural ornamentation to the development of dramatic action in a play. He also uses the notion of "gradation," an explicit term of seduction, to explain the central concept of his architectural theory: "The *gradation* of opulence, as one progresses further into the interior, casts the spell and stimulates the senses."[16] Describing the intimate relationship between the dining room and the adjacent serving room, for example, Le Camus emphasizes that their ornamentation must display the same character, and that their finishing materials also must be related. However, if the

dining room is finished with marble, one must use a more common marble for the serving room: "There must always be *gradation* of opulence; this principle we repeat, and it admits of no exception."[17]

The intimate connection between *The Genius of Architecture* and the sensuous architecture of Bastide's novel is based on more than their shared language of seduction. While the first third of Le Camus's book is devoted to general considerations about architecture, including "The Art of Pleasing in Architecture," the rest of *The Genius* is a room-by-room description of the distribution and decoration of an *hôtel particulier*. Le Camus literally takes the reader on a tour of the house: "To avoid confusion, let us take one step at a time," he writes.[18] The progression of rooms in the treatise is not haphazard. Interestingly, Le Camus chooses to travel through the house following the exact same route as the one described by Bastide in his novel. The reader follows the same progression that led to Mélite's seduction, which implicitly reveals an architectural space of desire in *The Genius of Architecture*.

As in Bastide's novel, the sequence of rooms in Le Camus's treatise begins in the vestibule. It should be decorated in accordance with the general character of the whole house; since it is the first room to receive visitors, it must set the tone and indicate the character of the building. The vestibule is followed by a series of anterooms that best exemplifies Le Camus's notion of gradation. This first progression toward the main apartments of the *hôtel* is an extended threshold that delays the penetration of the visitor into the centre of the house while gradually increasing the level of decoration, and, with it, the emotional tension. The first anteroom, immediately following the vestibule, is designated for servants. Its decoration is simple and the ceiling may have no cornice. The second anteroom is for the *valets de chambre*, and must be more ornate. Some sculptural ornaments may be employed, but their genre and character must be appropriate to the status of the master. It is in this room that one must start feeling the sensations in the rooms that follow: "it is, so to speak, a *proscenium* and the utmost care must be lavished upon it to announce the character of the performers in the play."[19] It is important to observe that Le Camus is not describing a unified character for the entire house. Instead, he speaks of a complex interplay of *performers*, again suggesting that the building is not given to be read all at once by the visitor, but that it can only be understood as one progresses along. The third anteroom is a waiting room for persons of distinction. It is more ornate than the previous one, but its decoration should not be too profuse so that the following rooms can continue to be progressively enriched: "Above all, let the Artist set a curb on his imagination; the genius that is his guide must remind him of the beauties and the splendors that are to be kept in reserve for his salon, his bedchamber, his cabinets, and other rooms no less interesting."[20] Like Trémicour delaying his victory over Mélite, Le Camus sets the pace to a slow progression of ornamentation.

This sequence gradually leads the reader to the living room or salon. This room is used for festive occasions and must display the magnificence of the place. Wealth must be lavish and forms must be noble and majestic. This room should proclaim the master's opulence, Le Camus writes, but it can also convey the character of gaiety, or even soberness and solemnity. In either case, "the general tone must

produce its effect; and whatever character may be chosen, it is essential to make it felt."[21] This is precisely why architectural spaces are developed to be analogous to various sensations. The shape of the living room is variable: it may be square, circular, oval, or even octagonal. Its shape, as well as the richness and elegance of its ornamentation, can pleasantly move the soul, and it is in France, Le Camus insists, that such impressions are most varied because the genius of this nation is predisposed toward inventiveness. In the past, he notes, the masterful decoration of a single room could have immortalized its artist, but such an accomplishment would no longer be sufficient for a refined individual of the late eighteenth century. Real perfection now depends on a gradation of richness from one room to the next, to ensure that the soul be entirely satisfied. Therefore, let us "pursue the precious nuances that can but delight and surprise our senses."[22]

The next room is the bedchamber. Le Camus's treatise is obviously more didactic than Bastide's erotic novel: in *The Little House* any technical or factual information that departs from the primary plot of seduction is indicated in footnotes, whereas *The Genius of Architecture* includes lengthy historical descriptions of how certain rooms have been transformed. The bedroom, for example, is often used only for parade, Le Camus explains. Traditionally, the bedroom had an important representational role, especially the king's bed, which was often regarded as the real seat of power. The political importance of a visitor would be indicated by his proximity to the king's parade bed. Although Le Camus felt that the bedroom in his own time was often too large and open for one to feel comfortable sleeping in it, for form's sake, an apartment still needed a bedroom that was in keeping with the rest of the house.

This representational role of every specific room, like individual characters performing in a story, was central to Le Camus's theory. Even though the exterior of a house was expected to convey the general character of its owner, thus setting the tone for the entire *performance*, the interior distribution would follow a more complex rule of decoration and ornamentation turning every room into a different stage set. Within a general choice of architectural shape and proportion for a given apartment, the ornamentation was refined to the smallest detail; color, lighting, furniture, and even the choice of flowers and specific smells became integral parts of the architecture.

As in *The Little House*, the boudoir immediately follows the bedroom in *The Genius of Architecture*, and there, the level of detail is developed to the highest degree. Its decoration appeals to all the senses, for it not only relies on the magic of painting and the illusions of perspective to produce its effects; Le Camus suggests that this room should open onto a garden so that birdsong and artful cascades can charm the ear and the eye alike. Here, Le Camus says, the beauty and mildness of spring will always prevail if one maintains the freshness of shrubs and flowers; they should be changed according to the seasons. The boudoir invites a visitor to abandon any resistance to the pleasures of the senses: "Here the soul rejoices; its sensations are akin to ecstasy." Everything in the boudoir, from its spatial proportions to the paintings, sculptures, and even the color of the curtains, must be chosen to inspire love and voluptuousness: "This delightful retreat must arouse none but the sweetest

emotions; it must confer serenity upon the soul and delight upon all the senses. It must aim for the ultimate perfection: let desire be satisfied without impairing enjoyment."[23] This room for frivolity evokes a character of lightness. Ideally, the plan is circular, for this shape agrees with the character of the place devoted to Venus. The shapes, curves, and softness also recall the contours of a beautiful woman. The general effect of the whole is better experienced than described, Le Camus emphasizes, which again confirms the distinctiveness of his architectural theory of expression; the specificity of distinct spaces can be perceived intuitively through the senses, but resists discursive identification.

Of all the rooms described in Le Camus's treatise, the boudoir most closely resembles the depiction in Bastide's novel; Le Camus's description of its ornamentation is taken almost word for word from *The Little House*, insisting on the sensuous qualities, the optical illusions, and the lighting effects of this abode of sensual delight:

> The boudoir would be still more delightful if the recess in which the bed is placed were to be lined with looking glasses, their joints concealed by carved tree trunks artfully arranged and leafed and painted to resemble nature. This would repeat to form a quincunx, which would be multiplied by the glasses. Candles, their light softened by gauzes in various degrees of tautness, would improve the effect. One might believe oneself to be in a grove; statues painted and suitably placed would enhance the pleasure and the illusion.[24]

The mirrors framed by sculpted tree trunks and arranged in a quincunx, the candlelight veiled with gauze, and the illusion of a natural wood artfully lit, are found almost word for word in Bastide's novel, making evident the influence of the libertine novel on the architectural treatise. Moreover, Le Camus follows the same narrative (spatial) structure as *The Little House*, acknowledging the use of sensuousness and emotional tension between lovers to qualify architectural spaces.

In *The Genius of Architecture*, as in *The Little House*, the bathroom is the main room that follows the boudoir. Even though Le Camus first introduces its anteroom and related closets, and expands on some technical – plumbing – considerations, the description of the character of the place remains his central object. The bathroom is the refuge of Diana and therefore is characterized by elegance and lightness: its proportion is Corinthian. It is the apartment whose decoration is determined most specifically by its occupant. Le Camus suggests surrounding the bathtub with a curtain of the whitest fabric to create more intimacy. However, Diana sometimes roams through the forest, where the scorching sun may tan her skin. In this case, he suggests, blue curtains might be more appropriate and would suit her skin tone better. "Foresight is all," he claims: "What is proper for a blonde has not the same advantage for a brunette."[25] The decoration of the bathroom thus becomes an extension of one's clothing, an interface between skin and walls.

The bathroom is also the apartment that offers the most freedom for an architect to imagine new forms of decoration. Why not represent Amphitrite's grotto with all the richness of the sea, or the palace of Neptune, Le Camus suggests.

The bath itself could be modeled on the chariot of the Sovereign of the sea. In the French language, the *baignoire* (bathtub) is a term that designates the ground-floor boxes at the theatre, and Le Camus does not miss this opportunity to expand on the analogy between architecture and theatrical staging. To enrich the composition, he writes, we should set the *stage foreground* with terracing, as well as with aquatic herbs and various seashells scattered on the shore. Moreover, if nature cannot be brought inside, then silver gauze may approximate the appearance of crystal waters, and some other device may imitate their murmur. Silver gauze in fact was commonly used to represent water on stage during the eighteenth century, and Le Camus once more validates the analogy by suggesting that while giving free rein to his imagination, the artist's inventions may indeed be prompted by examples of stage decoration.

In the story of *The Little House*, Mélite escapes from the bathroom and runs off to the gardens for a moment of respite, for she can no longer take the overwhelming beauty and the seductive power of the place. In his enumeration of architectural spaces, Le Camus also interrupts his progression. He explains, however, that if his treatise were about castles or country houses he would have expanded on their outdoor extensions, but the *hôtel particulier* is an urban building so he must limit himself to describing the stable yards and their related buildings. If in Bastide's story the gardens are an important element of seduction, they are not entirely absent from the spatial progression in *The Genius of Architecture*. The chapter on exterior decoration concludes with an analogy between architecture and gardens, while in the chapter on the art of pleasing in architecture, Le Camus qualifies the gardens as "the essential basis of a building" in which "everything must concur to a single end, as in a stage decoration, where all is connected."[26] Moreover, Le Camus understood the expressive power of gardens, for he dedicated *The Genius of Architecture* to Claude-Henri Watelet, the author of an important treatise on garden design, and he himself devoted an entire treatise to the garden and fountains of Chantilly a few years later.

While Mélite explores the gardens, Le Camus introduces a diversion on how the character of the apartments should be related to the client for whom they are built. This discussion, under the title "Linen Room," seems somewhat out of place in the overall structure of the treatise (as an interlude during which we await the return of the coveted lover), but it serves to remind the reader of the true purpose of the description: each room and the entire sequence must express the specific character of its inhabitant, not only the social status of the owner but his/her qualities of heart. Like Trémicour who used his little house to convince Mélite of his good taste and refinement, as well as the sincerity of his intentions, the *hôtel particulier* in *The Genius of Architecture* can become a proof of its owner's "purity of heart."[27] "The purity of moldings contributes much to this impression, as does the lighting; the whole must be well lit, but not too bright." This expressive power of architecture is not a vague system, Le Camus insists; it is based on firm foundations. Indeed, architecture can move the soul and induce emotions in its visitors: "There are few persons who fail to experience, on entering certain dwellings, a sudden emotion quite contrary to that with which they came. This is inspired by the place itself; the whole aspect of an apartment may inspire confidence, just as a prison arouses horror."[28]

After hesitating for a moment in the arms of the marquis, Mélite runs from the gardens and returns to the house where she first visits the game cabinet (*cabinet de jeu*). An *hôtel particulier* is more complex than a *petite maison*, so Le Camus describes not only the grand cabinet, but also the library, a private study, the cabinet of medals and antiquities, the cabinet of natural history, the cabinet of machines, and their adjacent closets and lobbies. In accordance with Le Camus's theory of gradation in richness and ornamentation, the main cabinet is preceded by two others that announce its character and provide an appropriate progression in sophistication.

The apartment that concludes the chapter "On Distribution and Decoration" is the dining room and its adjacent serving room. As in *The Little House*, where the "flying" table was inspired directly by theatrical devices, the dining room in Le Camus's treatise is also where the analogy with the theatre is most explicit. A cupboard and tables must be provided for serving dishes and for clearing away the table: "By this means, the table will be set in no more time than it takes to change a scene at the Opera."[29] The serving room that centralizes the carrying of dishes is compared to the backstage that prepares the changes of scenery. Private passages must be provided from the kitchen and pantries so that none of the dishes are carried through the main rooms. Just as theatrical machinery must be hidden to preserve the illusion of the scene, the process of preparing a meal should not disrupt the enjoyment of the feast. The dining room is also organized as an amphitheatre, surrounded by a few steps destined to receive flowers. Suggesting a theatre in a garden, Le Camus notes that the general decoration and lighting of the room will change throughout the day.

During dinner, after seeing so much beauty and experiencing such intense sensations, Mélite finally realizes that for the first time in her life, "love was presented to her in its true character."[30] What ultimately seduces her is not the confrontational insistence that Trémicour had displayed earlier in the novel, but the almost feminine tenderness he reveals during dinner, his "inaction in expressing such tenderness." Accordingly, the dining room in *The Genius of Architecture* is dominated by the feminine characters of Hebe, goddess of youth, and Flora, goddess of the gardens. Le Camus explains that in such a room, "statues of men would not succeed; the preference must be given to pleasing objects, nothing severe, nothing that might overawe. Constraint is foreign to pleasures; ease and freedom are to prevail."[31]

As the sequence of rooms described in *The Genius of Architecture* follows exactly the same order as Mélite's visit to Trémicour's little house, the dining room concludes the enumeration of the main rooms inside the *hôtel particulier*. Le Camus's treatise implicitly addresses the architectural space of desire in a scheme of seduction as it shares the same "plot" as Bastide's story. Mélite, however, does not lose her virtue in the dining room. Like Bastide, who describes Trémicour patiently observing Mélite's every gesture and hesitation as dinner unfolds through an elaborate series of courses presented for the enjoyment of all the senses, Le Camus takes us through a long interlude describing where such a meal would be prepared. Le Camus enumerates a long list of specialized rooms that evoke the pleasures of taste, as if to make us languish like Mélite anticipating her defeat. The main larder

and the fish larder are followed by the wood cellar, the roasting chamber, and the pastry kitchen. An entire section is devoted to the production of desserts: the workroom for confectionery, the room for preparing desserts, the room for storing confectionery, and the room for storing fruits. Also included are rooms where trays, porcelain, and silver are kept. As if to delay the final enjoyment of the artist's victory, Le Camus also describes the various officers' quarters, the apartments of the maids and employees of the house, and the stables. These quarters should be close enough to the main apartments to fulfill the master's every need, but carefully distributed to avoid interfering with the activities of the master. In other words, the employees should be as invisible as possible, as in the dining room scene in Bastide's novel, when Trémicour pretends that all the sevants have gone for the night: this intimacy is propitious to the expression of love.

Mélite loses her virtue in a second boudoir she enters by mistake, thinking that she is leaving the house. Trémicour sees that in her confusion Mélite is taking the wrong door, but does not try to stop her. Instead, he distracts her at the threshold by putting his foot on her dress. As she turns her head to disengage her dress, she does not notice that the room she is entering is in fact a green boudoir. Using a similar literary deceit, Le Camus de Mézières also pretends to lead the reader toward the exit, but suddenly makes a volte-face and introduces a second boudoir. Indeed, the last chapter of *The Genius of Architecture* is a description of the stable yards and the related carriage houses. As the reader prepares to take leave, Le Camus concludes his long enumeration of rooms with the riding school. It is here that the young noblemen master the horses and prove their skill and cleverness. Le Camus asks the reader to imagine two young masters competing side by side, trying to overcome in the briefest time a number of obstacles previously determined "with due taste and judgment." The riding school is indeed the ultimate place to *win a wager*, a direct reference to Bastide's novel and the initial wager between Mélite and the marquis.

The decoration of the riding school should be in accordance with the proportions of the Doric order, for it is the order of the warrior. Since part of the composition needs to be covered, the upper part could become a terrace for a most pleasant garden. At this point, after visiting the riding school, the reader is distracted for a moment and, like Mélite, is returned unexpectedly to the final boudoir that concludes the description of architectural spaces in *The Genius of Architecture*. Le Camus suggests that the roof above the riding school would be an ideal location for a boudoir that could extend out onto this elevated garden terrace. No situation could be happier, for "Mars and Venus always agree."[32] A contrast of light and shade enveloping architectural elements in the most voluptuous way characterizes this last boudoir. A colonnade facing the windows on the western façade would be lit by the rays of the setting sun producing a theatrical effect. Le Camus describes the slow and sensuous movement of light softened by the roundness of the shafts, gliding voluptuously around columns, before falling plentifully on the ground where the surrounding peristyle reflects its brightness. The vivid contrast between protruding and receding parts distinctly outlines every member and becomes more effective as daylight grows stronger. "At another time, the Sun's enfeebled rays will still illuminate

the lateral parts, when all above is shrouded in the first shades of evening. What beauties! What charms!"[33]

Thus ends Le Camus's enumeration of rooms and apartments in great and splendid houses known by the name *hôtel*. It also concludes his discussion of how the character of each room relates to the personal story or the character of its inhabitant. Although some may argue that Le Camus simply follows the typical sequence of rooms in an *hôtel particulier*, this would not explain the unexpected return to the boudoir at the end of *The Genius of Architecture*. Moreover, the organization of the treatise does not acknowledge Le Camus's insistence on important relationships between specific rooms in an *hôtel particulier*. For example, the first anteroom preceding the living room must be adjacent to the dining room, he writes, yet the section on the dining room appears much later in the treatise, in accordance with the unfolding of Bastide's story. Moreover, Le Camus does not follow his own written description of the distribution of the hôtel de Beauvau, an *hôtel particulier* that he built ten years earlier. In the contract document listing every room to be included in the hôtel for the Prince de Beauvau, the enumeration begins with "the courtyard for the stables and carriage houses," while the stables appear only at the very end of Le Camus's treatise. Then come "the lodgings of the officers and servants employed therein, together with the infirmary," corresponding to the second to last chapter of *The Genius of Architecture*. Before describing the "ground floor of the main fabric," the contract document for the hôtel de Beauvau lists the remaining services: "the kitchens, pantries, and subordinate offices," as well as the cellars, the basements, and the garden for which "Madame de Beauvau shall supply the design and provide the fruit trees."

This concern with services was not unusual in the eighteenth century. In his treatise *L'art de bâtir les maisons de campagne*, Briseux also began by describing the appropriate location for kitchens, related services, and stables before addressing the distribution of the main house. The progression through the hôtel de Beauvau begins with two anterooms, followed by a third anteroom that also serves as a dining room. Adjoining the second anteroom is a reception chamber, followed by the bedchamber of the Prince, the cabinet, and some back closets. Then comes the salon, the bedchamber of Madame la Princesse, her dressing room, boudoir, bathroom, and water closet. Only this last sequence of rooms, which constitutes the private apartments of the Princess, is grouped together in *The Genius of Architecture*, and the order is slightly different.[34]

The magnificence of the present age has forced architects to include many rooms that previous generations could not even imagine, Le Camus claims. The sight of such opulence and art amazes, but is the soul completely satisfied, he asks? Unfortunately, a series of rooms often lacks the necessary relationships to ensure that the whole distribution expresses a particular character. It is essential for the architect to determine the primary narrative that the house must convey. Throughout *The Genius of Architecture*, the narrative is clear: the delayed fulfillment and extended threshold of the *hôtel particulier* evokes the erotic tension between two lovers, a tension that becomes palpable and that addresses all the senses while defying objectification.

Chapter 10

The narrative space of desire

Concealed in the narrative structure of *The Genius of Architecture* is the implied objective of the architect: to create a sensuous architectural experience modeled on the gradual seduction of a lover. However, one should not assume that Le Camus sought to reproduce the libertine space of seduction, typical of the gallant eighteenth-century society. Although Le Camus borrows some passages from *The Little House* and follows its narrative structure, he never explicitly acknowledges the influence of Bastide's novel on his architectural treatise, as he did with Servandoni, Le Brun, and others. Even though seduction is an important part of his architectural theory as evidenced by his insistence on "The Art of Pleasing in Architecture," he clearly did not want his architectural treatise to be reduced to the erotic space of a boudoir novel. If one looks at his entire body of work, particularly his later literary writings, there is an explicit desire to recover a more original meaning of Eros, as expressed in classical tales, where desire and unrequited love offer the possibility of articulating an ethical position: finding an appropriate conduct between what is desired and what is given to the senses.

The pleasure of the senses advocated by Le Camus de Mézières becomes clearer when considered in the light of his novel, *Aabba* (1784), and his description of a picturesque garden, *Description des eaux de Chantilly et du hameau* (1783). Although often neglected by architectural historians because they seem to hold little architectural significance, these literary works epitomize Le Camus's belief that narrative space can translate the noblest expression of love. Unlike the typical boudoir novels of the time, these two works do not rely on games of deception to manifest their spatial tension. When Le Camus writes explicitly about the space of desire in a literary form, he returns to classical sources and tries to redefine the role of Eros, the bittersweet, as an agent of disruption that perpetually delays fulfillment and characterizes the destiny of human life.

Aabba, a romance

Le Camus's only novel, *Aabba, ou le triomphe de l'innocence*, is set in Thessaly, a region of Greece south of Mount Olympus, and specifically in a village close to the Vale of Tempe. In the eighteenth century, the Vale of Tempe was regarded as the abode of delight and of tranquility. Claude-Henri Watelet, one of the first French authors to write on the picturesque garden, credits this idyllic place with providing the ideal model for pastoral settings and sheepfolds which his contemporaries used in such a pleasing manner. Protected by gods and goddesses, who often visited the valley to renew their heart and their desire, the inhabitants of this heavenly place were said to be ignorant of vices.

The story of *Aabba* portrays a happy peasant couple, Chloe and Theogenes, who had remained childless. After giving some offerings to the gods, they are blessed with the birth of a beautiful daughter, Aabba, a name that evokes the primordial origins of language, as well as the recurrent theme of a rondo. Indeed, the names of the protagonists are borrowed from classical tales such as Longus's *Daphnis and Chloe*, and Heliodorus's *Theagenes and Chariclea*. Similar in their central theme and narrative structure, *Aabba* becomes a variation on these classical tales.

With the birth of their daughter, Chloe and Theogenes are filled with happiness and go to the Temple of Vesta to offer a lamb, symbol of innocence, to thank the gods. In their excitement, however, they neglect to thank the immortal Venus (Aphrodite), the goddess of Beauty and Love. Venus is infuriated at being excluded and runs to Jupiter to ask for retribution and starts to prepare her revenge.

Aabba grows up to be full of grace, beauty, and wit, and possesses all the attributes of Hebe, goddess of youth. She becomes the most coveted girl in the village. Eventually, her heart falls for Hilas, the most honest and talented shepherd. It is at this point, as the two lovers prepare to acknowledge their mutual feelings, that Venus intervenes and makes her son Cupid (Eros) hit Hilas with one of his love arrows while Aabba is struck by a lead-plated dart soaked in gall. Hilas falls passionately in love with Aabba, but she becomes indifferent and even repulsed by all that should please her: "her character is entirely transformed."[1]

Aabba's heart is now filled with a somber melancholy and she decides to withdraw to the Temple of Vesta. Aabba devotes her life to the service of Vesta, the goddess under whose protection she was placed at birth, but Venus still wants revenge and sends her son Cupid to the temple by hiding him in a basket of flowers. Cupid hits Aabba once more with an arrow and this time she falls in love with him. After chasing Cupid, she finally catches him and cuts his wings so that he won't escape again. Cupid is infuriated and hits Aabba with yet another arrow that induces a passionate love for Hilas. She leaves the temple in search of true love, but learns that Hilas fell into desperation after she rejected him and disappeared from the village. She faints in grief.

The second part of the story begins with Aabba's rebirth as she awakens, apparently liberated from the wrath of the gods. It seems that Venus is satisfied and has abandoned her pursuit of revenge. Aabba's revival symbolically coincides with the arrival of spring. However, she cannot taste the pure pleasures of nature because

10.1
**Aabba tries to
escape but is hit
by Love's arrow**
Source: N. Le
Camus de
Mézières, *Aabba,
ou le triomphe de
l'innocence*, 1784

*Elle veut fuire le petit traitre,
mais en vain;*

her heart still feels the wound inflicted by Love. Exhausted by sadness and melancholy, she falls asleep in a field where Zephyr, the western wind, who also happens to be Venus's messenger, uncovers Aabba's charms, opening the light veil that was covering her bosom. When she awakens, the wicked Tircis, a shepherd with a corrupted heart, is staring at her. The unknown shepherd is touched by the pure innocence of Aabba, and even though he scares her at first, she soon falls under his charm. Aabba returns home with her herd where she learns about Tircis's reputation. Aabba and her parents pray to the gods that destiny will stop hounding her. Jupiter, finally touched by their prayers, rewards Aabba's virtue and crowns her the most virtuous shepherdess of the canton.

Because of this triumph, Aabba wins general respect, and the beginning of the third part seems to announce new hopes for happiness. Her good fortune, however, awakens Venus's jealousy, and the goddess once more threatens her with retaliation. Cupid is sent to inflict again his mother's vindictiveness on Aabba, but at the sight of such virtue and innocence, he falls in love with her, and himself takes the form of a shepherd to be closer to Aabba. When Venus finds out that her son is in Thessaly, disguised as a shepherd and under Aabba's charms, she is infuriated and swears revenge. She goes to Jealousy herself to get help.

Throughout the story, Le Camus uses the Greek and Roman names of various divinities interchangeably, implying that their inherent characters are directly translatable. Interestingly, he also personifies various passions and vices, such as Jealousy, adding to the classical mythology new characters that relate more closely to human emotions. Le Camus carefully personifies the tormented passion, and the journey itself expresses Venus's state of mind. In Jealousy's lair, the stinking vapors that fill the place do not stop her. Different specters cross her path, but she pushes them away; Lie and Artifice stare at her with a distraught gaze, but rather than being disturbed the goddess only becomes more animated. As Venus finally reaches Jealousy, she finds her surrounded by her ministers, armed with poisonous torches and murderous daggers. Her eyes are wild and her face pale and livid. At the base of her throne, an altar filled with bloody hearths to appease her inflamed gaze would have repulsed anyone with horror, except the enraged Venus.

Trouble and Discord are called upon to assist Venus, but her wrath soon turns against her as other shepherds attack her son. Cupid nonetheless tries to seduce Aabba who scorns him and sends him away. Tircis, the debauched shepherd, reappears and, provoked by Jealousy, seeks revenge for Eros's indecent behavior toward Aabba. Even though he proclaims his love for her, Aabba rejects Tircis. In front of Cupid (Eros), Tircis dares compare his feelings for Aabba to those of Love for Psyche, but before he can even complete his sentence, he turns pale and a cold sweat takes over his body; he loses all his senses. Le Camus tells us that Tircis was punished less for being Eros's rival than for addressing him sharply on the delicate subject of his love for Psyche: "It is not for mortals to want to penetrate the decrees of the Gods."[2]

The final part of the story begins during the grape harvest, when everyone is working to collect the divine fruit. When the grapes are taken to the wine press, Aabba tries to get rid of Eros, the mysterious shepherd who follows her everywhere.

She climbs onto a wooden board that leads to the top of the wine vat, and when Eros follows her, she jumps off and causes him to fall into the vat. Eros is ridiculed and pushed away by the villagers. At that moment, the Satyrs and Fauns announcing Bacchus's chariot are marching toward him. Ashamed, Eros approaches Bacchus and recounts the story of his unfortunate fall into the wine vat. When Bacchus finally recognizes him as Venus's son, he takes Eros away in his chariot, and they drunkenly vow to punish those who dare make fun of the gods.
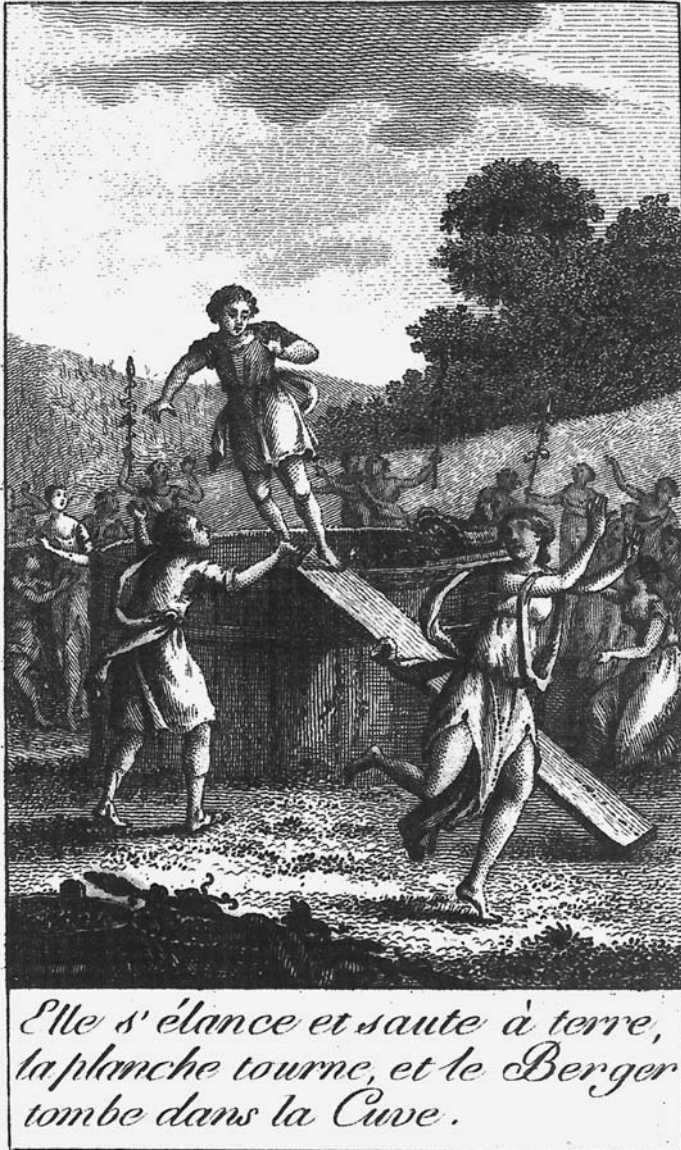
10.2
Love, disguised as a shepherd, falls in the wine vat
Source: N. Le Camus de Mézières, *Aabba, ou le triomphe de l'innocence*, 1784

In the meantime, the wine is ready and Theogenes, Aabba's father, organizes a feast to celebrate Bacchus. While serving wine, Aabba gets intoxicated by the wine's vapors and falls under the spell of Bacchus himself: she becomes a Bacchante. Her mind is taken over by the spirit of the god of wine, and she runs to the mountain where she goes through a series of initiatory experiences, encountering terrifying animals and strange beasts. At some point, a ray of light guides her into a cave where she finds a lifeless young man lying on the ground: it is her beloved Hilas.

S'il respire, c'est en poussant des cris douloureux.

10.3
**Aabba finds Hilas
in a cave**
Source: N. Le
Camus de
Mézières, *Aabba,
ou le triomphe de
l'innocence*, 1784

Aabba is freed from Bacchus's spell and tries to revive her lover. Hilas is given a magical drink (one assumes it is wine) that gives him enough energy to return to the village where they soon get married, and live a very happy life, protected by the gods.

The story of *Aabba* is inspired by a number of classical romances and mythological stories. As mentioned earlier, the plot of *Aabba* has a direct precedent in Longus's story of *Daphnis and Chloe* (second century AD). Le Camus de Mézières was undoubtedly familiar with this story since his brother, Antoine Le Camus, who also actively participated in his private theatre in Charonne, produced a translation of it in 1757.[3] In this pastoral romance two young peasants display a natural innocence with regard to sexual matters. Living in nature, their environment changes progressively from wilderness to a delectable garden as they gradually become educated in matters of love. In his preface, Longus states that the story was motivated by his encounter with a painted image of Eros that moved him profoundly, for it was the most beautiful thing he had ever seen. This desire to "create a rival image in writing" inspired him to start working on his story in which the erotic tension is maintained between the perfect painted image of Eros and the counterpart image in words.[4] These images are like two parts of a metaphor, and the tension between them is filled by the work of the imagination. As in *Aabba*, the primary theme in *Daphnis and Chloe* is not the fulfillment of an amorous relationship, but rather its delay and the continuation of the erotic tension, which is resolved only at the very end. The longing for completeness evokes a quest for the missing other, yet the distance must be maintained for the meaning of the work to be perpetuated.

The erotic tension reciprocates the aesthetic distance of the work of art, comparable to the distance between actors and spectators in Greek theatres of antiquity. Tragedy itself originated in the Dithyramb, the Dionysian spring ritual that celebrated the return to life and the power of nature.[5] Accordingly, the story of *Aabba* unfolds after the intervention of Bacchus, the Roman equivalent of Dionysius, the Greek god of wine and peasant celebrations. After being taken over by the power of Bacchus, Aabba becomes a Bacchante and confronts the forces of nature. Once she is freed from any cultural restraint (her behavior is compared to that of an animal), Aabba is reborn into a primordial state; it is the return to a purified nature, after the decadence of culture in the eighteenth century.

Besides the characters of Chloe and Theogenes mentioned earlier, Hilas (sometime spelt Hylas), Aabba's lover, is also borrowed from a classical tale. *Hylas* is the title of a mythological pastoral by Theocritus (c.315–c.250 BC). Honoré d'Urfé (1567–1625) later turned the character of Hilas into the protagonist in his pastoral novel *L'Astrée*, made into an opera by Pascal Colasse, a disciple of Lully, with a libretto by Jean de la Fontaine (1691). In the seventeenth-century story, Hilas is a pleasant man who personifies inconstancy and who criticizes idealism. Faced with the servile faithfulness of Céladon for his beloved Astrée, and Silvandre's complicated discourse on love, Hilas introduces a touch of humor and contradiction into the dialogue. The setting, however, is quite different from that of Le Camus's story where Hilas is sapped by passionate love – as if a revenge on he who dared joke with matters of Love. Tircis, the debauched shepherd from Le Camus's story, is also borrowed

from *L'Astrée*. In that context, he is the disconsolate shepherd who clings to the memory of his beloved Célon, while being loved by Laonice.

In *Aabba*, as well as in classical romances from antiquity, Venus (Aphrodite) plays a major role in maintaining the tension between purity and sensuality. Her jealousy often becomes the driving force behind the story, as Cupid becomes the executioner of his mother's revenge. In the relationship between Aabba and Venus's son, Cupid (Eros), one easily recognizes the story of Love and Psyche, first articulated in writing by Apuleius (second century AD), to which Tircis alludes, and in which Eros falls in love with a beautiful young girl. In the classical myth, Eros takes the girl to a palace where he joins her every night, promising her eternal love if she agrees never to try to see his face. One night, she approaches with a lamp and sees Eros; a drop of oil wakes him up and he runs away. After many adventures, Psyche finds Eros again. The myth of Love and Psyche was interpreted as the destiny of fallen souls in constant search for complete and divine love.

Incidentally, Jean de la Fontaine who wrote the libretto for *L'Astrée* also wrote a version of the myth of Love and Psyche, *Les Amours de Psyché et de Cupidon* (1669), in which the architectural framework plays an important role. As in the story of Aabba, Psyche's beauty inadvertently awakens the jealousy of Venus who sends her son to torture the heroine, but in both cases, Cupid falls in love with his victim. In order to appease Venus's anger, Psyche's parents learn from the oracle that they must sacrifice their daughter to a cruel monster. Abandoned in a dark forest by her escorts after a long pilgrimage, Psyche is carried to the top of a mountain by Zephyr – the wind god – to meet the monster she is destined to marry. There, she discovers the most enchanted palace decorated by Magnificence herself; every room is more ornate than the previous one in a principle of gradation that will later be articulated in the architectural theory of Le Camus de Mézières. Once in the palace, a group of nymphs take her to the baths before dressing her in her nuptial gown. Dinner is served in the next room where ambrosia is prepared in different forms. After the meal, the most charming music is heard from a corner of the ceiling, but no instrument is to be seen, suggesting some hidden passages similar to those described in *The Genius of Architecture*. Once the music stops, Psyche is put to bed, and in the obscurity of the night, her future husband comes to meet her. Even though Psyche is not allowed to see his face, Love appears to her in a dream and seduces her with his beauty. As she wakes up, she immediately asks to be taken around the palace and starts exploring every room, every corner: the palace becomes the embodiment of the invisible Lover.

Visiting the palace, Psyche finds depictions of herself in numerous paintings, sculptures, and tapestries: "It seemed that the Palace was a Temple, and Psyche was the goddess to whom it was dedicated."[6] The fairies who had decorated the palace took great care to represent Psyche in various forms and settings, so that she would never get bored. In some places, she is represented as an Amazon, in other places as a nymph, a shepherdess, a hunter, etc., and every day, while imper-sonating a different character, she wishes for her husband to see her dressed up in such a manner; she imagines that he can see her from some hidden corner, again a direct precedent to the hidden corridors and peeping devices in *The Genius of*

Architecture. Le Camus was most certainly familiar with La Fontaine's version of the story, for many of the characters from his plays and his novel are borrowed from La Fontaine's novels and fables.

One day, as Psyche explores the surrounding gardens and forest, she follows a river that takes her to a cave where she finds her husband. She complains to him that she cannot truly love him since she has no idea what he looks like. As Psyche keeps insisting that she wants to know her husband's identity, Cupid explains that her longing for his image is what prevents her from drifting into boredom. If her desire was fulfilled, her love for him would start to diminish, for Fortune, like all women, is never satisfied to remain immobile and the completion of her happiness would mark the beginning of their demise. And indeed, when Psyche disobeys the order and looks at her lover's face, he disappears together with the enchanted palace.

This resistance to representing the object of desire is meant to maintain the erotic tension between lovers. In an architectural context, it is also significant that La Camus de Mézières resisted illustrating his architectural treatise on the distribution and decoration of domestic spaces while so many of his contemporaries (from J.-F. Blondel and Briseux to Ledoux and Boullée) heavily illustrated their architectural ideas. Indeed, there are no pictures in Le Camus's work, except for the granary in Paris (a built project where the conceptual ideas had already been crystallized) and three images in his novel *Aabba* (where one would least expect images). This absence is deliberate, for Le Camus is using narrative as a way to depict ideas, and the presence of images in a work such as *The Genius of Architecture* would only restrict the realm of imagination.

La Fontaine's retelling of the classical tale of Love and Psyche is staged as a conversation between four friends. The main narrator is called Poliphilo, a name borrowed from the main protagonist in Francesco Colonna's treatise, *Hypnerotomachia Poliphili*, published in 1499. One of the most mysterious and influential treatises of the Renaissance, it became known in France primarily through Jean Martin's translation of 1546.[7] *Hypnerotomachia* is the story of a dream in which the main protagonist, Poliphilo, visits many ancient marvels, classical architectural monuments, and wondrous structures such as a pyramidal monument, an elephant based obelisk, and a Temple to Venus, in search of his beloved Polia, the embodiment of architectural meaning. Poliphilo's journey takes him through a series of initiatory experiences in which he successively dies and is brought back to life following his encounter with the five senses impersonated by five nymphs.[8] After acknowledging their mutual love, Poliphilo and Polia cross the water in Cupid's chariot and arrive triumphantly at the enchanted island of Cythera, where geometric gardens and ornate fountains epitomize the perfection of unearthly love. *Hypnerotomachia* is an original narrative articulation of the architectural space of desire. "It expounds a poetic vision that sets a temporal boundary to the experience of architecture, emphasizing that architecture is not only about form and space but about time, about the presence of man on earth."[9] It demonstrates the potential of architectural meaning to involve the individual not only intellectually but also in an embodied way.

The space of desire characterizes humanity, a bittersweet condition between nature and culture. In literature, it coincides with the beginning of alphabetic writing: when ephemeral speech was fixed in arbitrary signs and written words, it needed narrative tension to complete its meaning. Anne Carson explains that the introduction of vowels into the Greek alphabet around the early eighth century BC was a major modification of the written language. It amounted to an act of abstraction, dividing the pronounceable syllable into mute consonants and the sounding vocalic breath, thus isolating the consonants that could not exist on their own for the human ear or voice. The consonants, Carson emphasizes, mark "the edge of sounds," and since Eros becomes manifest in the liminal space, "to the edge of things," it is not surprising that this transformation of written language led to the beginning of erotic literature.[10]

Interestingly, from the Renaissance onwards, erotic narratives became a powerful model to convey architectural meaning, a tradition in architectural theory that began with Francesco Colonna's treatise. Not long after the original publication of the *Hypnerotomachia Poliphili*, Geoffroy Tory published his *Aediloquium* (1530) in which he discusses the architectural distribution of a house. What is most striking about this work is that it was published together with his *Epitaphia septem de Amorum aliquot passionibus Antiquo more et sermone veteri, vietoque conficta*, a series of seven love epitaphs. The author intended to call this second part *et Erotica*, but this title was rejected at the moment of printing, for fear that it might "give a false idea of the book."[11] In his preface to the *Aediloquium*, Tory explains that eminent painters of his time depict the tribal gods and human beings

> with such exactness that a voice and a soul seem the only things wanting to them; but here, most gentle reader, I offer you, nearly in the manner of these painters, a house, which not only is elegant and finished in its outlines and parts, but speaks prettily and describes itself part by part in a eulogy.

Following this tribute to the architecture of a house, the seven epitaphs, intentionally composed and written in an ancient style with obsolete words, show

> the various affections to which unhappy mortals who are in love are subject. I am, I say, pleased to offer you these, not that you may speak or write in obsolete words such as you here find, but that you may have before your eyes, so bright and full of charm, a sample of antiquity, and you may know that you have been thoroughly warned by me to be on your guard against falling into the snares and perplexities of an insane love. Farewell.[12]

Tory's work gave rise to some controversy. While some were delighted with it, others reproved Tory for "manufacturing Latin words after a style of the author of the *Songe du Poliphile*."[13] The *Aediloquium* also anticipates later works such as *The Genius of Architecture* where the architecture of a house similarly "speaks and describes itself part by part" (Le Camus would suggest proceeding step by step), in a form that borrows from the language of love and seduction.

As if to provide a key to the narrative enigma of his architectural treatise, Le Camus suggests that the ideas in *The Genius of Architecture* could be considered *a beautiful dream*, an implicit reference to Colonna's *Hypnerotomachia Poliphili*, which ends with Poliphilo awakening after a long peregrination through otherworldly architecture. Although "a beautiful dream, these ideas may be," Le Camus insists that they can nonetheless be made to come true; their purpose is to spur our imagination, and to provide new ways "of exciting our emotions, gratifying our sensations, and suiting our dwellings to our tastes, to our desires, and to various needs that luxury creates everyday."[14]

The parallels between Colonna's *Hypnerotomachia Poliphili* and Le Camus de Mézières's work are numerous and varied for they share the language of mythological stories and sensuousness. Some of the architectural correspondences are also striking. For example, the form and the architectural order that characterize
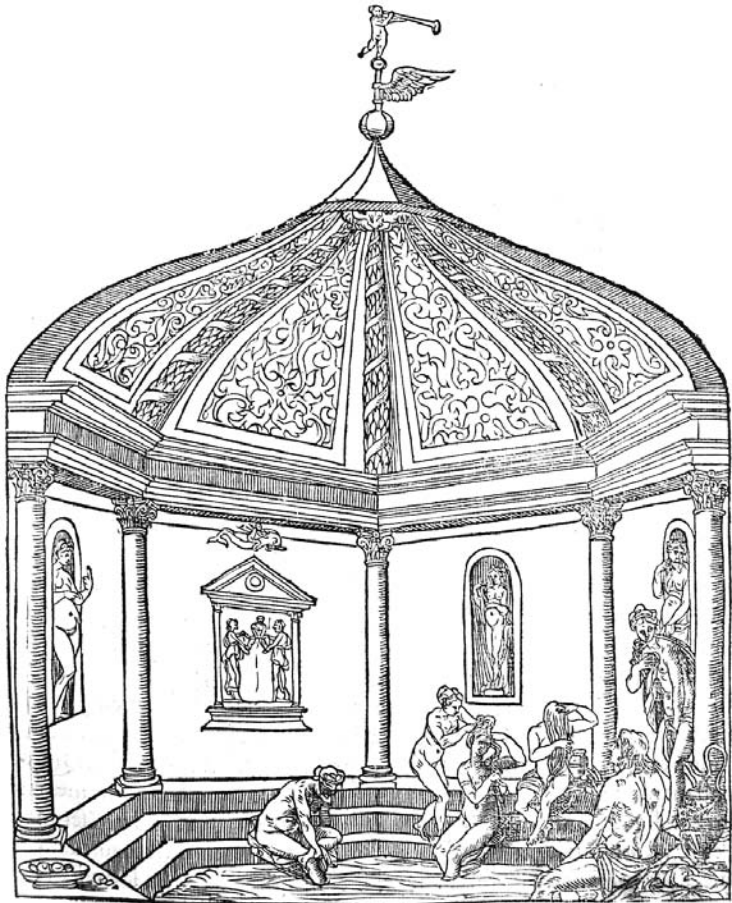
10.4
Octagonal bathhouse
Source: F. Colonna, *Hypneromachie, ou discours du songe de Poliphile*, 1546
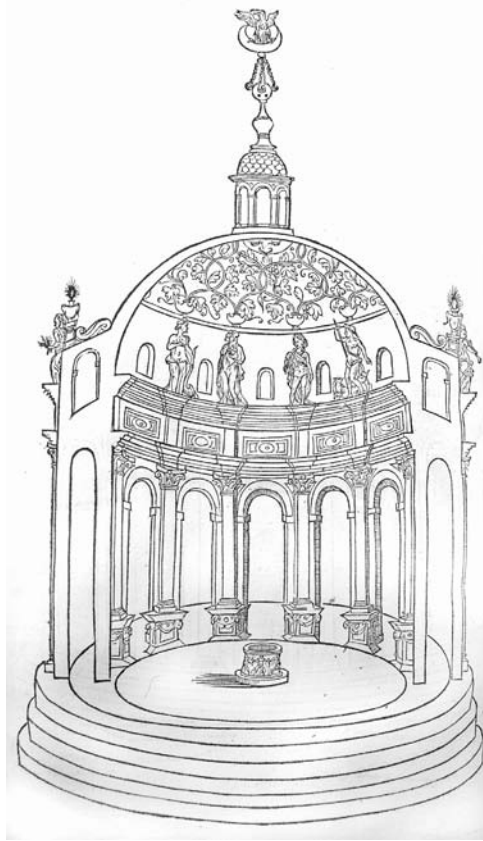
the octagonal bathhouse described in the *Hypnerotomachia* and illustrated in the Jean Martin edition become the reference model for Le Camus de Mézières as he describes the appropriate configuration for a bathroom in *The Genius of Architecture*. Le Camus's main architectural project, the granary in Paris, also seems to borrow from some of the monuments visited by the main protagonist in the *Hypnerotomachia*. Beyond formal resemblance, the circular structure of the granary (the repository for the fruits of the earth), clearly perceived as an innovative shape in the urban context of eighteenth-century Paris by many of his contemporaries, might have its symbolic origin in the circular Temple of Love in Colonna's story with its reference to fertility. The juxtaposition of arches and openings in the façade of the Temple of Venus in the 1546 edition of Colonna's treatise seems to anticipate the combination of arcades and square windows that compose the façade of Le Camus's granary. The parallel between the interior space of the Temple of Love and that of the granary is even more striking when compared to Le Camus's proposal for covering the structure. In the description of the circular amphitheatre on the island of Cythera and the orangery annexed to the main palace in the *Hypnerotomachia*, with its circular shape and its high tower overlooking a water labyrinth, one also

10.6
Granary
Source:
N. Le Camus de
Mézières, *Recueil
de differens plans
et desseins
concernant la
nouvelle Halle
aux grains*, 1769
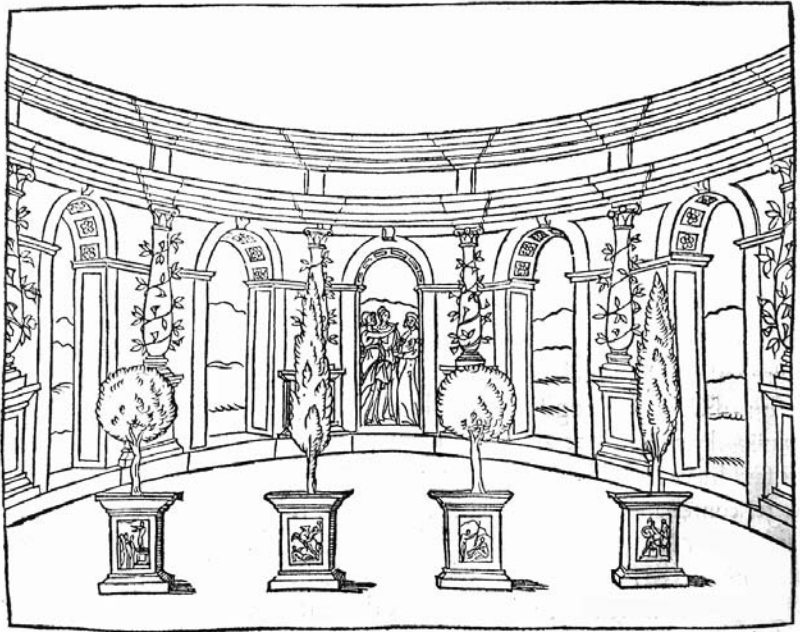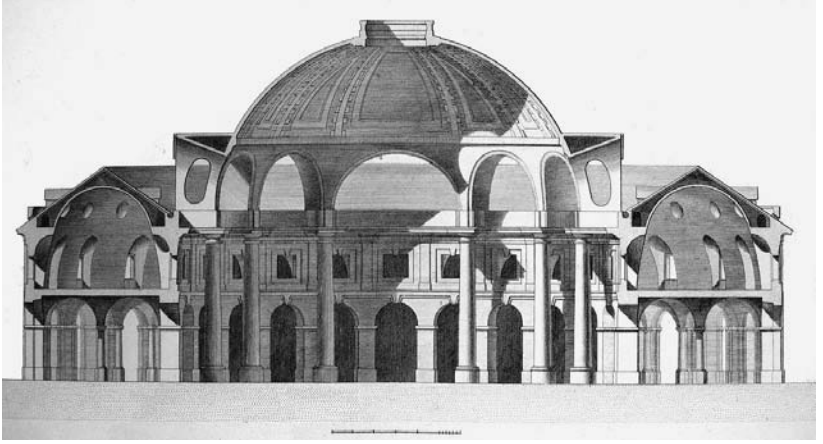
10.7
Orangery
Source: F. Colonna,
*Hypneromachie, ou
discours du songe
de Poliphile*, 1546

recognizes some important features of Le Camus's granary with the Medici tower and proposed naumachia. Other similarities are the five nymphs that accompany Poliphilo on his journey; they embody the fives senses, a recurring theme both in *The Genius of Architecture* and in Le Camus's later work, *Description des eaux de Chantilly et du hameau*. When Aabba becomes a Bacchante towards the end of Le Camus's story, she witnesses horrific scenes that also recall Polia's nightmare in the second part of the *Hypnerotomachia*.

If these connections may seem conjectural, the parallels between the *Hypnerotomachia Poliphili* and Le Camus de Mézières's granary are made explicit in the work of J.G. Legrand, the architect who designed with Molinos the first dome for the granary in 1782. Legrand produced a free translation of the *Hypnerotomachia* which he entitled *Songe de Poliphile* (1804). Legrand confesses from the start that his translation took some liberties with regard to the 1499 original, and this early nineteenth-century version is insightful for the depiction of its own social and cultural context. In a note following his free translation, Legrand confesses his bias in favor of Polia, whom he tries to ennoble, for this is the proper manner to treat women, he claims. On the other hand, Poliphilo is an unbearable coward, and "I took the liberty of eliminating the major part of his ridiculous fears that come back at every moment under Colonna's pen," he writes. Clearly, Legrand's translation is as revealing of the social and cultural context in which it was produced as was the original text by Colonna.

Indeed, in many instances, Legrand updates the settings of Colonna's story, introducing for example the theatrical device of the flying table, a contraption that became fashionable during the eighteenth century, in the description of a sumptuous dinner at Venus's palace. In a chapter entitled "Les Champs Élysées," an ideal place without pain or sickness where the principal occupation is to enjoy sensuous pleasures, Legrand goes into a long digression where he describes garments and headgear worn by the nymphs. Each one is inspired by nature, he explains, thus expressing a specific character from nature: "Imagine a Nymph lightly dressed as a hummingbird, another as a golden scarab, one more wearing a dazzling mother-of-pearl tunic with her hair done in the shape of a double volute," suggesting the adornment of an Ionic column. All these ornaments artfully produced enhance their beautiful physiognomy without hiding their natural grace and character. The splendor of public celebrations must draw from these images from nature originally outlined by the learned from antiquity, Legrand insists. They will feed the imagination of poets, painters, sculptors, and architects alike, ensuring the perfection of every spectacle.[15] Legrand himself drew his inspiration for celebrations and architectural

10.8
View of the granary in Paris with the cupola by Legrand and Molinos; drawing by J.B. Maréchal (1786)

projects from these metaphors from nature, including his dome for the granary in Paris.

Not surprisingly, when describing the Temple to Venus, Legrand emphasizes its most important feature, the half-circle cupola representing the sky:

> The entire planetary system was represented in greatest detail and with the utmost accuracy, so that one could see at a glance the majestic ensemble and the working of the Universe. Such spectacle honored both the gods who created such marvels, and the men who discovered their mechanism and harmony.[16]

This structure seemed to have been destined to preserve and convey to posterity the entirety of human knowledge. Great care was therefore taken in its construction in order to prevent the ravages of time. The cupola in golden copper directed rainwater into pipes that collected it into pools for purification; Legrand also suggests that this water could have served to fight fires if the Temple had not been built entirely of "incombustible materials," again a direct reference to the granary, renowned in its time for being the first entirely incombustible building in Paris.

Chantilly, a picturesque garden

Le Camus de Mézières alludes to the *Hypnerotomachia Poliphili* with his reference to the power of imagination and the dreamlike quality of his architectural theory in the chapter on exterior decoration in *The Genius of Architecture*. It also coincides with his discussion of the appropriate relationship between gardens and buildings. "Gardens are the great enhancement to buildings when well related," Le Camus writes, "when every part is well proportioned, while maintaining disarray that is characteristic of the productions of nature."[17] Le Camus's other quasi-novel, *Description des eaux de Chantilly et du hameau*, published a year before *Aabba*, is another eloquent example of a constructed plot that maintains a space of desire through the use of narrative. As in Colonna's story, in which the garden offers a privileged setting for the lovers to express their passions, Le Camus's description of the garden at Chantilly defines a space of erotic tension in which an architectural intention (embodied in a beautiful naiad) is translated into built form.

Description des eaux de Chantilly is usually defined as a description of a picturesque garden designed by the architect Jean-François Le Roy in 1780 for Monseigneur Louis-Joseph de Bourbon, Prince of Condé, on an island formed by the river Nonette and other sources of fresh water. This is factually correct but the implications of the work go far beyond the simple description of a garden. Le Camus describes the peregrination of Nonette, the river, who becomes a beautiful naiad traveling through the countryside. She encounters the Prince of Condé, with whom she falls deeply in love. The garden of Chantilly and its fountains then become a testimony to Nonette's feelings for her beloved Prince. For Le Camus, the narrative structure of the garden and its theatrical form of expression were again primary concerns.

The story begins when Nonette, the river, suddenly becomes transmuted into a radiant naiad leaning on her urn. As she watches the water pouring out, she

exclaims that the flow of water is similar to the flow of human life. Since it is the duty of gods and nymphs to contribute to human happiness, "Let's fertilize these countries and beautify these places," she exclaims.[18] She then makes her way through the countryside and enters the domain of the good Prince of Condé. When she sees him she is enthralled, and wishes to seduce him and to be loved by him. The behavior of the river follows the conventional conduct of a woman in love: "Nonette glances timidly at Condé, but cannot sustain watching him and gives up; she makes a new effort, comes closer, praises him and pays him tribute; at this moment she will spare nothing, she wants to please him."[19] Abundance and fertility are her greatest assets, and she takes advantage of them to impress her beloved Prince. He responds by invoking architecture, laying out for her the most delectable gardens in which she is the principal ornament. Nature and architecture complete each other and create a perfect scene. Her pure waters attract flocks of swans and various kinds of colorful fish. Like mermaids of the Tyrrhenian Sea, the fish appear when one approaches the edge of the water because they wish to seduce and please you, Le Camus writes. Moreover, the garden is the meeting point of all the gods as Diana and Bacchus betray their presence.

A satyr expresses the generosity of the Prince by whistling a seductive hymn that arouses all the creatures of the water and transforms the calm scene of the pond into a colorful spectacle. Nonette can no longer be contained in this limited space, and is soon carried away in other directions, creating cascades and other such wonders. She runs to the island of love, aware that she is the principal ornament wherever she passes. There, a marble statue has been erected in her honor. A basin collecting an abundant sping where all the nymphs come to gaze at their own reflection surrounds it. This enchanted island is the part of Le Camus's narrative that most closely resembles Colonna's perfect garden, where Cupid takes the two lovers following Poliphilo's trip into the underworld. As in Le Camus's account, Colonna's sacred island is populated by nymphs who come to pay tribute to their goddess at the fountain of Venus.

At the tip of the island in Chantilly stands the Temple to Venus, decorated with Ionic columns. Above the door are Venus's doves, as well as her torch and Love's arrows, decorated with vases and baskets of flowers: another direct reference to the Temple of Love in Poliphilo's story. Le Camus notes that this is the Temple of the goddess of Cythera, and mystery is at the door. Inside, Beauty is holding hands with the Graces and Pleasures. The naiad is pleased to contribute to the ornamentation of this place, producing fountains and cascades of water that collect in alabaster vases decorated with sculpted images of Cupid. The naiad Nonette is impatient to produce new miracles and to enjoy all the advantages of the beautiful space that opens in front of her.

She indicates to the Prince the appropriate location for creating an enchanted island where a pleasant hamlet could be built. She also indicates that a good architect must know how to penetrate "the progression of our sensations, to take hold of them, and to play with them as he wishes."[20] Indeed, in the hamlet, all the senses are excited: various perfumes fill the air, the birds create a symphony, and the entire composition provides a most pleasant scene. Nonette concludes her

voyage through the Prince's domain by surrounding the castle and the upper part of the property. Seduced by the beauty of the castle, she departs from her normal appearance as a water stream to become a truly embodied form that comes to rest on the grass: "She has been seen three times (if we believe some of the elders) among the nymphs of the canton, exhausted in contemplation, dozing on the lawn."[21]

The different forms and movements of the river create various fountains and waterworks. From her initial state of rest, lying in a pond, she leaves Morpheus's arms to become fountains in the stables. Then she proceeds through the vegetable garden, where there is no need for elegant forms: her abundance alone is sufficient to convey her charms. She continues into the three rooms of the Roman pavilion, two of which have an elliptical shape. A recess in each room receives the emerging water that decorates this seductive place. In the centre, a bathtub completes the grotto where Diana comes to bathe with her nymphs after running through the forests. The decoration of this idyllic place represents the perfection of nature: the ceiling is painted as a sky with birds, and the walls portray espalier trees climbing up a trellis, with fruits appearing so natural that many are fooled, like the birds by Zeuxis's grapes.[22]

Nonette's voyage culminates in the *grand jet*: upon seeing a statue of the Prince of Condé, she wishes to express her attachment to the lord of this illustrious house. The naiad "makes a last effort and forms a superb jet of sixty feet."[23] Following this ultimate outburst, Le Camus concludes that the generosity of this charming naiad "is the delight of Chantilly, she spreads her treasures and continually tries to embellish it. It is to you, generous Prince, that we owe these privileges."[24] In effect, the beauty of Chantilly originated from the mutual attraction between Nonette, the river-nymph, and the generous Prince.

In addition to characterizing the various parts of the picturesque garden as mythical figures and stories, Le Camus's description follows a narrative structure that links the elements of the garden into a story that maintains its erotic tension from the first encounter of the two lovers until the final outburst of passion. Like *The Genius of Architecture*, in which a concealed seduction plot reenacts a spatial narrative, *Description des eaux de Chantilly* presents the architectural program as a temporal unfolding, and thus confirms Le Camus's quest for an architecture of desire.

Le Camus's description of the gardens at Chantilly also coincided with a changing sensibility to nature and a renewed aesthetic of landscape design. From the mid-1760s in France, some important transformations occurred in the design of parks and gardens. In 1766, Scottish gardeners began to design a park for the marquis de Girardin at Ermenonville, where Jean-Jacques Rousseau, the author who most directly contributed to the new interpretation of nature, spent his last days.[25] At Versailles, the gardens of the Trianon were transformed after 1774 in accordance with the new fashion of the picturesque garden. In the 1770s, many French authors started writing about the emerging English gardens whose natural style was a reaction to neo-classical formalism. The profound difference between continental and English gardens was based not only on their concepts of nature and geometry, but also on their "staging" of architecture. The classical French garden typically surrounded the house or château with an axial geometry emanating from the doors

and windows of the house; in the English version, however, the house was merely placed "in" the garden, without being its centre or *raison d'être*. The English garden also could not be perceived at one glance from within the building; its irregular paths invited exploration.

Roger de Piles, in his *Cours de peinture par principes* (1708), introduced the notion of the "picturesque" (*pittoresque*) into the French critical vocabulary. The term originally referred to a painterly view, and only later was appropriated by theories of landscape gardening to describe a site whose spatial organization was qualitatively different from the Baroque geometric gardens. De Piles believed that landscape paintings could be expressive because all their composing elements were instilled with "intrinsic qualities." "Rocks," for example, "are of themselves gloomy, and only proper for solitudes."[26] Water on the other hand could take on various states, from a calm reflecting pond to a turbulent river, and stir the most varied passions; water was regarded as "the soul of the landscape." For Le Camus de Mézières, water was certainly the soul of the garden at Chantilly, for the river/naiad guided the distribution of the garden as she ran through it.

Le Camus's unacknowledged sources on gardening can be found in a number of treatises of the time, particularly in Jean-Marie Morel's *Théorie des jardins* (1776), and the Marquis René de Girardin's book, *De la composition des paysages* (1777). Although Girardin explores the relation between the philosophy of sensations and garden theory, Le Camus makes no mention of it. Interestingly, Girardin's treatise was discussed together with *The Genius of Architecture* in a session of the Académie Royale d'Architecture on May 29, 1780.[27]

Le Camus also never acknowledged the influence of Morel's treatise on his own architectural theory, but the parallels are evident. Morel's work was an investigation of the role of sensations in the art of gardening, and the analogy with theatre is also explicit. Morel believed that, more than any other art form, landscape design offered the spectator a "thrust of sensations in constant flux." Morel also discusses the role of convention in terms that were later borrowed directly by Le Camus de Mézières in his own treatise on architecture.

The second volume of Morel's treatise begins with a chapter on buildings, in which he insists that his interest lies neither in the science of architecture nor in the rules of decoration, but in the exterior appearance of buildings, their relation to the site, and their intended destination. In other words, he was interested primarily in how the character of a building could complement a picturesque landscape. Architecture must be integrated into a landscape with great care, he warns. Because it comes from convention rather than from nature, the appropriate character of buildings must be "subjected to that of the scene in which they are placed."[28] Architecture can complement a picturesque landscape only by respecting established conventions and by participating in a shared language:

> Appropriateness (*convenance*) which in architecture consists in the perfect accord between the form and character of a building and its destination, is a fine and precious part of the art that stems from emotion, and whose knowledge is acquired less by the study of rules than by that

of the manners, the customs of the country and the age in which one lives.[29]

Four years later, Le Camus de Mézières introduced his section on exterior decoration by defining appropriateness in terms that echoed Morel's:

> That part of Architecture that we call by the name of fitness (*convenance*) is defined and may be learned not so much by the study of rules as by a perfect understanding of the manners and customs of the age and country in which one lives.[30]

According to Morel, every building in the city or the country must obey the laws of propriety. However, the art of gardening follows a different kind of appropriateness: "It consists in the relationship that the productions of architecture have with the pastoral scenes in which they appear."[31] Whereas every building in the city has a different character and decoration, thus giving every street "its specific physiognomy," buildings in a garden must respond primarily to the landscape in which they are situated. Since they are not the work of nature, their very existence "implies an objective and an intention in the person who had them erected; this objective and this intention must express itself not only through the place they occupy, but also by their form and character."[32] The notion of *convenance* in gardens therefore presumes a contrast between nature and architecture: the appearance of buildings "arouses moral ideas and consequently acts upon the imagination and emotion."[33] By combining them with different natural scenes, a wide variety of impressions and characters can be created.

Le Camus's acknowledged source on gardening was his friend and fellow writer, Claude-Henri Watelet, to whom *The Genius of Architecture* is dedicated. Independently wealthy from an early age, Watelet devoted himself to the arts, and liked to consider himself a connoisseur. Sometimes credited with creating the first picturesque garden in France on his estate at Moulin-Joli on the banks of the Seine near Bezons, Watelet also wrote the first French treatise on the picturesque garden, *Essai sur les jardins* (1774). By promoting a new fascination for non-geometric gardens and exotic Anglo-Chinese landscapes, this book marked an important moment of transition in French taste. Watelet and Le Camus shared some fundamental assumptions about art. According to Watelet, works of art must not only please the senses; they must also touch the mind and the soul.[34]

From the outset, Watelet establishes that nature is the ultimate escape from the turmoil of society and the passions. Like all eighteenth-century philosophers with a romantic inclination, including Rousseau and Diderot, Watelet criticizes the city as a place of perversion. The complete enjoyment of a more "natural" state, however, almost demands that one be deprived of it for some time. Only someone arriving from the city can fully appreciate the sweetness of the countryside, he writes. The nature where many seek escape is not a wild primordial unknown, however, but a controlled expanse that provides its inhabitants with a sense of order and purpose, even without symmetry. In fact, the "natural" garden designed for the new individual trying to escape the city at the end of the eighteenth century did not undermine the

well-established order embodied by the monarchy and transposed into the French "geometric" garden. Before the fall of the *Ancien Régime* in France, the two formal dispositions in garden design remained non-contradictory and even needed to coexist to preserve a sense of stability.

As with Le Camus de Mézières, Watelet's ordering principle was a coherent plot underlying the distribution of the garden. Watelet even compares creating a country retreat to writing a novel. Not surprisingly, the text reads like a long poem whose structural clarity is often blurred for the sake of literary concerns. Describing the disposition of the *ornate farm*, the ultimate pastoral landscape, Watelet suggests that through art, man can "embellish nature," and give to elements such as flowers "the perfection that Nature itself seemed to have denied them."[35] If a man is initially led to improve nature and to perfect the art of gardening for his personal enjoyment, Watelet suggests that the owner of a garden can increase his pleasure by sharing it with a friend. This very possibility of "communicating" one's experience of gardens implied a shared language "from nature" that would have a direct impact on architectural theories of expression, in particular that of Le Camus de Mézières. As Watelet continues, however, it becomes clear that the ideal friend is the self, thus displacing the level of discourse on the question of decorum from an essentially public to a now private and personal domain.

This notion of oneself as a friend seems directly inspired by Diderot's description of artistic perfection in his writings for the Salon of 1767. The perfect work of art, he writes, should make one feel the delirium and the ultimate pleasure of enjoying oneself. Watelet relies even more directly on Diderot to define his theory of the picturesque garden when he uses the promenade as a transition among the various buildings or activities in a garden, similar to Diderot's description of Vernet's paintings in the Salon. The disposition of trees, rivers, and benches invites the *promeneur*, guides his steps, and protects him, in a way that recalls the unfolding of spaces in Le Camus's *hôtel particulier*:

> At every moment I find myself protected from the sun by trees that seem to have been placed there by chance . . . My steps are imperceptibly slowed down and ready to suspend their progression to take greater pleasure; the shade of a group of trees under which a grass bench and a little fountain are placed stop me and invite me to take a moment of rest . . . To engage without constraining; this is the art of all the Arts of pleasing.[36]

As in *The Genius of Architecture*, the theatrical metaphor recurs in the *Essai sur les jardins*. A house must convey a real simplicity, Watelet writes. It is by living in it that its owner becomes an "actor in its pastoral scene."[37] Because of his insistence on the narrative structure of gardens and their theatrical temporality, Watelet openly criticizes traditional parks in the French manner, which create paths with no point of interest and therefore little enjoyment. Watelet suggests replacing such parks with hamlets whose happy inhabitants would "provide animated scenes and appeal to the sensitive soul."[38] Again, the theatrical analogy is explicit, as the peasants are compared to actors in a pastoral setting.

Like De Piles before him, Watelet also acknowledges the origin of the picturesque in painterly views. To convey his intention, a painter assembles various objects from nature and chooses the most favorable angle to depict them. The garden designer must also create pleasing views, but the work is more difficult, he explains, because of restrictions due to the quality of land, the climate, and the character and shapes of the landscape. Watelet was most interested in what distinguished the picturesque garden from the notion of a painterly view; he insisted that a garden designer was more like a sculptor who composes in a figurative way using various natural elements. The major distinction came from the ability of the garden designer to create pastoral scenes with a temporal structure, by tracing paths and establishing rhythms of elements, as well as places of rest for the visitor.

A visit to a garden can also resemble an experience at the theatre, Watelet explained. Just as the movements and voices of actors create dramatic action, the movements and noises of natural elements can guide a visitor in the garden: "Waters, the trembling of foliage, or birdsong are the only resources against silence and immobility." For Watelet, these elements all contributed to define the character of a garden. As for De Piles, water was the central element that could give the most life to a garden: "The more animated [waters] are, the more they correct the silent and gloomy character of the most artfully composed elements."[39]

This analogy between garden and theatre was not unusual in the eighteenth century. Since the Renaissance, theatrical performances had often taken place in gardens. Colonna's influential *Hypnerotomachia Poliphili* indeed culminates in a garden with an amphitheatre at its centre. At this place there is a fountain devoted to Venus and Adonis, and the participants witness an amorous encounter between Mars and the goddess of Love, an encounter reenacted on the terrace above the riding school in Le Camus's *hôtel particulier*. In Colonna's story, however, this centre of perfect love is associated with the afterlife, the ideal realm of fulfilled love epitomized by the pure geometry of Renaissance gardens. In this theatre of desire the sensuous experience of the world is most perfectly accomplished, as Poliphilo's senses awaken at the sight of the beautiful nymphs, the sweet perfumes, and the joyful sounds of nature.[40]

The sensuous garden is also a central element in Watelet's treatise. Watelet distinguishes between three kinds of garden characterized by three different intentions. In the countryside, usefulness must predominate over pleasure. In parks, usefulness must assist pleasure, while art must be subordinated to nature. In pleasure gardens ("lieux de plaisance"), art may express itself more freely. In these gardens devoted to delicate sensations, artifice and wealth are combined to create supernatural effects, overriding nature itself. It is the character of the owner that defines these gardens, Watelet explains. Such pleasure gardens often become the display of their owner's wealth, but when the owner is less obsessed by the idea of splendor than that of sensuality, he wants to find "all the charms of voluptuousness" in his retreat where he hides from society: "imagination and the senses are excited by the dispositions, the assemblage of objects, and all the perfections of the art."[41]

Watelet's work on the picturesque garden was partly indebted to Thomas Whateley's *Observations on Modern Gardening*, published in England in 1770, and

soon translated into French. Although, like Watelet, Whateley was neither an architect nor a landscape designer, he is considered by some modern scholars to be the first English writer to consider the notion of character to the same depth as French theoreticians. With apparently no prior interest in these art forms, Whateley was in the midst of writing *Remarks on Some of the Characters of Shakespeare* when he decided to interrupt this work to write his treatise on gardening. His book on Shakespeare would focus specifically on the notion of character.[42] He believed that the main character was the central and most important feature of a play. It is therefore not surprising that his treatise on gardening expands on the three important components of his character theory: the prevailing or predominant character who pervades the entire play; the capacity of characters to affect the sensibilities of spectators; and the associative process that conveys an expressive character. Whateley's notion of "affectivity" (how a character affects a spectator) was intimately related to English theories of acting during the eighteenth century. It would clearly help define his garden theory: "The scenes of nature have a power to affect our imagination and our sensibility [. . .] The art of gardening aspires to more than imitation: it can create *original* characters."[43]

As in architecture, a garden designer can produce various characters by combining elements from nature. In *The Genius of Architecture*, Le Camus himself comments on English gardens and how their character is expressed directly by proportions derived from nature. "Their expression is never equivocal; no one is left in doubt by the character that nature presents; she is within everyone's reach. The sensibility that almost all men share is enough to make them feel her influence to the full."[44] English gardens, he continues, offer innumerable scenes and *tableaux* when they are well conceived in the appropriate genre and derived from the beauties of Nature herself. For Le Camus, as for Watelet, the analogy between architecture and garden design was especially relevant, since both art forms used spatial compositions and successions of elements to create an experience of movement and transformation: "The variety of levels makes up in part for the lack of movement in the art of garden design; in the same way in architecture, isolated columns and the interplay of planes produce different views at every step we take."[45] Garden design and architecture also express various characters in an analogous way. The Noble, the Rustic, the Pleasant, the Serious, and the Sad are characters that depend on the nature of the soil, its fertility, and the combination of various elements in the landscape, Watelet writes. The Majestic, the Terrible, and the Voluptuous can also determine the character of a scene, but they usually require accessories from the artifice of garden design to convey their effect. Since certain characters are more nuanced and require artificial objects to convey their meaning, Watelet suggests adding the *poetic* and the *novelistic* (from the French *romanesque*) to the more fundamental elements of a picturesque garden.

The poetic in gardens borrows from myths; myths have appeared widely in ancient stories and have become "adopted conventions and common to all who have some education."[46] However, very few people have a real knowledge of them, Watelet explains. Even the stories depicted in temples and monuments are not always recognized. Therefore, it is helpful to inscribe on these buildings (and

this is the primary meaning of the word "character") the names of the divinities to whom they are dedicated. Watelet's position here differs from that of Le Camus de Mézières, for whom mythological stories translated into built form could be understood easily and shared as a common language. The distinction, however, is primarily one of emphasis. Both Watelet and Le Camus believed that proportions and dimensions could express a specific character, like an actor on stage:

> Even if these poetic accessories can add to the pleasure of fertile imaginations and educated men; . . . if the proportions are incorrect, the characters badly expressed, the dimensions mean, then the poetic device becomes trivial, and the pretension ridiculous. A disgraceful or badly dressed actor makes us laugh when he presents himself as a hero.[47]

Poetic scenes, more than the picturesque or pastoral, suffer from lack of movement and action. To perfect this genre, Watelet considers including pantomimes with real actors in the landscape. Novelistic scenes, on the other hand, permit a wider range of invention but are less comprehensible than the poetic. Novelistic ideas, which Watelet associates with allegories in general, tend to be more vague and personal: "They belong, so to speak, to every individual; and for this reason, they tend to be guided by unruly imagination and aberrations of taste."[48] Yet, the novelistic has such a great power to create magical illusions that pantomime would not even be necessary.

It is very significant that Watelet expanded the usual definition of the picturesque garden to include a literal narrative dimension. It would have a deter-mining influence on the writings of Le Camus de Mézières for whom the unfolding of a spatial narrative in both *The Genius of Architecture* and the description of the gardens at Chantilly qualified the nature of architectural spaces. This introduction of narrative in architectural and garden theories also pointed to the new role of nature as an entity to be staged and exploited for artistic purposes rather than geometrized. The complex relationship between nature and architecture that resulted from it was also the basis of an important distinction between Le Camus de Mézières's theory of character and similar theories in the first half of the eighteenth century. While Boffrand, Blondel, and even Briseux used the architectural orders or their general proportions to "imitate" particular characters taken from nature, for Le Camus de Mézières, and later Ledoux and Boullée, nature became an obscure realm that could no longer be simply imitated but had to be recreated in a narrative form. Le Camus clearly embraced this pre-romantic perception of nature, as is evident in his *Description des eaux de Chantilly*. In this work of fiction, Le Camus does not describe nature as a model to be imitated nor as a primordial state to be sought; instead, he personifies it. As in his architectural treatise, the description of the garden includes many mythological stories. Using language to mediate between nature and archi-tecture was a fundamental part of Le Camus's theory. Through his narration of a love story, the description of Chantilly reveals the erotic tension that makes the picturesque garden into a work of art.

Conclusion

The temporality of human experience

In the decade preceding the French Revolution, Nicolas Le Camus de Mézières proposed an innovative theory of architecture which used language to define an erotic tension in architectural spaces, and an analogy with the theatre to create human sensations. It relied on narrative structure to expand the role of the architectural program and to propose a temporal experience of successive spaces. Le Camus concluded *The Genius of Architecture* by proposing a second part to his treatise that would be devoted to public buildings. "This would be the time to speak of public buildings," he writes, "of their use, the sensations that they must arouse, each in its own kind, and the resources to be employed to these ends."[1] This grand project, however promising, was never developed beyond this initial statement of intention. Le Camus never wrote his treatise on public buildings, yet he left behind an important public monument, the granary in Paris, and some important clues in *The Genius* itself that suggest what might have been the central concerns of his treatise on public buildings.

Le Camus believed that even residential buildings could contribute to the public role of architecture: by expressing the social status of its owner, the character of an *hôtel particulier* would convey its destination in the public realm. In a time of great political turmoil at the end of the eighteenth century, while other architects such as Boullée and Ledoux devised theoretical projects with a belief that human inventiveness could recover a lost order, Le Camus de Mézières looked to character theory for a way to compensate for the crumbling traditional order. By defining architecture as an expressive language that can announce the destination of a building, or convey the social character of its owner, he attempted to recover a higher order previously pursued by political life.

Twentieth-century philosophers and sociologists, such as Richard Sennett and Hannah Arendt, have argued that the overwhelming dominance of the private realm after the fall of the *Ancien Régime* could only result in a dead end for public arts such as architecture, and, consequently, they offer little hope for a significant

architectural practice. Since the private and social realms truly dominate our contemporary world, a nostalgic remembrance of the past era can lead only to muteness, and only by acknowledging our condition, by "working through" these private and social forms of interaction, can we find an appropriate alternative to act in the world.

In Le Camus's treatise, the expressive character of the *hôtel particulier* was conveyed through a temporal unfolding of the architectural program. This temporality, as should be obvious by now, was based on an analogy between architecture and theatrical staging, following the narrative structure and dramatic development of a plot. In late eighteenth-century theatre theory, however, temporality itself was being reconsidered and underwent some radical changes. Two opposing views of the three dramatic unities (particularly the unity of time) were based on diverging concepts of realism on stage, with profound consequences not only for theatre but also for architectural distribution.

For Pierre-Jean-Baptiste Nougaret, on the one hand, the simultaneous depiction of different places on stage was no longer acceptable. His treatise *De l'art du théâtre* (1769) demanded a linear series of events – except at the Opera, where complex leaps were accepted as part of the magical nature of the performance. In any other situation, collapsed time spans and rearranged places on stage were deemed to be incongruous. Nougaret even argued that the duration of the performance should match the duration of the action it portrays. Moreover, the time of day represented in the play should coincide with the actual time of the performance. This identification between real time and fictional time was intended to achieve greater realism, which, in Nougaret's view, could only contribute to the enjoyment of a play: "The more we can facilitate the spectator to imagine that what he sees is real, the more we can be certain that his pleasure is vivid, and that he takes a genuine interest in the action."[2]

Nougaret's defense of linear temporality at the theatre anticipated the nineteenth-century notion of *la marche* in architecture. This mode of representation, based on a linear promenade, was intended to present the distribution of a building within a rationally organized, homogeneous space. Nougaret's position, however, was not universally shared, and various writers began to question the theatrical principle of unity of time and place. The temporality of architectural narrative during the eighteenth century, particularly in the work of Le Camus de Mézières, also questioned Nougaret's premise. Its suggestions of non-homogeneous time and narrative tension could make hours seem to collapse, or an instant be suspended indefinitely.

This flexibility of theatrical time was defended by Louis-Sébastien Mercier in his treatise, published four years after that of Nougaret. In *Du théâtre* (1773), Mercier challenged the sacrosanct unity of time by rejecting the twenty-four-hour convention that limited the virtual duration of a play. He argued that a strict rule would be detrimental because it would hinder beauties of a new order: "With some skill and interest, sixty hours can appear to pass like twenty-four. Does the spectator have a watch in hand when he is moved or strongly interested?"[3] Unity of place is equally irrelevant, Mercier maintained, for it stifles the action and unduly restricts the imagination of the poet. The only unity that really mattered for him was the unity of action

(*unité d'intérêt*) that holds the story together: "This is what attaches the spectator, what fixes his soul entirely, and what reunites in a single point the network of his ideas, permitting no distraction."[4]

Given the close development of theatre and architecture theories, this fragmentation of linear time on stage led to a rethinking of the architectural program as a temporal sequence. This theatrical temporality was already at work in other forms of expression, such as the *Carceri* engravings of Giambattista Piranesi, which anticipate the radical temporal fragmentation and reconstitution of non-linear compositions of current art work. The most far-reaching architectural consequence of this eighteenth-century concern with time and unity of action was the implicit admission that the traditional architectural orders were no longer sufficient to express the complexities of an architectural program. For Le Camus de Mézières and Bastide, for example, the character of each room should be expressed by paintings, sculptures, and even lighting. Every element of the composition was expected to contribute to this unified narrative. Thresholds and doorways provided transitions from room to room and permitted gradations in the dramatic tension. A similar concern led Ledoux to transform architectural program in an even more radical way. The narrative structure of his treatise, *L'Architecture considérée sous le rapport de l'art, des moeurs et de la législation* (1804), was no longer confined to the internal spaces of an *hôtel particulier*. Although each individual continues to inhabit a house with an appropriate character, Ledoux's architectural intention had expanded to the scale of an ideal city, in which the configuration of each institution adheres to a unified program.

Le Camus de Mézières's architectural theory, like that of many of his contemporaries, developed a spatial interpretation of the current experiential perception of temporality. In his case, the theatrical temporality with a beginning, an emotional climax, and an ending that resolved the dramatic tension, was the acknowledged model. However, this temporality was not unique to the theatre: it was also prevalent in literature, including boudoir novels; in gardening, where a visitor would be led through various scenes; and even in music, where a debate had been raging throughout the century between those who favored melodic (temporal, horizontal) composition and those who favored harmonic (simultaneous, vertical) composition.

A feeling of boredom (*l'ennui*) was identified as the sickness of the time (*le mal du temps*) in the eighteenth century. It afflicted the most brilliant minds with an unforgiving awareness of the passing of time and their linear journey from life to death. The various art forms that engaged this linearity of human experience were considered to be the most effective means to fight it. In the early part of the century, some authors devoted entire works to this dreadful affliction, such as *L'Art de ne point s'ennuyer* (1715) by André-François Boureau-Deslandes (1690–1757). After discussing various conditions that can cause boredom and different ways of fighting it, Boureau-Deslandes concludes his treatise on the art of not getting bored with a last chapter entitled: "The more one feels, the less one gets bored." In it, he explains that in order to create sensations that will fight boredom, one needs to reject all natural passions that can move the soul in an unruly manner, and replace them with artificial ones created by art as imitations of the natural models.

This notion was expanded a few years later in Abbé Du Bos's treatise, *Réflexions critiques* (1719). In a chapter entitled "Of the necessity to be busy to escape boredom, & of the appeal of movements that passions induce in men," Du Bos indicates two ways in which the soul can be kept busy and fight boredom: by feeling and by thinking. The second option is the most tedious, he says, and without a well-trained imagination and a strong critical sense, one can be led to delusion and an even deeper boredom. Most people rely on feeling to avoid boredom, he writes. The fear of boredom is so great that even when people are disgusted by the world and decide to abandon the absurdity of it all, they can rarely live up to their decision after tasting the boredom of inaction, and usually return to the torment of the passions. This introduces his concept of "artificial passion" in which art should create powerful, yet controlled emotions. The principal merit of poetry and painting – and implicitly theatre and architecture – is their ability to excite real passions, without the negative consequences that normally follow. During the eighteenth century, boredom could be avoided by letting oneself be seduced by architecture and theatrical performances.

During the following two centuries, time and narrative became increasingly important elements of architectural theory. The work of prominent architects such as Le Corbusier, John Hejduk, Carlo Scarpa, and others, clearly offered promising alternatives, for they addressed alternate forms of architectural program and considered new modes of temporal fragmentation that characterized the arts at the end of the millennium. In that context, the radical changes in architectural program during the eighteenth century offer a fertile ground for speculating on contemporary architectural practice. However, the architecture of the twenty-first century should not mimic that of the *Ancien Régime*, nor should architectural programs suggest a theatrical organization of space reminiscent of a past era. It would be naïve to assume that a simple extrapolation could lead to a meaningful contemporary architectural practice. Nevertheless, architecture does have the capacity to convey meaning, and stories can be told through its program and its built form. For architects to operate ethically in a cultural context, we must avoid the pitfalls of empty formalism. To do so, we may consider not only modern functional requirements and cultural conventions, but also more complex notions such as the perception of time in our fragmented world.

Today, time is no longer limited to the linear continuum that encompasses the totality of human life, between birth and death; we perceive it with a different texture, a different mode of unfolding than in the eighteenth century. We have come to discover the irrational temporality of dreams, the fragmented juxtaposition of cinematographic montage, and, more recently, the "risomatic" logic of the internet. Our primary neuroses are no longer defined in terms of "boredom," but anxiety (the fear of accelerated time) and depression, which make one forgetful of the past and blind to the future, in an unbearable and inescapable fragmentary present. For architecture to be meaningful in the twenty-first century, it must address the fragmented time of human experience, while projecting a space/time in which we might recover a sense of our wholeness as mortal beings who belong to a more-than-human world.

Notes

Introduction

1 Abbé Marc-Antoine Laugier's *Observations sur l'architecture*, The Hague, 1765, p. v. The work of Laugier introduced literary aspiration to architectural theory.

2 Étienne-Louis Boullée, "Considérations sur l'importance et l'utilité de l'architecture," *Architecture: essai sur l'art*, ed. J.M. Pérouse de Montclos, Paris: Hermann, 1968, p. 33.

3 My translation, ibid., p. 49. Boullée goes even further and claims that if an architect devotes too much time to practice, he runs the risk of abandoning the more noble, speculative part of his art. Boullée, *Architecture*, p. 54. It is important to remember that Boullée was a student of Jean-Laurent Legeay, who proclaimed the superiority of the idea over construction. See Louise Pelletier and Alberto Pérez-Gómez, *Architectural Representation and the Perspective Hinge*, Cambridge, MA: MIT Press, 1997, pp. 216–27.

4 He writes: "The design process of this project [Cardiff Bay Opera House] . . . could be characterized by an alternative conception of repetition that can be broadly understood as evolutionary, flexible and proliferating. Alfred North Whitehead has described evolution as the 'creative advance into novelty.' . . . [N]ovelty, rather than being some extrinsic effect, can be conceived as the catalyst of new and enforceable organizations that proceed from the interaction between freely differentiating systems and their incorporation and exploitation of external constraints. Novelty and order are related in an autocatalytic rather than binary manner as they are simultaneously initiated from a constellation of vicissitudes." Online. Available <http: //www.basilisk.com/R/renw_d_novlty_ symmtry_576.html> (accessed August 1999).

5 Hannah Arendt, *The Human Condition*, Chicago and London: University of Chicago Press, 1958, pp. 3–4.

6 Arendt, *Human Condition*, pp. 24–6.

7 In *Naissance de la conscience romantique au siècle des Lumières*, Paris: Payot, 1976, Georges Gusdorf identifies "the birth of a romantic consciousness" with the rise of a new subjective individual in the eighteenth century. Gusdorf argues that as early as 1711, Anthony Ashley Cooper, earl of Shaftesbury was the first to consider the human subject in his book, *Characteristics of Men, Manners, Opinions, Times*, where he developed the notion of man as a sensitive consciousness.

8 This is confirmed by the publication of many texts on the decadence of architecture at the end of the eighteenth century, such as Charles-François Viel, *Décadence de l'architecture à la fin du 18e siècle*, Paris, 1800. Arendt argues that the decline of architecture testifies to the "close relationship between the social and the intimate." Arendt, *Human Condition*, p. 39.

9 Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, intr. Robin Middleton, trans. David Britt, Santa Monica: The Getty Center, 1992, p. 105. Most quotations from Le Camus's treatise will be taken from Britt's translation. However, when the translation is mine, I shall give the reference to the reprint of the original French edition: *Le génie de l'architecture, ou l'analogie de cet art avec nos sensations*, Geneva: Minkoff Reprint, 1972.

10 Gusdorf, *Naissance*, p. 340.

11 This progression toward the boudoir is also eloquently described in Jean-François de Bastide's *La petite maison* (1758 and 1763) to which I shall return later.

12 Soane translated an important part of Le Camus de Mézières's *Le génie de l'architecture* while he was working on his own *Lectures on Architecture* for the Royal Academy in 1808; the *Lectures* were published in 1929. David Watkin, *Sir John Soane, Enlightenment Thought and the Royal Academy Lectures*, Cambridge: Cambridge University Press, 1996, pp. 210–17. A partial German translation of *Le génie de l'architecture* also appeared in 1789 in *Allgemeines Magazin für die bürgerliche Baukunst*, issued in Weimar.

13 Although it has been described as a "technical treatise" (Michel Delon) and as a "handbook on the planning of the French *hotel*" (Robin Middleton), these descriptions fail to acknowledge the more fundamental intention of the work.

14 The word "distribution" is used throughout this book with its specific meaning (borrowed from the eighteenth-century French language) of the organization of the rooms of a building in plan.

15 In his book *Differences. Topographies of Contemporary Architecture*, Cambridge, MA: MIT Press, 1997, Ignasi De Solà-Morales introduces this notion of architecture as an "event." De Solà-Morales's discussion of contemporary architecture is greatly indebted to the philosophy of Gilles Deleuze and the phenomenology of Edmund Husserl.

1 Architecture as an expressive language

1 Marcus Pollio Vitruvius, *De architectura*, trans. F. Granger, London and Cambridge, MA: Harvard University Press, 1983, Book I, chap. 2, pp. 27–9.

2 Vitruvius, *Ten Books on Architecture*, trans. Ingrid D. Rowland, Cambridge: Cambridge University Press, 2001, Book I, chap. 1, p. 22.

3 Vitruvius, *De architectura*, Book I, chap. 3.

4 "Vitruvius added Proportion, Decorum (*Bienséance*) and Distribution (*l'Oeconomie*) to Ordonnance and Disposition, not as proper parts of Architecture, but as what improves them; he most probably meant to say that Architecture has two parts which are Ordonnance and Disposition that provide to every part of a Building their perfection." Vitruvius, *Les dix livres d'architecture de Vitruve, corrigés et traduits en 1684 par Claude Perrault*, Brussels: Pierre Mardaga, 1979, Book I, chap. 2, p. 10, my translation.

5 Ibid., Book I, chap. 2, p. 12, my emphasis.

6 Debates on the status of architectural orders, proportion, and harmony rely on a complex terminology of notions or principles such as character (*caractère*), appropriateness (*convenance*), taste (*goût*), etc. In *Symétrie, goût, caractère*, Paris: Picard, 1986, Werner Szambien traces the semantic transformations of such terms from the sixteenth century to the French Revolution. Most interesting are the sections on the proportions of architectural orders, the notion of imagination expanding from the simple mode of knowledge established by Condillac, and the complex transformation of the term *caractère*. Szambien, *Symétrie*, pp. 42–3, 121–2, 174–99.

7 A. Pérez-Gómez's introduction to the translation of Claude Perrault's treatise, *Ordonnance for the Five Kinds of Columns After the Method of the Ancients*, trans. I.K. McEwen, Santa Monica: The Getty Center, 1993, is a crucial reference for the interpretation of Perrault's theory.

8 Claude Perrault, *Ordonnance des cinq especes de colonnes selon la methode des anciens*, Paris: Chez Jean Baptiste Coignard, 1683, pp. i–ii, my translation.

9 Perrault's annotations of Vitruvius, *Les dix livres*, p. 12.

10 Perrault, *Ordonnance*, p. 67, my translation.

11 Louis Savot, *L'Architecture françoise des bastimens particuliers composée par M Louis Savot augmentée dans cette seconde edition de plusieurs figures & des notes de Monsieur Blondel . . .* 1673, 2nd ed., Paris, 1685, p. 341, my translation.

12 Comparing architecture to the other arts, he writes: "The beauties of architecture that delight us also have a natural foundation within us; if such beauties can please us, it is because they imitate those that can be seen in the works of Nature." François Blondel, *Cours d'architecture enseigné dans l'Académie royale d'Architecture*, Paris: Chez l'auteur & Nicolas Langlois, 1675–83, p. 2: 766.

Notes

13 J.-F. Blondel, *De la distribution des maisons de plaisance et de la décoration des édifices en général*, Paris: Chez Charles-Antoine Jombert, 1737, pp. 1: 113–14, my translation.

14 Ibid., p. 2: 27.

15 Claude-Nicolas Ledoux, *L'Architecture considérée sous le rapport de l'art, des moeurs et de la législation* [1804], Munich: UHL Verlag, 1981, p. 12, my translation.

16 J.-F. Blondel, *De la distribution*, pp. 2: 26–7, my emphasis.

17 Germain Boffrand, *Livre d'architecture contenant les principes généraux de cet art: et les plans, élévations et profils de quelques-uns des bâtimens faits en France & dans les pays étrangers*, Paris: G. Cavelier, 1745, pp. 1–2, my translation.

18 Ibid., pp. 16–17, my emphasis.

19 Ibid., pp. 26–32.

20 J.-F. Blondel, *Cours d'architecture*, 6 vols., ed. Pierre Patte, Paris, 1771–7, pp. 2: 2–3.

21 Charles-Étienne Briseux, *L'Art de bâtir les maisons de campagne*, Paris, 1743, pp. 1: 2–25.

22 Ibid., p. 1: 21.

23 Ibid., pp. 2: 115–20.

24 Ibid., p. 2: 154, my emphasis. In her article, "The Use of Architecture: The Destination of Buildings Revisited," in *Chora* 2, Montreal and Kingston: McGill-Queen's University Press, 1996, pp. 17–36, Lily Chi expands on the theatrical metaphor in the characterization of architectural use.

25 Marc-Antoine Laugier, *Essai sur l'architecture* [1755], Brussels: Pierre Mardaga, 1979, p. xvii, my translation.

26 Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, Santa Monica, CA: The Getty Center, 1992, p. 72.

27 Ibid., p. 95.

28 Ibid., p. 110, my emphasis.

29 Ibid., p. 71.

30 Remy Saisselin, "Architecture and Language: The Sensationalism of Le Camus de Mézières," *The British Journal of Aesthetics* 15, 1975, 239.

31 Sir John Soane's Museum, London, Archives 1/2/52, "Querry 5th lecture" (paper watermarked 1808), quoted by David Watkin, *Sir John Soane, Enlightenment Thought and the Royal Academy Lectures*, Cambridge and New York: Cambridge University Press, 1996, p. 188. Coincidentally, Soane's work on Le Camus de Mézières's treatise (around 1807) concurred with the development of what was to become Soane's museum (known as the Dome, or no. 13 Lincoln's Inn Fields). Scholars have suggested that "the poetic lighting effects of the Dome, and the bold play with mirrors in subsequent interiors [. . .] were surely influenced by Le Camus's description of a house as a theatre in which every room evoked different and appropriate sensations, with light and illusions to create moods." Watkin, *Sir John Soane*, p. 215.

32 Coincidentally, the decade between 1769 and 1780 marked a period of reduced architectural activity following Le Camus's financial misfortune related to the construction of the *Halle au blé*, or granary, erected in Paris between 1763 and 1767. The construction of the *Halle au blé* led to a lengthy speculative development of the surrounding area by Le Camus de Mézières and his contractor, Charles Oblin. Although many of Le Camus's contemporaries praised the mastery of its archi-tecture, as a financial enterprise it was a failure that had repercussions until the end of Le Camus's life. Arch. de Paris, DQ[10] 1392, dossier 3046, et Lacroix, *Actes de la commune de Paris pendant la Révolution*, Paris, 1908, t.VI, 191–2; see also Mark Deming, *La halle au blé de Paris 1762–1813, "Cheval de Troie" de l'abondance dans la capitale des Lumières*, Brussels: Archives d'architecture moderne, 1984, p. 43.

2 Character theory in theatrical staging

1 Arch. Nat., Y. 574–81, 947. Also known as Giovanni Nicolo Servandoni, he was born on May 2, 1695, in Florence, to an Italian mother and a French father named Servan from Lyons, who was a coachman and drove between the two cities. Baptized the following day, the record kept in Santa

Maria del Fiore identifies his father with an italianized name: Giovanni Luigi Servando. Servandoni studied with Paolo Pannini, a painter who combined landscape painting with views of monuments and ruins from antiquity; he also studied with the architect Jean Joseph de Rossi. Before arriving in Paris, Servandoni spent some time in England, where he married Anne-Henriette Roots in London. He left his wife in complete misery, with eight children. While in France, he had a son, Servandoni d'Hanetaire, who became a comedian, but Servandoni apparently denied being the father. Servandoni traveled all over Europe, and produced many works of architecture and ephemeral structures. For a brief biography and an exhaustive list of Servandoni's architectural work, see Louis Hautecoeur, *Histoire de l'architecture classique en France*, Paris: Picard, 1950, pp. 3: 266–70. Hautecoeur takes part of his information from J.-F. Blondel, *Cours d'architecture*, 6 vols., ed. Pierre Patte, Paris, 1771–7, p. I: 103 and p. IV: 351. See also Quatremère de Quincy, "Servandoni," in *Histoire de la vie et des ouvrages des plus célèbres architectes du XIe siècle jusqu'à la fin du XVIIIe*, New York: Hacker Art Books, 1970, pp. 2: 284–96; and Eveline Schlumberger, "Un génie d'opéra; Servandoni," *Connaissance des arts*, August 1965, 23. Servandoni died on January 19, 1766. The most comprehensive biography can be found in Jeanne Bouché, "Servandoni (1695–1766)," *Gazette des Beaux-Arts*, Paris, 1910, 121–46. See also J.-J. Guiffrey, *Nouvelles Archives de l'art français*, 1888, p. V: 263.

2   Hautecoeur traces the development of the façade from 1675 (when construction was stopped due to lack of money) to the project by Oppenord begun in 1719, and the competition for the façade in 1732. Servandoni, who had already designed the chapel of the Virgin in 1729, won the competition. After Servandoni died in 1766, Oudot de Maclaurin was appointed architect to complete the St-Sulpice façade. He did not follow Servandoni's latest design, however, but reverted instead to a 1739 design. In 1770, while the work was hardly completed, it was struck by lightning – perhaps Servandoni's last optical effect. Hautecoeur also traces the successive transformations of Servandoni's project by other architects, including Patte and Chalgrin after 1777. Hautecoeur, *Histoire*, pp. 3: 319, 362–5.

3   On the altered relationship between the spectator and the stage due to the introduction of several vanishing points in stage set decors such as those of the Bibienas, see Marian Hobson, *The Object of Art: The Theory of Illusion in Eighteenth-Century France*, New York: Cambridge University Press, 1982, pp. 139–95. On the Bibiena family's contribution to the development of stage set design, see also Alpheus Hyatt Mayor, *The Bibiena Family*, New York: H. Bittner, 1945.

4   Servandoni was granted the privilege to produce his optic plays in the Salle des Machines during the Easter weeks from 1738 to 1742, and then from 1754 to 1756. Arch. Nat., O/1/382: *Lettres du Ministre de la Maison du Roi*, September 16, 1737. This theatre was famous for its stage machinery, the best in Paris at that time. It was built for opera, on the order of Mazarin for the young Louis XIV, in a converted structure on the Tuileries. Built from 1659 to 1661 by Gaspare Vigarani, its deep stage (40 meters) provided great opportunities for scenic invention, and its elaborate machinery gave its name to the theatre: La Salle des Machines.

5   Giovanni Nicolo Servandoni, *Description abrégée de l'église de Saint-Pierre de Rome*, Paris, 1738.

6   Gösta Mauritz Bergman, *Lighting in the Theatre*, Totowa, NJ: Rowman and Littlefield, 1977, p. 134.

7   Quatremère de Quincy, "Servandoni," 2: 288.

8   Giovanni Nicolo Servandoni, *La descente d'Enée aux Enfers*, Paris, 1740.

9   Diderot, *Salon de 1765*, Assezat et Tourneux; also in Hautecoeur, *Histoire*, p. 3: 269.

10 There is some confusion in identifying the specific performance to which Le Camus is referring in the first pages of *The Genius of Architecture. Ulysses's Adventures at his Return from the Siege of Troy* was performed at the Salle des Machines in 1741; as described by Le Camus, it included a prison, sumptuous gardens, and the palace of Circea, daughter of the Sun. Le Camus, however, also refers to Godefroy's camp and the enchanted palace of Armide that appeared only in Servandoni's staging of *Enchanted Forest* in 1754, from Torquato Tasso's *Jerusalem Liberated*. If this might indicate that Le Camus's memory could have "played him false," as Robin Middleton

suggests in his commentaries to the English translation of *The Genius of Architecture*, it also indicates that Le Camus was familiar with a wide range of Servandoni's performances. See Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, Santa Monica, CA: The Getty Center, 1992, pp. 180–1, notes 3–4.

11 Le Camus, *The Genius*, p. 71.

12 Ibid.

13 Richard Cleary, "Beauty: Absolute or Arbitrary?" *Design Book Review* 34, Fall 1994, 57.

14 The théâtre du Marais, which opened in 1644, is a well-documented example of a theatre that used natural light in the auditorium. For more on this subject, see Donald Charles Mullin, *The Development of the Playhouse; a Survey of Theatre Architecture from the Renaissance to the Present*, Berkeley: University of California Press, 1970, p. 30; Marvin Carlson, *Places of Performance: The Semiotics of Theatre Architecture*, Ithaca, NY: Cornell University Press, 1989, p. 140.

15 It was later published in Antoine Laurent de Lavoisier, *Oeuvres complètes*, Paris, 1865, pp. 3: 91–102. Coincidentally, Lavoisier's "Rapport" was presented the same year Boullée produced his project for the opera house.

16 Lavoisier, "Rapport," p. 91. Goethe also complained about the technical problems of trimming candles. He writes: "I could think of no better invention than that of candles burning without having to be trimmed." J.W. von Goethe, *Gedenkausgabe der Werke, Briefe und Gespräche*, Zurich, 1950, p. 421; trans. Bergman, *Lighting*, p. 55.

17 Lavoisier, "Rapport," p. 93. In the Renaissance, Angelo Ingeneri was already aware that "the darker the auditorium, the more luminous seems the stage," for he discussed these issues in his treatise *Il discorso della poesia rappresentativa e del modo di rappresentare le favole sceniche*, 1598. Ingeneri seems to have been the first author to discuss the appropriate lighting of the stage to show the facial expression of actors. For more on this, see Bergman, *Lighting*, p. 66.

18 Pierre Peyronnet, *La mise en scène au XVIIIe siècle*, Paris: Librairie A.-G. Nizet, 1974 p. 67.

19 In an earlier production for the opera *Proserpine*, in 1727, Servandoni created a waterfall made of silver gauze gliding on two wheels. A similar device is represented in Denis Diderot, *Encyclopédie; ou, Dictionnaire raisonné des sciences, des arts et des métiers* [1751–80], New York: Pergamon Press, 1969.

20 Giovanni Nicolo Servandoni, *Description du spectacle de Pandore*, Paris, 1739.

21 Servandoni, *La descente*.

22 Giovanni Nicolo Servandoni, *La forest enchantée*, Paris: Ballard, 1754, pp. 5–6.

23 Ibid., p. 8.

24 Le Camus, *The Genius*, p. 71.

25 Servandoni, *La forest enchantée*, pp. 13–14.

26 The description of the celebrations of 1730 are based on Gabriel Mourey, *Le livre des fêtes françaises*, Paris: Librairie de France, 1930, pp. 198–212, and Bouché, "Servandoni," p. 143.

27 Quatremère de Quincy, "Servandoni," pp. 2: 290–1.

28 Jacques-François Blondel, *Description des festes données par la ville de Paris, à l'occasion du mariage de madame Louise-Elisabeth de France, & de Don Philippe, infant et grand admiral d'Espagne . . .*, Paris: Le Mercier, 1740. The publication includes 22 pages of text and 13 large engravings.

29 Amédée François Frézier, *Traité des feux d'artifice pour le spectacle*, Paris: Chez Nyon, 1747, p. 384.

30 Étienne-Louis Boullée, *Architecture: essai sur l'art*, ed. J.M. Pérouse de Montclos. Paris: Hermann, 1968, pp. 104–5.

31 Ibid., pp. 77–8.

32 Le Camus, *The Genius*, p. 96.

33 Ibid., p. 88. This passage had a great influence on Sir John Soane, who translated an important section of Le Camus's treatise while preparing his own lectures for the Royal Academy. In Lecture

VIII he writes: "The 'lumière mystérieuse,' so successfully practiced by the French Artists, is a most powerful agent in the hands of a man of genius (. . .) We do not sufficiently feel the importance of character in our buildings, to which the mode of admitting light contributes in no small degree." Quoted by Watkin, *Sir John Soane*, p. 598.

34   Le Camus, *The Genius*, p. 173, my emphasis.

35   Vitruvius also suggests light to be "taken from the east for bedrooms and libraries; . . . for picture galleries and the apartments which need a steady light, from the north, because that quarter of the heavens is neither illuminated nor darkened by the sun's course but is fixed unchangeable throughout the day." Vitruvius, *De architectura*, trans. F. Granger, London and Cambridge, MA: Harvard University Press, 1983, Book I, chap. 2, p. 31.

36   Le Camus, *The Genius*, p. 174.

37   Ibid., p. 95.

38   Le Camus, *Le génie*, p. 58, my translation. It is difficult to capture the multilayered meaning of the French text where Le Camus uses adjectives that he later attributes to the feminine character: "Le caractère de la douceur ne se fait jamais mieux sentir que lorsque les ombres deviennent plus foibles en s'allongeant."

39   Le Camus, *The Genius*, pp. 95–7.

40   Ibid., p. 95.

41   Le Corbusier, *Toward A New Architecture*, trans. F. Etchells, New York and Washington: Praeger, 1960, p. 31.

42   Aristotle's *Poetics* V.4–5, from *Aristotle's Theory of Poetry and Fine Art*, trans. S.H. Butcher, New York: Dover Publications, 1951, p. 23.

43   Ibid., XXIV.4–7, pp. 91–3.

44   *Aristotle's Theory*, trans. Butcher, pp. 297–8.

45   Diderot, *Encyclopédie*, 4: 701.

46   Jean-Jacques Olivier, introduction to Voltaire, *Sémiramis*, Paris: Librairie Droz, 1946, pp. viii–ix.

47   This brief synopsis is taken partly from Per Bjurström, "Mise en scène de Sémiramis de Voltaire en 1748 et 1759," *Revue d'histoire du théâtre*, 8, Paris, 1956, 302–3.

48   Ibid., 306.

49   Voltaire, "Dissertation sur la tragédie ancienne et moderne," in *Oeuvres complètes*, Paris, 1877, IV, p. 499.

50   Olivier, introduction to Voltaire, *Semiramis*, p. xxx.

51   For more on this question, see Adolphe Jullien, *Les spectateurs sur le théâtre*, Paris: Detaille, 1875, and A. Prat, "Le parterre au XVIIIe siècle," *La Quinzaine*, February 1906, 388–412. See also Pierre Patte, *Essai sur l'architecture théâtrale. Ou, de l'ordonnance la plus avantageuse à une salle de spectacles, relativement aux principes de l'optique & de l'acoustique. Avec un examen des principaux théâtres de l'Europe, & une analyse des écrits les plus importans sur cette matiere*, Paris: Moutard, 1782, pp. 185–6; J.J. Rousseau, *Discours: Lettre sur les spectacles*, Paris: Librairie Larousse, 1939, p. 119; Martine de Rougemont, *La vie théâtrale en France au 18e siècle*, Paris and Geneva: Champion-Slatkine, 1988, p. 160; Peyronnet, *La mise en scène*, p. 100; and Hobson, *The Object of Art*, p. 194. Hobson presents this transformation of the acting area as another attempt to collapse the action on the stage with a perfected illusion of reality.

52   Diderot criticized some changes in the audience following this event, in his "Lettre à Madame Riccoboni," in *Diderot's Writings on the Theatre*, ed. F.C. Green, London: Cambridge University Press, 1936, p. 216.

53   The reform of costumes at the theatre was carried through by Lekain and Clairon at the end of the 1750s.

54   On the old and new style of acting, see Voltaire, *Appel à toutes les nations, des divers changements arrivés à l'art tragique*, 1761.

55   Bjurström notes that this way of changing the sets had been done fifty years earlier by Juvara, in Italy. Bjurström, "Mise en scène," 316.

56   Voltaire, *Oeuvres complètes*, Paris, 1880, p. 31: 328.

57   Charles-Nicolas Cochin, *Projet d'une salle de spectacle pour un théâtre de comédie* [1765], Geneva: Minkoff Reprint, 1974, pp. 18–19.

58   Anthony Vidler, *Claude-Nicolas Ledoux, Architecture and Social Reform at the End of the Ancien Régime*, Cambridge, MA: MIT Press, 1990, p. 183.

59   In an unpublished *Mémoire*, De Wailly defended the divided stage. Arch. Nat., O^1 846, n.8; on this question see Daniel Rabreau, "Des scènes figurées à la mise en scène du monument urbain," in *Piranèse et les Français*, Roma: Edizioni dell'Elefante, 1978, p. 462.

60   The radical transformation of the performing area during the second half of the eighteenth century, brought about by a renewed concern with the notion of unity of place and the desire for greater realism in the theatre, and giving the stage sets the appropriate character demanded by each scene, is put forward by Louis Charpentier in *Causes de la décadence du goût sur le théâtre*, Paris: Au Parnasse François 1758.

61   Le Camus, *The Genius*, p. 95.

62   Ibid., p. 88.

63   Ibid., p. 95.

3   Rules of expression and the paradox of acting

1   Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, Santa Monica, CA: The Getty Center, 1992, p. 70.

2   His treatise was translated into English in 1734.

3   Le Camus, *The Genius*, p. 70.

4   In his extensive introduction to the English translation of Le Camus de Mézières's treatise, *The Genius of Architecture*, 1992, Robin Middleton emphasizes that Le Camus's theory was greatly indebted to theories of expression in painting, from Le Brun's notion of physiognomy to Du Bos's *Réflexions critiques*, 1719, and Roger de Piles's *Cours de peinture par principes*, 1708. *The Genius of Architecture*, intro. Middleton, pp. 23–31.

5   Charles Le Brun, *A Method to Learn to Design the Passions* [1734], intro. A.T. McKenzie, Los Angeles: University of California, 1980, p. 12.

6   Ibid., pp. 12–13.

7   Ibid., p. 20.

8   Ibid., p. 45.

9   Le Camus, *The Genius*, intro. Middleton, p. 23.

10   *Mercure de France*, December 1761; from Bergman, *Lighting in the Theatre*, Totowa, NJ: Rowman and Littlefield, 1977, p. 220.

11   L'abbé Jean-Baptiste Du Bos, *Réflexions critiques sur la poésie et la peinture* [1719], Geneva: Slatkine Reprints, 1967, 1: III, p. 26.

12   Ibid., 1: III, pp. 31–2.

13   Ibid., 1: XLIII, pp. 451–3.

14   Saisselin relates Du Bos's notion of natural versus artificial passions to Le Camus's theory of sensations in architecture. Although Du Bos does not explicitly address the question of architecture in his treatise, Saisselin argues that the sentiment created by architecture was natural as opposed to the artificial passions created by art. Saisselin, "Architecture and Language: The Sensationalism of Le Camus de Mézières," *The British Journal of Aesthetics* 15, 1975, 241.

15   Du Bos, *Réflexions*, 1: XLIV, pp. 458–61.

16   Servandoni d'Hannetaire is believed to be Jean-Nicolas Servandoni's illegitimate son.

17   For more on this, see Martine de Rougemont, *La vie théâtrale en France au 18e siècle*, Paris and Geneva: Champion-Slatkine, 1988, p. 92.

18   Antonio Francesco Riccoboni, *L'Art du théâtre à Madame XXX* [1750], Geneva: Slatkine Reprints, 1971, pp. 73–5.

19   Ibid., pp. 75–6.

20 Ibid., pp. 94–5.

21 Ibid., pp. 36–7. In a footnote, F. Riccoboni acknowledges the opposition of his theory to that of his father.

22 Denis Diderot, *Oeuvres esthétiques*, ed. P. Vernière, Paris: Garnier Frères, 1968, p. 104.

23 *Garrick ou les acteurs anglais* was originally inspired by a treatise written in 1747 by Pierre Rémond de Sainte-Albine, *Le Comédien*. Sainte-Albine's treatise on acting supported the view that the actor feels what he plays, and argued that the soul of the actor is the source of his/her power. It was partly translated into English and adapted for English readers by John Hill as *The Actor*, 1750–5. This reduced version was translated back into French in 1769 by Sticotti as *Garrick ou les auteurs anglais*.

24 November 14, 1769, *Correspondance inédite*, p. 1: 102; quoted by Paul Vernière in Diderot, *Oeuvres esthétiques*, p. 292.

25 Diderot, *Oeuvres esthétiques*, p. 306.

26 Ibid., p. 308. In the 1760s, Mlle Clairon was the lover of Marmontel, an important contributor to the *Encyclopédie* and a close friend of Diderot. Beatrix Dussane, in *Reines de théâtre 1633–1941*, Lyons: H. Lardanchet, 1944, explains Diderot's *Paradoxe* through his connection with Clairon.

27 Diderot, *Oeuvres esthétiques*, p. 350.

28 Diderot, *Oeuvres complètes*, Paris, 1969, 3: 140.

29 Diderot, *Oeuvres esthétiques*, p. 317.

30 Le Camus, *The Genius*, p. 98.

31 Ibid., p. 99.

32 Denis Diderot, *Sur l'art et les artistes*, intro. Jean Seznec, Paris: Herman, 1967, p. 68.

33 Ibid., p. 69.

34 Le Camus, *The Genius*, p. 102.

35 Luigi Riccoboni, *Réflexions historiques et critiques sur les différens théâtres de l'Europe* [1740], Bologna: Forni Editore, 1969, p. 101.

36 Marmontel, "Décoration," in *Encyclopédie*, 4: 701.

37 Francesco Algarotti, *Saggio sopra l'opera in musica* [Venice, 1755; Livorno, 1763], Bologna: Libreria Musicale Italiana, 1989, p. 56.

38 Louis Charpentier, *Causes de la décadence du goût sur le théâtre*, Paris: Au Parnasse François, 1758, p. 75.

39 Pierre-Jean-Baptiste Nougaret, *De l'art du théâtre* [1769], Geneva: Slatkine Reprints, 1971, 1: 351.

40 Pierre Rémond de Sainte-Albine, in his *Le Comédien*, 1747, proposes a similar theory. He claims that the actor must be endowed with the specific characteristics of the role he is asked to perform. Age, voice, and constitution must be suitable to the impersonated character.

4 Theatre as the locus of public and social expression

1 Montesquieu, *Persian Letters*, Harmondsworth: Penguin, 1973, p. 79.

2 For some interesting examples of such interactions between spectators and actors at the theatre, see Henri Lagrave, *Le théâtre et le public à Paris de 1715 à 1750*, Paris: C. Klincksiek, 1972, particularly part 4, "Le public au théâtre."

3 Augustus John's introduction to the English translation of Chevalier Charles-Jacques-Louis-Auguste Rochette de La Morlière, *Angola: An Eastern Tale*, London: Chapman & Hall, 1926, p. xii.

4 Chevalier Jacques-Rochette de La Morlière, *Angola*, Paris, 1746, pp. 69–70.

5 Ibid., p. 21, my translation.

6 Richard Sennett, *The Fall of Public Man*, Cambridge: Cambridge University Press, 1974, p. 64.

7 In the mid-eighteenth century, the acknowledged pleasure of observing and being observed by strangers had many urban repercussions in cities such as London and Paris. The new institution of the public park, for example, was created as a response to this new mode of interaction in public. Because of the dress code and the general respect for conventions dictated by the "sumptuary

laws" – a violation of which could be punished by a jail sentence – people strolling through the park knew at first glance the social status of any stranger, and consequently could assume the appropriate social behavior. While this permitted extemporaneous conversations (although such contacts were always brief), it also gave everyone the license to pass anyone without engaging in conversation. It was here that the idea of silence in public first germinated. In Sennett's view, the well-defined set of conventions was precisely what permitted spontaneous interaction of strangers in the public realm. Sennett, *Fall of Public Man*, pp. 64–86.

8   Diderot, *Oeuvres esthétiques*, Paris: Garnier Frères, 1968, p. 381.

9   Ibid., pp. 347–8.

10 See Lily Chi, "The Quest of an 'Arbitrary' Authority in Early Modern Architectural Theory: Claude Perrault and the Idea of *Caractère* in Germain Boffrand and Jacques-François Blondel," Ph.D. dissertation, McGill University, 1997, chap. 13.

11 Pierre Choderlos de Laclos, *Les liaisons dangeureuses*, Paris, 1782, Lettre 85. Translation from *The Libertine Reader*, New York: Zone Books, 1997, p. 1088.

12 Ibid., Lettre 173. *The Libertine Reader*, pp. 1247–8.

13 Ibid.

14 These hidden places serve mainly to ensure the tranquility of those "qui ont quelque representation à observer." Nicolas Le Camus de Mézières, *Le génie de l'architecture: ou, L'analogie de cet art avec nos sensations* [Paris: B. Morin, 1780], Geneva: Minkoff Reprint, 1972, p. 163. The English translation of this expression fails to convey the performative role of the master. It reads as follows: "those persons who have some state to maintain." Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, Santa Monica, CA: The Getty Center, 1992, p. 132.

15 Le Camus, *The Genius*, intro. R. Middleton, p. 56.

16 Moreover, Le Camus continues his reflection on flowers by referring to the greenhouse of an actress whom Middleton identifies as La Guimard. Ibid., p. 194, n. 49.

17 Bachaumont, *Mémoires secrets pour servir à l'histoire de la république des lettres en France, depuis MDCCLXII jusqu'à nos jours, ou, Journal d'un observateur . . .* London: Chez John Adamson, 1780–9, entry dated 17 mars 1770. See also Martine de Rougemont, *La vie théâtrale en France au 18e siècle*, Paris and Geneva: Champion-Slatkine, 1988, p. 306.

18 Under pressure from Madame de Maintenon (1635–1719, and secretly married to the king after 1683), who was concerned with the morality of the theatre, Louis XIV issued a decree in 1699 that limited the number of official public theatres in Paris. The attribution of such privilege, as could be expected, is very complex and can be traced back to the fifteenth century. It is beyond the scope of this study to deal with this particular development.

19 Concerning the emergence of private and court theatres, see Marvin Carlson, *Places of Performance: The Semiotics of Theatre Architecture*, Ithaca, NY: Cornell University Press, 1989, pp. 50–2.

20 Many novels and even treatises were devoted to this affliction, such as André-François Boureau-Deslandes, *L'Art de ne point s'ennuyer*, Paris: Chez Etienne Ganneau, 1715.

21 For more on Madame de Pompadour and her involvement with the theatre, see Adolphe Jullien, *Histoire du théâtre de Madame de Pompadour, dit théâtre des petits cabinets; Les grandes nuits de Sceaux: le théâtre de la duchesse du Maine, d'après des documents inédits; L'opéra secret au XVIIIe siècle: aventures et intrigues secrètes racontées d'après les papiers inédits conservés aux Archives de l'Etat et de l'Opéra* [Paris: J. Baur, 1874], Geneva: Minkoff Reprint, 1978; and Victor Du Bled, *La comédie de société au XVIIIe siècle*, Paris: Calmann Lévy, 1893, p. 49.

22 Du Bled, *La comédie*, pp. 56–7.

23 Ibid., pp. 60–3.

24 The last performance in Bellevue, in March 1753, was Rousseau's opera, *Le Devin de village*, and although it was said to be a great success, La Pompadour had fallen from the king's favour and the audience diminished with every performance.

25 Thierry-G. Boucher, "Rameau et les théâtres de la cour (1745–1764)," in *Jean-Philippe Rameau, Colloque international organisé par La Société Rameau*, Paris and Geneva: Champion-Slatkine, 1987, p. 574.

26 La Guimard was also known as a generous patron of the arts. In her hôtel, she had some famous paintings by Fragonard and others, and while Louis David was working there as a young apprentice, La Guimard noticed his great talent. She became his patron, giving him a pension to pursue his studies in painting. Henri D'Alméras and Paul D'Estrée, *Les théâtres libertins au XVIIIe siècle*, Paris: H. Daragon, Éditeur, 1905, p. 295.

27 She was in constant financial crisis, and at some point she had to get rid of her hôtel on the Chaussée d'Antin to pay her creditors, and organized a lottery in which the hôtel was the winning prize. Soon after, she would have a second residence on the Chaussée d'Antin designed for her by the architect Claude-Nicolas Ledoux. In that *hôtel*, as in her country house, a theatre would occupy an important part of the planning, as it occupied a crucial part of her life. In her summer residence, the architect Piètre designed a *théâtre de Pantin* for her. This kind of theatre was very fashionable during the eighteenth century. The plan was based on two half-ellipses and could hold 234 spectators, excluding the boxes. It was considered an intimate theatre. Ibid., pp. 284–91.

28 Anthony Vidler writes: "In many respects, the Guimard theatre anticipated Ledoux's design for the theatre of Besançon after 1776; in the context of a private house it was recognized, in Bastide's words, as 'a masterpiece of its kind,' especially for the intimate relationship it forged between spectators and performers." Vidler, *Claude-Nicolas Ledoux: Architecture and Social Reform at the End of the Ancien Régime*, Cambridge, MA: MIT Press, 1990, p. 54.

29 D'Alméras and D'Estrée, *Les théâtres libertins*, p. 292, my translation.

30 *Théâtre d'Amour* was the title of the manuscript that comprised the plays performed on the stage of La Guimard's theatre.

31 For more on this, see Giuseppe Radicchio and Michèle Sajous D'Oria, *Les théâtres de Paris pendant la Révolution*, Fasano: Elemond periodici, 1990, p. 12.

32 Louis-Sébastien Mercier, *Du théâtre, ou nouvel essai sur l'art dramatique* [1773], Geneva: Slatkine Reprints, 1970, p. 94. All excerpts from this book are my translation.

33 Ibid., p. 95. Aristotle, *Poetics*, 3.3.

34 Mercier, *Du théâtre*, p. 102.

35 Ibid., p. 103. Diderot's position converges with that of Mercier when he argues that the *drame bourgeois* is more useful than comedy or tragedy because its actions are more akin to real life. Diderot, *Oeuvres esthétiques*, p. 136.

36 In *The Object of Art*, Marian Hobson distinguishes between tragedy and *drame* in terms of illusion: "Pleasure in French tragedy is an oscillation, indeed an enjoyment of the discrepancy, between the appearance and what lies behind . . . this is the structure of *dissimulatio*. The *drame* is defined in opposition to this structure, as the contrary of tragedy." Hobson, *The Object of Art: The Theory of Illusion in Eighteenth-Century France*, New York: Cambridge University Press, 1982, p. 175. In an interesting study of the *drame bourgeois*, Scott S. Bryson argues that the *drame bourgeois* challenged the extremes of traditional comedy and tragedy "both on the level of the object represented (the ethereal hero/the grotesque villain) and the emotions they provoked (terror/laughter)." Bryson, *The Chastised Stage. Bourgeois Drama and the Exercise of Power*, Saratoga, CA: ANMA Libri, 1991, p. 61.

37 The role of the poet is to find the words with which everyone would identify. See Diderot, *Oeuvres esthétiques*, p. 99.

38 Ibid., pp. 140–1.

39 *Oeuvres complètes de Diderot*, ed. J. Assézat, Paris: Garnier Frères, 1875, pp. 7: 19–21. For an analysis of the dramatic structure of the play, see Aimé Guedj, "Les drames de Diderot," *Diderot Studies* 14, 1971, 15–95.

40 Diderot, *Oeuvres esthétiques*, pp. 77–175. In his introduction to the *Entretiens*, Vernière understands that the dialogue between Dorval and "Me" could easily be read as an encounter between

the two Diderots: the enthusiast and the rationalist. He suggests, however, that in the *Entretiens*, Dorval is not so much Diderot's internal voice as the ghost of Jean-Jacques Rousseau.

41 Nougaret is in fact very critical of the *drame bourgeois*, which forces the spectator to change from sadness to laughter in an instant. Pierre-Jean-Baptiste Nougaret, *De l'art du théâtre en général* [1769], Geneva: Slatkine Reprints, 1971, pp. 2: 6–8.

42 Diderot, *Essais*, p. 718; quoted by Michael Fried, *Absorption and Theatricality: Painting and Beholder in the Age of Diderot*, Berkeley: University of California Press, 1980, p. 80. In the second chapter of his book, Scott S. Bryson defines what distinguishes bourgeois drama from the great tragedies and comedies of the French seventeenth-century court theatre: "To attend high theatre, then, was in some ways to bathe in this royal light, to be reaffirmed, *confirmed* as a member of the City. In this sense, theatre is synonymous with ritual. On the contrary, for Diderot and the bourgeois aesthetic he envisions and seeks to impose, theatre would constitute an absolute break with existing social reality and the injustices that permeate it; theatre would literally be a refuge for all those seeking honest, authentic, *moral* relations among men." Bryson, *The Chastised Stage*, p. 37.

43 Diderot, *Oeuvres esthétiques*, p. 354.

44 The parallel between Diderot's *Entretiens* and Rousseau's own considerations on the theatre is particularly relevant if we adhere to Paul Vernière's hypothesis that the character of Dorval in the *Entretiens* was probably based on Diderot's friend at the time: Rousseau himself. Vernière bases his claim on the fact that the *Entretiens* were written during the summer of 1756, just after the publication of the sixth volume of the *Encyclopédie*, while Diderot stayed at Massy. A few weeks earlier, Diderot had visited Rousseau in his hermitage. Vernière establishes many parallels between Dorval's position in the *Entretiens* and Rousseau's writings at that time. See Diderot, *Oeuvres esthétiques*, pp. 72–4.

45 Rousseau was a citizen of Geneva, a city of Calvinist tradition. After the controversy surrounding the publication of the article on Geneva, the *Encyclopédie* was denied permission to publish any additional volume for a period of over six years.

46 Rousseau's position was shared by some of his contemporaries, such as Charles Desprez de Boissy, who wrote in 1756: "The art of theatre moves the soul only to give it a taste of voluptuous sensations." *Lettres sur les spectacles; avec une histoire des ouvrages pour et contre les théâtres*, Paris, 1756, p. 15.

47 Sennett, *Fall of Public Man*, p. 6.

48 Jean-Jacques Rousseau, *Lettre à Monsieur D'Alembert sur les spectacles*, Paris: Flammarion, 1967, p. 66.

49 Ibid., p. 122.

50 Ibid., p. 123.

51 Mercier, *Du théâtre*, p. 119. In his introduction, Scott S. Bryson compares the blurring of the limit between "the public's space and the representational space" in the *drame bourgeois* to the legal and penal reforms of the judicial system of the same period in France. Bryson claims that the distance established between the criminal and the public during capital punishment is similar to the distance established between a classical play and the spectator, a representational distance equally challenged by a life sentence of enforced labour in the first case, and the *drame bourgeois* in the second. In Bryson's concept, both the life sentence of enforced labour and the *drame bourgeois* create a greater identification with the spectacle. Bryson also compares the body of the actor to that of the criminal or the prostitute, and equates their doubleness (the actor often lives his real life according to different moral standards from those of the characters he portrays on stage) with an opacity that opposes Rousseau's "ideal of transparency." Bryson, *The Chastised Stage*, p. 80.

52 *Oeuvres complètes de Diderot*, p. 7: 20.

53 Le Camus is known to have written at least four plays, including *Les plaisirs innocents, Les Suisses reconnaissants, Les laitières de Bagnolet*, and *Les Dragons de Charonne*. Gourdon de Genouillac,

Paris à travers les siècles, livraison 168, p. 3: 357. Concerning the Société dramatique de Charonne, see D'Alméras and D'Estrée, *Les théâtres libertins*, p. 52; and Léo Claretie, *Histoire des théâtres de société*, Paris: Librairie Molière, 1905, p. 96.

54 Nicolas Le Camus de Mézières, *Mes délassemens ou les Fêtes de Charonne*, 1781, p. 3.

55 In the first scene of *Les Dragons*, Colas is dressed as a gardener and sings about his happiness, far from the chaos of the city. Le Camus, *Mes délassemens*, pp. 7–8.

56 Diderot himself recommends that "every learned man who believes himself to have some talent for play-writing should first experiment with the serious genre." Diderot, *Oeuvres esthétiques*, p. 137.

57 Although Le Camus's plays are classified as *théâtre de société*, related to the tradition of *vaudeville*, their moral overtones make a definitive classification difficult.

58 Diderot, *Oeuvres esthétiques*, p. 21.

59 I do not mean to imply that the *physical* performing distance between actors and spectators was truly abolished with Diderot. Throughout the eighteenth century, theatre genres such as the *drame bourgeois* sought to create a greater association between the action on stage and the emotional participation of the spectators, but the architectural tendency in newly built theatres was to further isolate the realm of the actors from that of the spectators.

60 Diderot, *Oeuvres esthétiques*, p. 78.

61 Chantal Thomas, "*The Indiscreet Jewels*: A Dangerous Pastime," in *The Libertine Reader*, ed. M. Feher, New York: Zone Books, 1997, p. 334.

62 Michael Fried relates this denial or oblivion of the theatre audience to a similar phenomenon in paintings at that time. His interpretation, however, is problematic, for he claims that the objective was to "neutralize" the visual domination by the theatrical audience, "to wall it off from the action taking place on stage." Fried, *Absorption and Theatricality*, p. 96.

63 Nougaret, *De l'art du théâtre*, pp. 1: 355–7.

64 Le Camus, *The Genius*, p. 108.

65 Nerciat, *Félicia, ou mes fredaines*, Paris, 1786, p. 56.

5 Theatre architecture and the role of the proscenium arch

1 Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, Santa Monica, CA: The Getty Center, 1992, p. 93.

2 The privilege received by the three theatres protected their repertoire, but did not involve a real financial sponsorship by the state. Instead, the privileged theatres were subjected to an entertainment tax, a "poor tax" that entitled the Parisian hospitals to 25 per cent of their gross income. This connection between theatre and health, somewhat reminiscent of the cathartic effect attributed to Greek theatres of antiquity, persisted throughout the eighteenth century. The "poor tax," established in 1699, originally targeted only the privileged theatres, but in 1773 it was extended to the fair and boulevard theatres. Moreover, concern with the morality of theatre was widespread during the eighteenth century. On the immorality of the theatre and the Church's contempt for actors, see, for example, Charles Desprez de Boissy, *Lettres sur les spectacles; avec une histoire des ouvrages pour et contre les théâtres* [1756], 7th ed. 2 vols., Paris: Desaint, 1780.

3 Even with its monopoly on performances in Paris, the Opera could hardly meet its debts, and in 1784 it was granted the right to exploit economically the minor theatres of Paris by renting at a very high price the privilege to perform. The leasing of privilege led to cumbersome devices aimed at differentiating one boulevard theatre from the next, in order to preserve the appearance of specific privilege. For example, from the late 1760s, the Comédie italienne had acquired from the Opera the exclusive right to perform comic opera. In 1784, the Opera leased a similar right to the small theatre at the Palais Royal, with the stipulated exception that the actors of the Beaujolais would have to "mimic on the stage what others sang for them in the wings." In 1786, the Bluettes, another boulevard theatre, was granted a similar right but was required to place a gauze curtain between the stage and the auditorium. This kind of scrim was adopted by the Délassements-

Comiques "to differentiate itself from the Associés, which in turn opened its show with marionette skits." For a comprehensive study on Boulevard theatre, see Michèle Root-Bernstein, *Boulevard Theater and Revolution in Eighteenth-Century Paris*, Ann Arbor, MI: UMI Research Press, 1984.

4 Alberto Pérez-Gómez, "Chora: The Space of Architectural Representation," in *Chora: Intervals in the Philosophy of Architecture* 1, ed. A. Pérez-Gómez and S. Parcell, Montreal and Kingston: McGill-Queen's University Press, 1994, p. 13.

5 Since little archeological evidence prior to the fourth century BC has survived, all historical reconstructions and interpretations remain partly speculative.

6 Simon Tidworth writes: "Masks, costume, movement and language were all stylized, giving the dramatic poet freedom only within quite narrow limits." *Theatres: An Illustrated History*, London: Pall Mall Press, 1973, p. 9.

7 Aristotle (384–322 BC) writes that Sophocles (*c.*496–406 BC) "raised the number of actors to three," thus potentially diminishing the role of the chorus, "and added scene-painting." *Aristotle's Theory of Poetry and Fine Art, with a Critical Text and Translation of The Poetics*, New York: Dover Publications, 1951, p. 19.

8 For more on this, see Louise Pelletier and Alberto Pérez-Gómez, *Architectural Representation and the Perspective Hinge*, Cambridge, MA: MIT Press, 1997, pp. 45–51.

9 Simon Tidworth, *Theatres*, p. 35.

10 The renewed interest in classical theatre architecture coincided with the re-evaluation of classical literature and the desire to revive Plautus, Terence, and Seneca "in conditions as close as possible to their original performance." Ibid., p. 44. For an excellent study of the theatre in Sabbioneta commissioned by Vespasiano Gonzaga, the ruler of Mantua, see Kurt W. Forster, "Stagecraft and Statecraft: The Architectural Integration of Public Life and Theatrical Spectacle in Scamozzi's Theater at Sabbioneta," in *Oppositions* 9, Summer 1977, 63–87.

11 It is usually assumed that the development of theatrical form in England between the years 1580 and 1620 was widely influenced by the tradition of playing in the yards of inns, surrounded by galleries. "When players became prosperous enough to build theatres of their own, this was the model that they followed." An alternative theory is that they may have copied bear-baiting arenas. Tidworth, *Theatres*, p. 60. Frances A. Yates, however, argues against the general trend that sees in the inn-yard the origin of the Elizabethan and Jacobean theatres. She puts forward the theory that these theatres were more of a "return to antiquity." Yates summarizes the argument: "The Shakespearean type of theatre represented as never before since antiquity the most important aspects of the ancient theatre as described by Vitruvius, its aural, musical, and cosmic aspects [. . .] The designers of this type of theatre knew something of classical theory on these matters and produced an adaptation of the ancient theatre which was actually closer to its spirit and function as the vehicle of poetic drama than any other Renaissance adaptation." Yates, *Theatre of the World*, London: Routledge and Kegan Paul, 1969, p. 125.

12 Tidworth, *Theatres*, pp. 58–60.

13 In Italy, the Teatro Mediceo in the Uffizi Palace in Florence was another great hall, converted into a theatre by Buontalenti in 1586. A famous engraving by Callot (1617) clearly illustrates this use of the auditorium by actors. Donald Charles Mullin, *The Development of the Playhouse; a Survey of Theatre Architecture from the Renaissance to the Present*, Berkeley: University of California Press, 1970, pp. 22–5.

14 On the spatial hierarchy of Renaissance and Baroque theatres, see M. Carlson, *Places of Performance: The Semiotics of Theatre Architecture*, Ithaca, NY: Cornell University Press, 1989, pp. 140–3, 173. Carlson traces the development of architectural elements of the theatre such as the loggia and the royal boxes, and emphasizes their highly symbolic significance.

15 The Teatro Farnese at Parma, built between 1617 and 1628 by Giambattista Aleotti, was an important example of a U-shaped auditorium and some have argued the first example of a proscenium stage. It provided enough space on stage to allow for movable scenery, a great innovation in the early seventeenth century. The rows of seats framed an area in the middle of the

auditorium where the action, not confined to the stage, could spill forward as in previous Renaissance theatres. Tidworth, *Theatres*, pp. 66–7.

16 Mullin, *Development of the Playhouse*, p. 26.

17 Such theatres included the Théâtre du Marais, the Petit Bourbon (1635), Richelieu's theatre in the Palais Cardinal (1641), and Giacomo Torelli's theatre, which had the first proscenium frame in France. Even though the period of important architectural transformations in the Italian theatre coincided with a great effervescence of dramatic writing in France (Corneille, Molière, Racine), the physical conditions of places of performance in the French capital remained primitive. Molière's troupe, for example, performed in a small theatre at the Palais Royal, built in 1660 by Lemercier, which had a stage too shallow to accommodate elaborate scenery. After merging with the Comédiens du Roi that were then housed in the theatre of the Hôtel de Bourgogne, the troupe moved in 1680 into a theatre fitted into a *jeu de paume* on Rue Guénégaud, which had been built for opera in 1673. Giuseppe Radicchio and Michèle Sajous D'Oria, *Les théâtres de Paris pendant la Révolution*, Fasano: Elemond periodici, 1990, p. 7.

18 Charles-Nicolas Cochin, *Voyage d'Italie, ou, Recueil de notes sur les ouvrages de peinture & sculpture: qu'on voit dans les principales villes d'Italie* [Paris, 1758; Paris: C.A. Jombert, 1769], with introduction and notes by C. Michel, Rome: École française de Rome, 1991, my translation.

19 Claude-Nicolas Ledoux, *L'Architecture considérée sous le rapport de l'art, des moeurs et de la législation* [1804], Munich: UHL Verlag, 1981, p. 229.

20 Tidworth, *Theatres*, p. 74.

21 Mullin, *Development of the Playhouse*, p. 53. Rougemont argues that additional boxes at the level of the *avant-scène* were oriented obliquely toward the auditorium instead of the stage, thus providing them with a rather poor view of the performance. "It is an extreme configuration that posits the explicit interpretation of these boxes as a projection of the public facing the public." Rougemont, *La vie théâtrale en France au 18e siècle*, Paris and Geneva: Champion-Slatkine, 1988, p. 160.

22 Jacques-François Blondel, *Architecture françoise*, Paris, 1752, p. 2: 14.

23 Voltaire, "Dissertation sur la tragédie" [1750], in *Oeuvres complètes*, Paris: Renouard, 1819–25, p. 4: 487.

24 Wend von Kalnein, *Architecture in France in the Eighteenth Century*, trans. D. Britt, New Haven and London: Yale University Press, 1995, p. 131.

25 Benedetto Alfieri was not an architect but a lawyer when he built the Teatro Reggio at Turin for King Carlo Emmanuele III's palace. For this project, he started from the original project by Juvarra, and was later appointed "First Architect to the King in succession to Juvarra." Tidworth, *Theatres*, p. 84.

26 While Vandière was entertained by various ambassadors, Soufflot, accompanied by his friend Gabriel Pierre Martin Dumont, author of the *Parallèle des plans des plus belles salles de spectacles d'Italie et de France*, 1774, went on this southern expedition.

27 Daniel Rabreau, "Autour du voyage d'Italie (1750). Soufflot, Cochin et M. de Marigny réformateurs de l'architecture théâtrale française," in *Bollettino del Centro internazionale di studi di architettura "Andrea Palladio"* 17, Venice, 1975, 214–15.

28 The first freestanding theatre building in Europe, however, appeared in Germany: the Berlin Opera House built in 1741 by Knobelsdorf for Frederick the Great. It apparently influenced many public theatres built in eastern France during the following decade, including those at Lyon and Metz. The theatre at Montpellier was also among the first to be conceived as an independent building. Tidworth, *Theatres*, p. 103; Mullin, *Development of the Playhouse*, p. 90.

29 Charles-Nicolas Cochin, *Projet d'une salle de spectacle pour un théâtre de comédie*. London and Paris: Chez Charles Antoine Jombert, 1765, p. 2.

30 Ibid., p. 4.

31 Patte discusses various artifices that were used to help propagate sounds, such as the *vases d'airain* described by Vitruvius.

32 Patte later elaborates on the same subject: "Les femmes, accoutumées depuis long-tems à faire le principal ornement de cet objet de nos plaisirs, ne trouveroient pas leur compte à ces gradins sur lesquels elles paroîtroient isolées & confondues." Patte, *Essai sur l'architecture théâtrale. Ou, de l'ordonnance la plus avantageuse à une salle de spectacles, relativement aux principes de l'optique & de l'acoustique. Avec un examen des principaux théâtres de l'Europe, & une analyse des écrits les plus importans sur cette matiere*, Paris: Moutard, 1782, pp. 141–2, 165.

33 Tidworth remarks that Patte's description of English theatres doesn't seem accurate, and he wonders what Patte knew about them. Tidworth, *Theatres*, pp. 102–3.

34 Patte, *Essai sur l'architecture théâtrale*, pp. 118–19.

35 Francesco Algarotti, *Essay on the Opera*, 1767, p. 30.

36 Patte, *Essai sur l'architecture théâtrale*, p. 180. In *A Treatise on Theatres*, 1790, George Saunders also argues against the projecting apron stage, and favors instead the French theory that "a division is necessary between the theatre and the stage, and should be so characterized as to assist the idea of their being two separate and distinct places."

37 Patte, *Essai sur l'architecture théâtrale*, p. 183.

38 Fuchs, *La vie théâtrale en province au XVIIIe siècle* [Droz, 1933], Geneva: Slatkine Reprints, 1976, pp. 71–2. Fuchs equates the narrow proscenium arch with a realistic, illusionistic stage, while a thicker arch would suggest a more schematic, atmospheric stage.

39 "Par le moyen du proscenium avancé jusqu'au centre de la salle, tous les spectateurs se trouveront à peu près à la même distance de la scène, ce qui empêchera la voix de se perdre dans les coulisses, et n'étant plus obligée de parcourir un long espace ni de séjourner dans les angles, elle conservera mieux sa vibration." Arch. Nat., O^1 846 n°8; quoted by Fuchs, *La vie théâtrale*, p. 74.

40 Almost a century later, Wagner used a similar device in his Festspielhaus in Bayreuth.

41 Patte, *Essai sur l'architecture théâtrale*, p. 13. His theory was clearly indebted to the Newtonian sciences and the underlying belief that the universe was rational and implicitly geometric.

42 This solution, however, was not shared by all; some, such as the Chevalier de Chaumont, claimed that the vertical proportions of the building and the widening in its upper portion produced disastrous acoustic effects. Grimm later wrote that Soufflot, who built a theatre in Paris with poor visibility, was also the designer of a theatre in Lyon with terrible acoustics. See Fuchs, *La vie théâtrale*, pp. 68, 96.

43 Patte, *Essai sur l'architecture théâtrale*, p. 175, quoting M. de la Harpe in his *Éloge de Racine*.

44 Denis Diderot, *Diderot's Writings on the Theatre*, ed. F.C. Green, London: Cambridge University Press, 1936, p. 216.

45 Although two decades earlier Soufflot had modified the seating arrangement of his theatre in Lyon in a similar fashion, this distribution of the auditorium was nonetheless innovative for a Paris audience.

46 In his *Cours d'architecture*, completed by Patte in 1777, J.-F. Blondel had already suggested removing the traditional boxes from the theatre and replacing them with galleries, and transforming the *parterre* into a *parquet* with seating places. Blondel also suggested dividing the orchestra in two, on either side of the forestage. This last design suggestion was criticized by Patte in his own treatise on the theatre. Patte criticized mainly the uncertainty of his colleague regarding the appropriate shape for the theatre.

47 In his theatre in Bordeaux (1780), Victor Louis (1731–1811) was in fact the first architect to experiment with a new way of placing the poorest spectators in a *paradis*. For more on the transition from a standing *parterre* to a seating *parquet* in Ledoux's theatre, see A. Vidler, *Claude-Nicolas Ledoux, Architecture and Social Reform at the End of the Ancien Régime*, Cambridge, MA: MIT Press, 1990, p. 170.

48 From a letter to the Intendant of Franche-Comté, Charles-André de Lacoré, dated August 24, 1775, quoted by Jacques Rittaud-Hutinet, *La vision d'un futur: Ledoux et ses théâtres*, Lyon: Presse universitaire de Lyon, 1982, p. 14.

49 Cochin, *Projet d'une salle de spectacle*, pp. 30–3.

50 Chevalier de Chaumont, *Véritable construction d'un théâtre d'opera à l'usage de la France*, Paris: Chez de Lormel, 1766, p. 15.

51 Kalnein, *Architecture in France*, pp. 179–80.

52 Charles Garnier, *Le théâtre*, Paris: Hachette, 1871, pp. 1–2.

53 Quoted by Tidworth, *Theatres*, p. 172.

54 Karsten Harries looks at this important transition in his article "Theatricality and Representation," *Perspecta* 26, 1990, 21–40.

55 Daniel Rabreau and Marianne Roland-Michel, *Les arts du théâtre de Watteau à Fragonard*, Bordeaux: Galerie des Beaux-Arts, 1980, p. 40; Mullin, *Development of the Playhouse*, p. 96.

56 Ledoux, *L'Architecture*, p. 222. Anthony Vidler suggests that in Ledoux's engraving, the eye "remains the frame of vision for each individual member of the audience. The proscenium, focusing the collective vision of the *salle* at a single point, thus echoed in its form the natural boundaries of sight." Vidler, *Claude-Nicolas Ledoux*, p. 172. See also Rittaud-Hutinet, *La vision d'un futur*, p. 67.

57 Vidler, *Claude-Nicolas Ledoux*, p. 172.

58 Vidler also points out that the beam of light that comes from behind the eyelid seems to cast light on the auditorium as on a stage; instead of being contained within the eye, the light is projected out (as in the extramission theory of light), emulating "the commonplace *all-seeing eye* of Freemasonic iconography." Ibid., p. 184.

59 Ledoux, *L'Architecture*, p. 219. Boullée also had this idea of using the spectators as "decoration" for his coliseum. Vidler emphasizes that in his treatise, Ledoux pushes this notion of the theatricality of real life further, since in his text, entire passages describing the life of the inhabitants of the Salines (such as the blacksmiths) "read like descriptions of dramatic scenes." Vidler, *Claude-Nicolas Ledoux*, p. 185.

60 Ledoux, *L'Architecture*, p. 229.

61 Le Camus, *The Genius*, p. 71.

62 Françoise Boudon, "Urbanisme et spéculation à Paris au XVIIIe siècle: le terrain de l'Hôtel de Soisson," *Journal of the Society of Architectural Historians* 32/4, Philadelphia, 1973, 274–5.

63 *Le provincial à Paris ou l'état actuel de Paris*, Paris, 1787, p. 4: 47.

64 In his book on the *halle au blé* in Paris, Mark Deming is interested primarily in the urban impact of the original construction of the municipal institution of the granary. He investigates very carefully the difficult negotiations that led the city to acquire the land of the hôtel de Soisson, as well as the transactions and development of the pieces of land surrounding the new building, in which Le Camus de Mézières was directly involved. Deming's book owes much to an article published about ten years earlier by Boudon, "Urbanisme et spéculation," 267–307. Like Deming, she traces a history of the development of the piece of land on which the granary was erected, and carefully analyzes the residential development that surrounded the central building.

65 Arch. Nat,. H^2* 1859, Registre des délibérations du Bureau de la Ville, 31 octobre 1740 f° 78v^o. Quoted by Boudon, "Urbanisme et spéculation," 275.

66 In order to maintain the value of the land surrounding the new granary at an acceptable price, Le Camus de Mézières, in association with the Oblin brothers, acquired most of it. The selling of this land was meant to finance the construction of the granary. The enterprise, however, led to lawsuits and marked the beginning of financial hardship for both Le Camus and the Oblin brothers. Mark K. Deming, *La halle au blé de Paris 1762–1813, "Cheval de Troie" de l'abondance dans la capitale des Lumières*, Brussels: Archives d'architecture moderne, 1984, pp. 37–43.

67 Jean-Aymar Piganiol de la Force, *Description historique de la ville de Paris*, Paris, 1765, p. 3: 492.

68 Le Camus, *The Genius*, p. 97.

69 It was a brick and stone construction; the façade was made of ashlar masonry (moellon). *Journal des bâtiments civils* 9, no. 222, 28 vendémaire, an x, 121; *Journal des bâtiments civils* 9, no. 238, 24 frimaire, an xi, 392–3.

70 Boudon, "Urbanisme et spéculation," 282.

Notes

71 J.-F. Blondel, *Cours d'architecture*, 6 vols., ed. Pierre Patte, Paris, 1771–7, p. 1: 108. For a description of the positive reception of the *halle au blé*, see Georges-Louis Le Rouge, *Curiosités de Paris, de Versailles et de Marly*, Paris, 1771.

72 Marc-Antoine Laugier, *Observations sur l'architecture*, The Hague: Desaint, 1765, p. 196.

73 Chevalier de Chaumont, *Exposition des principes qu'on doit suivre dans l'ordnnance des théâtres modernes*, Paris: C.A. Jombert, 1769, p. 109.

74 The history of the covering of the granary has been studied by Dora Wiebenson in her exhaustive article "The Two Domes of the Halle au Blé in Paris," *The Art Bulletin* 55, no. 1, March 1973, 262–79.

75 Bibliothèque historique de la ville de Paris, Ms Cp 4823, "note pour le journal 22 septembre 1782."

76 *Journal des bâtiments civils* 11, no. 291, 21 prairial, an xi, 403.

77 Bibliothèque historique de la ville de Paris, Ms Cp 4823, "Abrégé des moyens employés successivement à la construction de coupole de la halle. . . ."

78 Deming, *La halle au blé*, p. 125. Deming follows the successive phases of the transformation of the building: the construction of a wooden dome by Legrand and Molinos in 1782–3; the fire of 1802; the construction of a cast iron cupola by Bélanger in 1808–13 (the first metal structure in France); and its partial destruction and integration into the Bourse du commerce in 1889.

79 Italics are in the original. Louis Petit de Bachaumont, *Mémoires secrets pour servir à l'histoire de la republique des lettres en France, depuis MDCCLXII jusqu'à nos jours, ou, Journal d'un observateur . . .*, London: Chez John Adamson, 1780–9, p. IV: 249, entry dated June 10, 1769.

80 Louis Hautecoeur, *Histoire de l'architecture classique en France*, Paris: Éditions A. et J. Picard, 1950–2, p. 4: 452; Émile Dacier, *Gabriel de Saint-Aubin*, Paris: Les Éditions G. Van Oest, 1931, pp. 83–4; Paul d'Ariste and Maurice Arrivetz, *Les Champs Élysées. Étude topographique, historique et anecdotique jusqu'à nos jours*, Paris: Emile-Paul Éditeur, 1913, pp. 221–7; Jacques Hillairet, *Dictionnaire historique des rues de Paris*, 2 vols., Paris: Éditions de Minuit, 1963, 1.

81 For a careful analysis of the debate surrounding the attribution of the Colisée, see my Ph.D. dissertation, "Nicolas Le Camus de Mézières's Architecture of Expression, and the Theatre of Desire at the End of the *Ancien Régime*," McGill University, Montreal, 2000, pp. 53–6 and 336–41.

82 George Louis Le Rouge, *Description du Colisée, élevé aux Champs-Élisées, sur les dessins de M. Le Camus*, Paris: Le Rouge, la Veuve Duchesne, 1771.

83 Alain-Charles Gruber, "Les 'Vauxhalls' parisiens au XVIIIe siècle," *Société de l'histoire de l'art français*, 1971, 134.

84 J.-F. Blondel, *Cours*, II, p. 189; my emphasis.

85 Le Camus de Mézières was very active in the urban development of Paris, not only as an architect but also as a landowner and investor. He was not only involved in the speculative development of the area surrounding the granary, but also owned important pieces of land, including one around Place Louis XV, now place de la Concorde. When Place Louis XV was being developed, he negotiated on behalf of the very powerful comte de Saint-Florentin to acquire a site belonging to the city of Paris. In an undated letter written between 1763 and 1767, Le Camus de Mézières defends a deal concerning an exchange of land. The deal was conditional on the right of M. de Saint-Florentin to enjoy a site at the corner of the Rue de l'orangerie. In Paris at that time, this was a very important location, since it constitutes one of the corners of Place Louis XV, developed on the general plan of Jacques-Ange Gabriel. The site in question is the actual location of the hôtel Saint-Florentin, built for the comte himself by Chalgrin in 1767 at the expense of the city of Paris, on a small deviation originally called cul-de-sac or Rue de l'orangerie, now renamed Rue Saint-Florentin. Arch. Nat., Z/1J/896, "Estimation des terrains pour Nicolas Le Camus de Mézières, Place Louis XV, 13 septembre 1765." Letter by Le Camus de Mézières, Getty Research Institute for the History of Arts and the Humanities, Accession number: 870428.

86 Hillairet, *Dictionnaire historique*, p. 2: 251; *Almanach national*, Paris, 1769.

87 Nicolas Le Camus de Mézières, *Le guide de ceux qui veulent bâtir* [1781; 2nd ed. 1786], Geneva: Minkoff Reprint, 1972, Book 2, Letter 43. It should be kept in mind that during the Middle Ages

and the Renaissance, buildings were usually built before thorough clearing of sites. The best example might be Palladio's Basilica in Vicenza which integrated part of the existing civic building rather than clearing the site entirely.

88 Whereas his book on incombustible theatres was identified only indirectly as being by the same author as that of *Le guide de ceux qui veulent bâtir*, *L'Esprit des Almanachs* was published under the pseudonym of Wolf D'Orfeuil.

89 "Comme l'enceinte d'en bas était uniquement destinée au peuple, on avait aménagé en haut des galeries pour en procurer le spectacle aux gens de la Cour et de la ville." Bachaumont, *Mémoires secrets*, pp. 24: 89–91, entry dated December 15, 1783.

90 "Description des réjouissances données à la nouvelle halle le dimanche 14 décembre 1783 à l'occasion de la paix," Bibliothèque historique de la ville de Paris, Ms Cp 4823.

91 An anonymous letter, dated December 14, 1783, describes Le Camus de Mézières's granary as a coliseum that rivaled the Pantheon in Rome, while the Medicis column is a Parisian Trojan column. Quoted by Anne-Marie Lecoq, "A propos de la nouvelle halle au blé." *Archives d'architecture moderne* 28, 1985, 94.

92 *Journal de la municipalité*, no. 119, July 20, 1790.

93 "Discours de Mirabeau à la mémoire de Franklin prononcé à l'Assemblée nationale, le 11 juin 1790," Bibliothèque historique de la ville de Paris, Ms 773, f° 109 v°.

94 Deming, *La halle au blé*, p. 129. Boullée's project for Newton's cenotaph is dated 1784.

95 Ibid., pp. 123–9, 159–61, 237–9.

96 J.G. Legrand, *Essai sur l'histoire générale de l'architecture*, Paris, 1809, p. 104.

97 *Journal de Paris*, no. 351, December 17, 1783, 1444.

98 For more on De Wailly's project, see Deming, *La halle au blé*, p. 125.

99 Radicchio and D'Oria, *Les théâtres de Paris*, pp. 27–8.

100 *Moniteur* 21, no. 282, 12 Messidor, an ii [30 June 1794], 96; quoted and trans. James Leith, *Space and Revolution*, Montreal and Kingston: McGill-Queen's University Press, 1991, p. 145.

101 Deming, *La halle au blé*, p. 126.

102 Concerning De Wailly's project for transforming the Comédie française into a revolutionary theatre, see Leith, *Space and Revolution*, pp. 141–50, 190.

103 *Procès-verbaux de l'Académie royale d'architecture, 1671–1793*, 10 vols., ed. Henry Lemonnier, Paris: J. Schemit, 1911–29, pp. 9: 17–18.

6 Taste, talent, and genius in eighteenth-century aesthetics

1 Denis Diderot, *Encyclopédie; ou, Dictionnaire raisonné des sciences, des arts et des métiers* [1751–80], New York: Pergamon Press, 1969, p. 7: 584. The authorship of the article "Génie" from the *Encyclopédie* remains unclear. Paul Vernière attributes its initial version to Saint-Lambert; he emphasizes, however, that its final form betrays some explicit influence from Diderot, and was most likely indebted to him. Diderot, *Oeuvres esthétiques*, ed. P. Vernière, Paris: Garnier Frères, 1968, pp. 5–8.

2 Diderot, *Encyclopédie*, p. 7: 584.

3 The letter, dated 1761, was addressed to Charles Pinot Duclos, author of the *Considérations sur les moeurs de ce siècle*. Quoted by G. Gusdorf, *Naissance de la conscience romantique au siècle des Lumières*, Paris: Payot, 1976, p. 49, my translation.

4 Louis Charpentier, *Causes de la décadence du goût sur le théâtre*, Paris: Au Parnasse François, 1758, pp. i–ii, my translation.

5 Ibid., p. iii.

6 Ibid., pp. 14–15.

7 Louis-Sébastien Mercier, *Du théâtre, ou nouvel essai sur l'art dramatique* [Amsterdam: Chez E. van Harrevelt, 1773], Geneva: Slatkine Reprints, 1970, p. vii, my translation.

8 Ibid., p. 7.

9 Ibid., p. 318.

10   J.-F. Blondel, *Cours d'architecture*, 6 vols., ed. Pierre Patte, Paris, 1771–7, pp. IV: xl–lii

11   *Procès-verbaux de l'Académie royale d'architecture, 1671–1793*. 10 vols., ed. Henry Lemonnier, Paris: J. Schemit, 1911–29, June 5, 1780, 9: 18. Left unfinished when he died in 1755, the article on "taste" by Montesquieu was partly completed by Voltaire and published in the sixth volume of the *Encyclopédie* in 1756.

12   Diderot, *Encyclopédie*, p. 6: 761.

13   Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, trans. D. Britt, intro. Robin Middleton, Santa Monica, CA: The Getty Center, 1992, pp. 80–5.

14   Ibid., p. 86.

15   Ibid., p. 92.

16   Ibid.

17   Ibid., p. 93.

18   Middleton, introduction to Le Camus, *The Genius*, p. 18.

19   Diderot, *Encyclopédie*, p. 7: 582.

20   Ibid.

21   Ibid.

22   Ibid.

23   Denis Diderot, *Oeuvres completes*, Paris: Hermann, 1976, p. 7: 35.

24   Diderot, *Encyclopédie*, p. 7: 582.

25   Stanley Green, introduction to Anthony, Earl of Shaftesbury, *Characteristics of Men, Manners, Opinions, Times*, ed. J.M. Robertson, New York: Bobbs-Merrill, 1964, p. xv.

26   Gusdorf differentiates between two kinds of romanticism. He says that the romantic mind of Shaftesbury led to a romanticism of conciliation rather than the romanticism of rupture that would impose itself in the nineteenth century. Gusdorf, *Naissance de la conscience romantique au siècle des Lumières.* Paris: Payot, 1976, p. 227.

27   Shaftesbury, *Characteristics*, pp. 1: 35, 2: 178.

28   Anthony Shaftesbury, "Letter to Michael Ainsworth, June 3rd 1709," in *The Life, Unpublished Letters and Philosophical Regimen of Anthony, Earl Of Shaftesbury*, ed. Benjamin Rand, London: S. Sonnenschein; New York: Macmillan, 1900, p. 404.

29   In architecture and especially theatre, for example, theoreticians and practitioners such as Charles-Nicolas Cochin and Pierre Patte knew that the traditional shape of theatres in France was acoustically irrational, but they believed that a superior acoustical shape, such as the Greek amphitheatre, would have been unacceptable to French customs. Consequently, during the first half of the eighteenth century, social conventions in the theatre overruled rational acoustics and sightlines. It was not until the second half of the eighteenth century that a growing attention to romantic sensitivity (characterized by the belief that the physical world is given to humankind with an intrinsic spontaneous intuition) enabled natural principles (such as acoustics) to be considered alongside social conventions.

30   *The Oxford English Dictionary* (1971) defines the origins of the word "aesthetic" in these terms: "Applied in Germ. by Baumgarten (1750–58, *Æsthetica*) to 'criticism of taste' considered as a science of philosophy; against which, as a misuse of the word found in German only, protest was made by Kant (1781, *Crit. R. V.* 21), who applied the name, in accordance with the ancient distinction of αισθητά and νοητα, to 'science which treats of the conditions of sensuous perception,' a sense retained in the Kantian philosophy, and found in English *c* 1800. But Baumgarten's use of *æsthetik* found popular acceptance, and appeared in Eng. after 1830, though its adoption was long opposed."

31   Alexander Baumgarten, *Aesthetica*, Francfort-sur-l'Oder, 1750, T.1, §14, p. 6. Quoted by Gusdorf, *Naissance*, pp. 423–4.

32   Jean-Jacques Rousseau, *Les confessions*, Paris: Garnier-Flammarion, 1968, p. 1: 43, my translation.

7 Newtonian empirical sciences and the order of nature

1 Jacques-François Blondel, *Discours sur la nécessité de l'étude de l'architecture: De l'utilité de joindre à l'étude de l'architecture celle des sciences et des arts qui lui sont relatifs* [1754], Geneva: Minkoff Reprint, 1973, pp. 55–6. Blondel concedes, however, that it is not necessary for the architect to master all of these sciences.

2 Alain Le Bihan, *Franc-maçons parisiens du Grand Orient de France*, Paris: Bibliothèque Nationale, 1966, p. 299.

3 G. Gusdorf, *Naissance de la conscience romantique au siècle des Lumières*, Paris: Payot, 1976, p. 277.

4 For more on this, see Georges Gusdorf, *Les principes de la pensée au siècle des lumières*, Paris: Payot, 1971, pp. 405–6.

5 For more on the influence of freemasonry on late eighteenth-century architectural theories, and particularly on the work of Ledoux, see A. Pérez-Gómez, *Architecture and the Crisis of Modern Science*, Cambridge, MA: MIT Press, 1983, pp. 151–6.

6 Although it would take more than a century for Pierre Simon Marquis de Laplace to describe God as an "unnecessary hypothesis" in his *Traité de la mécanique céleste* (1799), Newton was soon regarded as the leader of scientific agnosticism.

7 For more on the influence of Newtonianism on the field of architecture, see Louise Pelletier and Alberto Pérez-Gómez, *Architectural Representation and the Perspective Hinge*, Cambridge, MA: MIT Press, 1997, Variation Two; and on its influence on other disciplines, see Gusdorf, *Les principes*, pp. 181–91.

8 D'Alembert, *Discours préliminaire de l'Encyclopédie*, II, Paris: Gonthier, 1965, p. 99, my translation.

9 In his article "Étienne-Louis Boullée. Empiricism and the Cenotaph for Newton," *Architectura* 23, Munich, 1993, 37–57, Martin Bressani proposes to demonstrate that the "enthusiasm for modern experimental science" (Newton's empiricism) and the "melancholic sensibility" that both determine the work of Boullée are not contradictory, but intimately connected to one another. Bressani also aims to demonstrate "a direct influence from the field of philosophy" on the work of Boullée.

10 Étienne-Louis Boullée, *Architecture: essai sur l'art*, ed. J.M. Pérouse de Montclos, Paris: Hermann, 1968, p. 121, my translation.

11 J.-M. Perouse de Montclos, introduction to Boullée, *Architecture*, p. 15.

12 Pérez-Gómez, *Architecture and the Crisis*, p. 131. Pérez-Gómez continues: "In a truly Platonic sense, the sphere became the image of *agathon* – supreme beauty and goodness. Issuing from Newtonian cosmology, it symbolized the presence of the infinite *in nature.*" Ibid., p. 141.

13 Ledoux also used the purity of forms found in Greek temples to develop a new geometric vocabulary "that could chasten the Rococo style in the interests of clarity and naturalness." Robert Rosenblum, *Transformations in Late Eighteenth Century Art*, Princeton: Princeton University Press, 1970, pp. 120–2.

14 Boullée, *Architecture*, pp. 33–4.

15 Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, trans. D. Britt, intro. Robin Middleton, Santa Monica, CA: The Getty Center, 1992, p. 117.

16 Ibid., p. 79. Szambien remarks that Le Camus de Mézières diverges from the classical doctrine when he attributes to the Tuscan order the character of force and solidity. This character was traditionally attributed to the Doric order, which follows the proportions of a noble and attractive man. Traditionally, the Tuscan order was considered to be so unrefined that it was rarely used. Andrea Palladio, *Les quatre livres d'architecture*, trans. R. Fréart de Chambray, 1650, p. 13, quoted by W. Szambien, *Symétrie, goût, caractère: théorie et terminologie de l'architecture à l'âge classique 1550–1800*, Paris: Picard, 1986, p. 138.

17 Boullée, *Architecture*, p. 73. This notion is recurrent throughout *Architecture: l'essai sur l'art*.

18 Le Camus, *The Genius*, p. 70. This analogy with the language of physics was first pointed out by

R. Saisselin, "Architecture and Language: The Sensationalism of Le Camus de Mézières," *British Journal of Aesthetics* 15, 1975, 241.

19 Pérez-Gómez notes the complexity of Le Camus de Mézières's work by delineating the apparent contrast between *The Genius of Architecture* and his two other books concerned with technical problems of construction. Pérez-Gómez's commentary on Le Camus de Mézières is particularly helpful for it places his theory of a harmonic architecture in the context of the century-long debate over the notion of arbitrary and absolute beauty that stemmed from Perrault's questioning of the status of architectural orders. Pérez-Gómez, *Architecture and the Crisis*, p. 74.

20 Nicolas Le Camus de Mézières, *Traité de la force du bois. Ouvrage essentiel, qui donne les moyens de procurer plus de solidité aux Edifices, de connoître la bonne et la mauvaise qualité des Bois, de calculer leur force, et de ménager près de moitié sur ceux qu'on emploie ordinairement. Il enseigne aussi la manière la plus avantageuse d'exploiter les forêts, d'en faire l'estimation sur pied, etc.*, Paris: Chez l'Auteur et chez Benoît Morin, 1782, pp. 41–2, my translation.

21 Le Camus, *The Genius*, p. 71.

22 Le Camus, *Traité de la force du bois*, pp. 42–3.

23 Ibid., pp. 26–7.

24 Le Camus de Mézières and Antoine Babuty Desgodets, *Dissertation de la compagnie des Architectes Experts des Bâtimens à Paris, En réponse au mémoire de M. Paris du Verney sur la théorie & la pratique des gros bois de charpente dans leur exploitation & dans leur emploi*, 1763, p. 69.

25 *Procès-verbaux de l'Académie royale d'architecture, 1671–1793*, ed. Henry Lemonnier, Paris: J. Schemit, 1911–29, vol. VII, pp. 250–5, 328.

26 Le Camus, *Traité de la force du bois*, p. 24.

27 For more on the debate opposing Soufflot and Patte, see Pérez-Gómez, *Architecture and the Crisis*, pp. 260–4.

28 Charles-François Viel, *Décadence de l'architecture à la fin du dix-huitième siècle*, Paris: Chez l'auteur & chez Perronneau, 1800, An VIII, p. 28.

29 Ibid., pp. 5–6.

30 Ibid., p. 8.

31 Ibid., p. 10.

32 Le Camus devotes various sections to colors and painting where he acknowledges different authors, including Watelet who, he says, wrote about this sublime art. Le Camus turns his attention to what he calls "impression painting" in a section entitled "l'Art de coucher à plat les couleurs sur des murs, sur de la menuiserie, sur des plafonds, etc." Le Camus, *Le guide de ceux qui veulent bâtir* [1781; 2nd ed. 1786], Geneva: Minkoff Reprint, 1972, pp. 39, 68–72.

33 Ibid., pp. 40–1.

34 Ibid., p. 3.

35 Nicolas Le Camus de Mézières, *Mémoire sur la manière de rendre incombustible toute salle de spectacle*, Paris: Chez Benoît Morin, 1781, p. 3.

36 Thirteen years later, in 1794, while the temporary structure was threatening to collapse, the opera was moved again to the Théâtre des Arts, where it stayed until 1820. Its permanent residence was built only under the Second Empire.

37 At the end of the eighteenth century, the preoccupation with fire became the central subject of treatises on the theatre. See, for example, George Saunders, *A Treatise on Theatres* [London: I. & J. Taylor, 1790], New York: B. Blom, 1968.

38 Le Camus, *Mémoire*, pp. 3–9.

8 Empirical philosophy and the nature of sensations

1 Richard Cleary, "Beauty: Absolute or Arbitrary?" *Design Book Review* 34, Berkeley, CA, Fall 1994, 57.

2 Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, trans. D. Britt, intro. Robin Middleton, Santa Monica, CA: The Getty Center, 1992, p. 72.

3 Étienne Bonnot de Condillac, *Oeuvres philosophiques*, Paris: Presses Universitaires de France, 1947, p. 229.

4 Julien Offray de La Mettrie, *Man a Machine; L'homme machine* [1748], La Salle, IL: Open Court, 1987, pp. 26, 38.

5 Jean-Jacques Rousseau, "Discours sur l'origine et les fondements de l'inégalité parmis les hommes", in *Oeuvres complètes*, Pléiade, Paris: Gallimard, *c.*1959, p. 1: 143.

6 Condillac, *Oeuvres philosophiques*, p. 330.

7 John Locke's treatise was translated into French by Coste in 1700 as *Essai concernant l'entendement humain*. Condillac owned a fourth edition published in 1742.

8 G. Gusdorf, *Naissance de la conscience romantique au siècle des Lumières*, Paris: Payot, 1976, p. 113.

9 Condillac, *Oeuvres philosophiques*, pp. 225–7.

10 Since the statue is devoted to a single sense, Condillac speculates, its faculty of imagination must be more developed than ours. Ibid., p. 239.

11 Le Camus, *The Genius*, p. 139.

12 Descartes in *Dioptrique*, Discours VI, and Malebranche in *De la recherche de la Vérité*, liv. 1, chaps. 6–9, deal with perception of distance, place, size, and figure as visual phenomena.

13 Condillac, *Oeuvres philosophiques*, pp. 243–5. Condillac was in fact expanding on Locke's speculations on a similar experiment published in the *Essay on Human Understanding*. Locke speculated that a person blind since birth to whom the sense of sight is given would still need the sense of touch to distinguish between a sphere and a cube. Condillac, however, criticizes Locke for failing to acknowledge the possibility for touch to educate the eye and for believing that judgment occurs at the level of perception. Locke attributed to vision ideas that come only from the sense of touch, Condillac argues. This experiment was also published in *Philosophical Transactions* (1728), and Voltaire recounted it in his *Elemens de la philosophie de Newton*, Part 2, chap. 7.

14 Condillac, *Oeuvres philosophiques*, p. 271, my translation.

15 Ibid., p. 175.

16 Le Camus, *The Genius*, pp. 93–4.

17 Ibid., pp. 72–3.

18 René Ouvrard, *Architecture harmonique ou application de la doctrine des proportions de la musique à l'architecture*, Paris: Chez Robert Jean Baptiste de la Caille, 1679, p. 2, my translation. Ouvrard acknowledged the origin of this tradition in antiquity, and praised Vitruvius and other masters for following the principles of harmonic proportion. However, he thought his predecessors lacked rigor in their application of natural proportions to architecture. Anticipating Perrault's treatise on the architectural orders by only a few years, he writes that many seemed to have regarded the architectural orders to be "arbitrary and dependent on the sole will of the workmen rather than as the principles of the Art, for when they decided to apply them, they used other measurements, and paid little attention to the harmony of Proportions." Whereas Ouvrard criticized this arbitrariness that seemed to plague the architectural orders as a lack of rigor, as we have seen earlier, for Perrault, it would become the justification for making this "arbitrary beauty" based on conventions into a guiding rule for architecture.

19 Ibid., p. 10.

20 The association of musical harmony and architectural proportions in the eighteenth century is a complex issue and not without contradiction. Theories of music at that time opposed those who, following Rameau, believed in the evocative power of every chord to create harmony, to those, such as Jean-Jacques Rousseau, who emphasized the importance of the temporal unfolding of melody. Although Le Camus de Mézières does not explicitly enter this debate, he speaks about musical harmony as opposed to melody, and this would suggest a more traditional, static reading of character, in contradiction to his apparent interest in the temporal/theatrical unfolding of architectural spaces in his treatise. It could also be related to the modes based on musical intervals, and thus closer to the Vitruvian tradition.

21 Three decades before the publication of Le Camus's *The Genius of Architecture*, Briseux insisted that reason and proportion were the essential conditions of beauty in the arts, and developed his essentialist aesthetics into an applicable method in architecture.

22 Le Camus, *The Genius*, p. 73.

23 Ibid., p. 74.

24 Edmund Burke, *A Philosophical Enquiry* [1757], London: Routledge & Kegan Paul, 1958, p. 13.

25 Ibid., p. 23. Burke is referring to John Locke, *An Essay Concerning Human Understanding* [1690], II, i, 3.

26 Here Burke is disputing Locke's notion that the removal of pain is a form of pleasure. Locke, *Essay*, I, 2, c.20, section 16. Burke, *Enquiry*, pp. 32–4.

27 Burke, *Enquiry*, p. 39.

28 Ibid., p. 71.

29 Aristotle, *The Poetics*, translated by S.H. Butcher in *Aristotle's Theory of Poetry and Fine Art*, New York: Dover Publications, 1951, p. 15.

30 Burke, *Enquiry*, pp. 74–5.

31 Étienne-Louis Boullée, *Architecture: essai sur l'art*, ed. J.M. Perouse de Montclos, Paris: Hermann, 1968, p. 35.

32 Le Camus, *The Genius*, pp. 95–6.

33 Burke, *Enquiry*, p. 76.

34 Ibid.

35 Le Camus, *The Genius*, pp. 93–4.

36 Boullée, *Architecture*, p. 82.

37 Ibid., p. 84.

38 Le Camus, *The Genius*, p. 94.

39 Burke, *Enquiry*, pp. 80–1.

40 Boullée, *Architecture*, p. 35.

41 The language Boullée uses to describe the source of light inside the monument assumes a familiarity with Newton. It also states explicitly his architectural intention: "In using, Newton, your divine system in order to shape the sepulchral lamp that lights your tomb, I became myself sublime." Ibid., pp. 138–9.

42 Burke, *Enquiry*, p. 92.

43 Ibid., p. 100.

44 Ibid., pp. 105–6.

45 Ibid., p. 113.

46 Ibid., p. 115.

47 Ibid., pp. 149–50.

48 "The sublime and the beautiful stand on foundations so different, that it is hard, I had almost said impossible, to think of reconciling them in the same subject, without considerably lessening the effect of the one or the other upon the passions." Ibid., p. 114.

49 In his article on taste from the *Encyclopédie*, Montesquieu writes that we like to see many objects at once, and we wish we could extend our sight to perceive great distances. Our sense of vision, however, is limited and needs the assistance of art to provide this pleasure. Art is so esteemed that it is even preferred to nature. Diderot, *Encyclopédie; ou, Dictionnaire raisonné des sciences, des arts et des métiers* [1751–80], New York: Pergamon Press, 1969, p. 7: 763.

50 Else Marie Bukdahl traces Diderot's affinities with Burke's work in *Diderot critique d'art*, Copenhagen: Rosenkilde et Bagger, 1982, pp. 103–13.

51 The Discourse around Poussin's *Israelites Gathering Manna in the Desert*, for example, raised an intense debate. Poussin was criticized for excluding from the painterly representation the camels of the biblical text. Le Brun defended Poussin's painting for its disposition and unity of the narrative message. On the creation of the Academy and its practice of the Discourse, see Norman Bryson,

Word and Image: French Painting of the Ancien Régime, Cambridge: Cambridge University Press, 1981, pp. 30–3.

52 The works of Condillac and Burke, for example, still have the density and rhythm of story telling.

53 Michael Fried, *Absorption and Theatricality: Painting and Beholder in the Age of Diderot*, Berkeley: University of California Press, 1980, pp. 57–9.

54 Denis Diderot, *Oeuvres esthétiques*, ed. P. Vernière, Paris: Garnier Frères, 1968, p. 533.

55 Denis Diderot, *Diderot's Salons*, p. 3: 1767, ed. J. Seznec, Oxford: Clarendon Press, 1983, p. 338; and Denis Diderot, "Pensées détachées sur la peinture," in Oeuvres esthétiques, p. 824.

56 Diderot, *Oeuvres esthétiques*, p. 825.

57 Le Camus, *The Genius*, p. 96.

58 For a brief history of the hierarchy of genre in paintings and particularly landscape painting from the seventeenth to the eighteenth century, see Ian J. Lochhead, *The Spectator and the Landscape in the Art Criticism of Diderot and His Contemporaries*, Ann Arbor, MI: UMI Research Press, 1982, pp. 2–14.

59 Diderot, *Diderot's Salons*, p. 129, my translation.

60 Ibid., pp. 130–1.

61 Ibid., p. 133.

62 Ibid., p. 142.

63 Burke, "The Effect of Sympathy in the Distress of Other," Enquiry, pp. 45–6. Diderot expands on Burke's notion of a delightful pain by quoting La Rochefoucauld, who says that "in the greatest misfortunes of our dearest ones, there is always something that does not displease us." Diderot, *Diderot's Salons*, pp. 142–3.

64 Diderot, *Diderot's Salons*, p. 163.

65 As Remy Saisselin puts it, "the introduction of sensationalist notions into architectural theory increased the awareness of the effects of an edifice by displacing sensibility and attention from the eye, which perceived proportions and rapports, to the skin, the entire body, which thereby became, however vaguely or emphatically, aware of surfaces, light and shade, mass, so that the heart became affected by those phenomena which were not strictly derived from the more intellectual aspects of proportions and orders." Saisselin, "Architecture and Language: The Sensationalism of Le Camus de Mézières," *British Journal of Aesthetics* 15, 1975, 246–7.

66 Diderot was criticized by some of his contemporaries for the apparent contradiction in his ideology and later would be criticized even more strongly by twentieth-century art critics. For more on the controversy, see S. Bryson, *The Chastised Stage. Bourgeois Drama and the Exercise of Power*, Saratoga, CA: ANMA Libri, 1991, p. 200.

9 Staging an architecture in words

1 Rémy G. Saisselin, "The Space of Seduction in Eighteenth-Century French Novel and Architecture," *Studies on Voltaire and the Eighteenth Century* 319, Oxford, 1994, 418. Saisselin devotes the entire article to the role of architecture in eighteenth-century novels.

2 Bastide was not an architect, although he collaborated on other occasions with Jacques-François Blondel, particularly for a novel entitled *L'Homme du monde éclairé par les arts*, Amsterdam, 1774, which also associated the erotic novel and the architectural treatise.

3 In his article "The Space of Seduction," Saisselin opposes the notion of the *petite maison* to the more public role of the *hôtel particulier*, describing it instead as a hiding place "to escape the *regard* of the other." This reading, however, appears to be a modern misinterpretation, for the *petite maison* also expressed the social status of its owner, and in many novels of the time, such as Vivant Denon's *Point de lendemain* (Paris, 1777), the risk of being caught was not without importance. Saisselin suggests that "the petite maison need not be a separate edifice, but private apartments within a larger palatial structure, as were the *petits appartements* of Louis XV within the vast public magnificence of Versailles." Saisselin, "Space of Seduction," p. 419. If the *petits appartements* in Versailles can indeed be equated to the concept of the *petite maison* in the

eighteenth century, these private apartments, flagrantly occupied by Louis XV's mistresses (such as Madame de Pompadour and her theatre), did not represent a place of hiding, but rather the social recognition of the king's intimate life.

4   This translation by Rodolphe El-Khoury, in his introduction to Jean-François de Bastide, *The Little House: An Architectural Seduction*, trans. and intro. R. El-Khoury, preface by Anthony Vidler, New York: Princeton Architectural Press, 1995, p. 31, is closer to the original text: "une piece fait désirer l'autre, cette agitation occupe & tient en suspens les esprits, c'est un genre de jouissance qui satisfait." Nicolas Le Camus de Mézières, *Le génie de l'architecture: ou, L'analogie de cet art avec nos sensations* [Paris: B. Morin, 1780], Geneva: Minkoff Reprint, 1972, pp. 44–5. It seems significant that the *genre* described here by Le Camus is indeed the *genre galant*.

5   Bastide, *The Little House*, p. 66.

6   Ibid., p. 70.

7   Ibid., p. 75.

8   Ibid., p. 80.

9   Ibid., pp. 99–100.

10 Quoted by Claude Bonnet, *Écrits gastronomiques*, Paris, 1978, pp. 64–5, and translated by Rodolphe El-Khoury, *The Little House*, p. 112. El-Khoury attributes this mechanical table to Guerin, but the mechanism itself was clearly inspired by Vaucanson, the famous stage set engineer.

11 Marmontel, quoted by Henri D'Alméras and Paul d'Estrée, *Les théâtres libertins au XVIIIe siècle*, Paris: H. Daragon, 1905, pp. 257–8, my translation.

12 *La petite maison* was published for the first time in *Le nouveau spectateur*, Amsterdam and Paris, 1758, pp. 2: 361–412. The story was republished in a slightly modified form and with a different ending in *Les contes de M. de Bastide*, Paris, 1763, and then in 1784 in *Bibliothèque universelle des romans*, pp. 2: 66–102.

13 Jacques-François Blondel and Jean-François de Bastide, *L'homme du monde éclairé par les arts*, Amsterdam and Paris, 1774, pp. II: 286–7, trans. Richard Cleary in "Romancing the tome; or an Academician's pursuit of a popular audience in 18th-century France," *Journal of the Society of Architectural Historians* XLVIII, June 1989, 145. In his *Cours d'architecture*, 6 vols., ed. Pierre Patte, Paris, 1771–7, IV: xlviii, Blondel had already acknowledged the complementary nature of passion and reason in his discourse on the man of genius.

14 Vivant Denon, *Point de lendemain* [1777], ed. Michel Delon, Paris: Éditions Gallimard, 1995, p. 92.

15 Jean-François de Bastide, *Dictionnaire des moeurs*, The Hague and Paris, 1773; quoted by Michel Delon in an endnote to *La petite maison*, Paris: Éditions Gallimard, 1995, p. 205.

16 Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, trans. D. Britt, intro. Robin Middleton, Santa Monica, CA: The Getty Center, 1992, p. 128, my emphasis. It is worth noting that this central concept about distribution is developed in the section devoted to the Linen Room, one of the longest on secondary service rooms in Le Camus's treatise.

17 Ibid., p. 141, my emphasis.

18 Ibid., p. 104.

19 Ibid., p. 110, my emphasis.

20 Ibid., p. 103.

21 Ibid., p. 112.

22 Ibid., p. 113.

23 Ibid., pp. 116–18.

24 Ibid., p. 116. Bastide writes: "The walls of the boudoir were covered with mirrors whose joinery was concealed by carefully sculpted, leafy tree trunks. The trees, arranged to give the illusion of a quincunx, were heavy with flowers and laden with chandeliers. The light from their many candles receded into the opposite mirrors, which had been purposely veiled with hanging gauze. So magical was this optical effect that the boudoir could have been mistaken for a natural wood, lit with the help of art." Bastide, *The Little House*, pp. 75–6.

25 Le Camus, *The Genius*, p. 124.

26 Ibid., p. 88.

27 Le Camus, *Le génie*, p. 151.

28 Le Camus, *The Genius*, p. 128.

29 Ibid., p. 141.

30 Bastide, *The Little House*, p. 102.

31 Le Camus, *The Genius*, p. 138.

32 Ibid., p. 176.

33 Ibid., p. 174.

34 Paul Bouteiller records the contract documents for the construction of the Hôtel de Beauvau in an article in the journal of the Ministère de l'Intérieur, *L'administration*, no. 151, April 15, 1991. All English references are taken from Appendix B following the English translation of *The Genius of Architecture*.

10 The narrative space of desire

1 Nicolas Le Camus de Mézières, *Aabba, ou le triomphe de l'innocence*, published together with Claude-Henri Watelet, *La Vallée de Tempé*, Paris: Chez Gueffier, 1784, p. 15.

2 Ibid., p. 77.

3 Martin Angus, *Bibliographie du genre Romanesque français, 1751–1800*, London: Mansell, 1977, pp. 57–8. The 1757 edition puts in parallel two French translations from the original Greek fragment, the first one by Jacques Amyot dated 1559, and the second one anonymous, later attributed to Antoine Le Camus. Between 1783 and 1787, two other French translations were also produced by Mulot and Debure de Saint-Fauxbin.

4 Quoted by Anne Carson, *Eros the Bittersweet, An Essay*, Princeton, NJ: Princeton University Press, 1986, p. 88.

5 Aristotle, *The Poetics*, trans. S.H. Butcher in *Aristotle's Theory of Poetry and Fine Art*, New York: Dover Publications, 1951, pp. IV: 12, 19.

6 Jean de la Fontaine, *Les amours de Psyché et Cupidon*, Paris: Le Castor Astral, 1991, p. 50.

7 In his book on the life of painters, André Félibien writes that Colonna has revived the spirit of antiquity and that *Le Songe* (the French word for Hypnerotomachia) is "a book that everybody knows today." André Félibien, *Entretiens sur les vies et les ouvrages des plus excellents peintres*, Paris: Trévoux, 1725, p. V: 232.

8 Preface to the original edition of Colonna, *Hypnerotomachia Poliphili ubi humana omnia nisi somnium esse docet*, Venice: Aldus Manutius, 1499.

9 Alberto Pérez-Gómez, "The Hypnerotomachia Poliphili by Francesco Colonna," in *Paper Palaces*, ed. Vaughan Hart with Peter Hicks, New Haven: Yale University Press, 1998, p. 92.

10 Carson, *Eros*, p. 55. The plot of such romances in antiquity typically revolved around love stories in which the lovers are kept apart and made miserable until the very end. Ibid., p. 78.

11 Auguste Bernard, *Geofroy Tory, Painter and Engraver*, trans. G.B. Ives, London: Riverside Press, 1909, p. 31.

12 Geofroy Tory, *Aediloquium ceu Disticha partibus Aedium urbanarum et rusticarum suis quaeque locis adscribenda*, Paris, 1530, preface; trans. G.B. Ives in Bernard, *Geofroy Tory*, pp. 92–3. I am grateful to Louis Brillant for pointing out to me the work of Geofroy Tory.

13 Bernard, *Geofroy Tory*, p. 93.

14 Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, trans. D. Britt, intro. Robin Middleton, Santa Monica, CA: The Getty Center, 1992, p. 101.

15 J.G. Legrand, *Songe de Poliphile*, Paris, 1804, pp. 176–7.

16 Ibid., p. 194. Legrand writes that such a sublime idea, first executed by the Egyptians for the tomb of Osimandias, has often been planned by different artists without ever having been properly executed, a direct hint at Boullée's project of Newton's cenotaph.

17 Le Camus, *The Genius*, pp. 100–1.

18 Nicolas Le Camus de Mézières, *Description des eaux de Chantilly et du hameau*, Paris: Chez l'Auteur, 1783, p. 8. All excerpts from this book are my translation.

19 Ibid., p. 12.

20 Ibid., p. 43.

21 Ibid., p. 97.

22 Ibid., pp. 113–15. Le Camus is referring to the famous Greek painter from the fifth century BC who was said to have painted grapes so realistically that birds tried to eat them. The Roman historian Pliny the Elder describes it in his *Natural History*.

23 Le Camus, *Desciption des eaux de Chantilly*, p. 121.

24 Ibid., p. 125.

25 It is in his *Confessions* that nature seems to reflect most eloquently Rousseau's state of mind and advance his ecstatic perception of the world.

26 Roger De Piles, *Cours de peinture par principes*, Paris: J. Estienne, 1708, p. 219; trans. Middleton, introduction to *The Genius*, p. 31.

27 *Procès-verbaux de l'Académie royale d'architecture, 1671–1793*, 10 vols., ed. Henry Lemonnier, Paris: J. Schemit, 1911–29, pp. 9: 17–18.

28 Jean-Marie Morel, *Théorie des jardins, ou l'art des jardins de la nature*, Paris, 1776, 2nd ed., Paris: D. Coles, 1806, p. 180.

29 Ibid., pp. 1–2.

30 Le Camus, *The Genius*, p. 93.

31 Morel, *Théorie des jardins*, p. 3.

32 Ibid., p. 6.

33 Ibid., pp. 15–16.

34 Claude-Henri Watelet, *Essai sur les jardins* [Paris: Chez Prault, Saillant & Nyon, Pissot, 1774], Geneva: Minkoff Reprint, 1972, p. 2.

35 Ibid., pp. 14–15.

36 Ibid., pp. 25–6. In an article on Watelet's landscape theory, Sylvia Lavin argues that the garden is a feminine space waiting to be penetrated and thus dominated by the male *promeneur*. Her translation of Watelet's promenades, however, is misleading. Lavin, "Sacrifice and the Garden: Watelet's Essai sur les jardins and the Space of the Picturesque," *Assemblage* 28, MIT Press, 1996, 23.

37 Watelet, *Essai*, p. 42.

38 Ibid., pp. 47–52.

39 Ibid., p. 58.

40 Francesco Colonna, *Le songe de Poliphile ou Hypnérotomachie*, trans. C. Popelin, 2 vols. [1883], Geneva: Slatkine Reprints, 1971, p. 2: 242.

41 Watelet, *Essai*, p. 92.

42 Whateley died two years after the publication of his treatise on gardening and his study on Shakespeare was published by his brother in 1785. John Archer, "Character in English Architectural Design," *Eighteenth-Century Studies* 12/3, Spring 1979, 349–53.

43 Thomas Whateley, *Observations on Modern Gardening*, 1770, pp. 153, 155–6.

44 Le Camus, *The Genius*, p. 74.

45 Watelet, *Essai*, p. 62.

46 Ibid., p. 86.

47 Ibid., pp. 80–1.

48 Ibid., p. 87.

Conclusion

1 Nicolas Le Camus de Mézières, *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, trans. D. Britt, intro. Robin Middleton, Santa Monica, CA: The Getty Center, 1992, p. 176.

2   Pierre-Jean-Baptiste Nougaret, *De l'art du théâtre en général* [1769], Geneva: Slatkine Reprints, 1971, pp. 221–2.

3   Louis-Sébastien Mercier, *Du théâtre, ou, nouvel essai sur l'art dramatique* [Amsterdam: Chez E. van Harrevelt, 1773], Geneva: Slatkine Reprints, 1970, pp. 145–6.

4   Ibid., p. 147.

Selected bibliography

Algarotti, Francesco, conte. *Saggio sopra l'opera in musica* [Venice, 1755; Livorno, 1763], Bologna: Libreria Musicale Italiana, 1989.

André, Édouard. "Documents inédits sur l'histoire du Château et des jardins de Chanteloup," *Bulletin de la société de l'histoire de l'art français* I, Paris, 1935, 21–39.

Archer, John. "Character in English Architectural Design," *Eighteenth-Century Studies* 12/3, Spring 1979, 339–71.

Arendt, Hannah. *The Human Condition*, Chicago and London: University of Chicago Press, 1958.

Aristotle. *The Poetics*, translated by S.H. Butcher, in *Aristotle's Theory of Poetry and Fine Art*, New York: Dover Publications, 1951.

Bachaumont, Louis Petit de. *Mémoires secrets pour servir à l'histoire de la république des lettres en France, depuis MDCCLXII jusqu'à nos jours, ou, Journal d'un observateur . . .*, London: Chez John Adamson, 1780–9.

Bapst, Germaine. *Essai sur l'histoire du théâtre; la mise en scène, le décor, le costume, l'architecture, l'éclairage, l'hygiène*, Paris: Hachette, 1893.

Bastide, Jean-François de. *The Little House: An Architectural Seduction*, translation and introduction by Rodolphe El-Khoury, preface by Anthony Vidler, New York: Princeton Architectural Press, 1995.

—— *La petite maison* [1758, 1763], edited and introduction by Michel Delon, Paris: Éditions Gallimard, 1995.

Becker, Carl L. *The Heavenly City of the Eighteenth Century Philosophers*, New Haven: Yale University Press, 1973.

Belaval, Yvon. "La crise de la géométrisation de l'univers dans la philosophie des Lumières," *Revue Internationale de Philosophie* 6, Brussels, 1952, 337–55.

—— *L'esthétique sans paradoxe de Diderot*, Paris: Gallimard, 1950.

Ben Chaim, Daphna. *Distance in the Theatre: The Aesthetics of Audience Response*, Ann Arbor, MI: UMI Research Press, 1984.

Bergman, Gösta Mauritz "Le décorateur Brunetti et les décors de la Comédie Française au XVIIIe siècle," *Theatre Research; Recherches théâtrales* 4/1, London, 1962.

—— "La grande mode des pantomimes à Paris vers 1740 et les spectacles d'optique de Servandoni," *Theatre Research; Recherches théâtrales* 2/2, London, 1960, 71–81.

—— *Lighting in the Theatre*, Totowa, NJ: Rowman and Littlefield, 1977.

Bernard, Auguste. *Geofroy Tory, Painter and Engraver: First Royal Printer, Reformer of Orthography and Typography Under François I*, translated by Georges B. Ives, London: Riverside Press, 1909.

Bernie, Victoria Clare. "The Art of Disappearance: The Architecture of the Exhibition and the Construction of the Modern Audience," Master's dissertation, McGill University, 1995.

Bjurström, Per. "Mise en scène de Sémiramis de Voltaire en 1748 et 1759," *Revue d'histoire du théâtre* 8, Paris, 1956, 299–320.

—— "Servandoni, Décorateur de theatre," *Revue d'histoire du théâtre* 6, Paris, 1952, 150–9.

—— "Servandoni et la Salle des Machines," *Revue d'histoire du théâtre* 11, Paris, 1959, 222–4.

Blondel, François. *Cours d'architecture*, Paris, 1675–83.

Blondel, Jacques-François. *Architecture françoise, ou, Recueil des plans, élévations, coupes et profils des églises, maisons royales, palais, hôtels et édifices les plus considérables de Paris, ainsi que*

des châteaux et maisons de plaisances situés aux environs de cette ville, ou en d'autres endroits de la France, bâtis par les plus célèbres architectes, et mesurés exactement sur les lieux, Paris: C.A. Jombert, 1752–6.

—— *Cours d'architecture, ou, Traité de la décoration, distribution & construction des bâtiments contenant les leçons données en 1750 & les années suivantes par J.F. Blondel*, 6 vols., edited by Pierre Patte, Paris: Desaint, 1771–79.

—— *De la distribution des maisons de plaisance et de la décoration des édifices en général*, Paris: Chez Charles-Antoine Jombert, 1737–8.

—— *Description des festes données par la ville de Paris à l'occasion du mariage de madame Louise-Elisabeth de France, & de Don Philippe, infant et grand amiral d'Espagne, les vingt-neuvième & trentième août mil sept cent trente-neuf*, Paris: Le Mercier, 1740.

Blondel, Jacques-François and Jean-François de Bastide. *L'homme du monde éclairé par les arts*, 2 vols., Amsterdam and Paris, 1774.

Boffrand, Germain. *Livre d'architecture contenant les principes généraux de cet art: et les plans, élévations et profils de quelques-uns des bâtimens faits en France & dans les pays étrangers*, Paris: G. Cavelier, 1745.

Bouché, J. "Servandoni," *Gazette des Beaux-Arts* 2, Paris, 1910, 121.

Boucher, Thierry-G. "Rameau et les théâtres de la cour (1745–1764)," in *Jean-Philippe Rameau, Colloque international organisé par La Société Rameau*, edited by J. de La Gorce, Paris and Geneva: Champion-Slatkine, 1987, 565–77.

Boudon, Françoise. "Urbanisme et spéculation à Paris au XVIIIe siècle: le terrain de l'Hôtel de Soisson," *Journal of the Society of Architectural Historians* 32/4, Philadelphia, 1973, 267–307.

Bouleau-Rabaud, Wanda. "L'Académie d'Architecture à la fin du XVIIIe siècle," *Gazette des Beaux-Arts* 68, Paris, 1966, 355–64.

Boullée, Étienne-Louis. *Architecture: essai sur l'art*, edited by J.M. Pérouse de Montclos, Paris: Hermann, 1968.

Boureau-Deslandes, André-François. *L'Art de ne point s'ennuyer*, Paris: Chez Etienne Ganneau, 1715.

Bousquet, Jacques. *Anthologie du dix-huitième siècle romantique*, Paris: Jean-Jacques Pauvert, 1972.

Bouteiller, Paul. "La construction de l'Hôtel de Beauvau au XVIIIe siècle," *L'administration* 151, Paris, April 15, 1991, 122–7.

—— *L'hôtel de Beauvau, Histoire d'un hôtel privé parisien devenu ministère*, Paris: Éditions SIRP, [1995].

—— *L'hôtel de Beauvau, 96 rue du Faubourg Saint Honoré des origines à nos jours*, Paris: Éditions ISI, 1994.

—— "L'hôtel du ministre de l'intérieur et les bâtiments de l'administration centrale de 1790 à nos jours," *L'administration* 150, Paris, January 15, 1991, 199–210.

Boyer, Ferdinand. "Lotissement à Paris au XVIIIe siècle: de l'hôtel de Choiseul à la Comédie italienne," *La vie urbaine* 4, Paris, October 1962, 241–60.

Boyer, Marie-France. "Pagode de Chanteloup," *World of Interiors*, May 1990, 120–7.

Braham, Allan. *L'architecture des Lumières: de Soufflot à Ledoux*, Paris: Berger-Levrault, 1982.

Bressani, Martin. "Étienne-Louis Boullée. Empiricism and the Cenotaph for Newton," *Architectura* 23, Munich, 1993, 37–57.

Breton, Gaelle. *Theatres*, New York: Princeton Architectural Press, 1989.

Briseux, Charles-Étienne. *L'Art de bâtir les maisons de campagne où l'on traite de leur distribution, de leur construction, & de leur decoration . . . Avec l'explication de ses projets, et des desseins de menuiserie, de serrurerie, de parterres, & d'autres ornemens propres à la décoration intérieure & extérieure . . .*, Paris: Prault père, 1743.

—— *Traité du beau essentiel dans les arts appliqués particulièrement à l'architecture, et démontré phisiquement et par l'expérience. Avec un traité des proportions harmoniques, et l'on fait voir que c'est de ces seules proportions que les édifices généralement approuvés, empruntent leur beauté réelle et invariable*, Paris: Chez l'auteur, 1752.

Bryson, Norman. *Word and Image. French Painting of the Ancien Régime*, Cambridge: Cambridge University Press, 1981.

Bryson, Scott S. *The Chastised Stage. Bourgeois Drama and the Exercise of Power*, Saratoga, CA: ANMA Libri, 1991.

Bukdahl, Else Marie. *Diderot critique d'art*, translated by J. Piloz, Copenhagen: Rosenkilde et Bagger, 1982.

Burke, Edmund. *A Philosophical Enquiry into the Origin of our Ideas of the Sublime and Beautiful* [1757], edited with an introduction and notes by James T. Boulton, London: Routledge & Kegan Paul, 1958.

Butcher, S.H. *Aristotle's Theory of Poetry and Fine Art*, New York: Dover Publications, 1951.

Campardon, Emile. *Les spectacles de la foire: théâtres, acteurs, sauteurs et danseurs de corde . . . des foires Saint-Germain et Saint-Laurent, des boulevards et du Palais-Royal, depuis 1595 jusqu'à 1791; documents inedits recueillis aux Archives nationals*, Paris: Berger-Levrault, 1877.

Carina Motla, Fabrizio. *Trattato sopra la struttura de'teatri e scene* [1676], introduction by E.A. Craig, Milan: Il Polifilo, 1972.

Carlson, Marvin. *Places of Performance: The Semiotics of Theatre Architecture*, Ithaca, NY: Cornell University Press, 1989.

—— *Theories of the Theatre: A Historical and Critical Survey from the Greeks to the Present*, Ithaca, NY: Cornell University Press, 1984.

Carson, Anne. *Eros the Bittersweet, An Essay*, Princeton, NJ: Princeton University Press, 1986.

Charpentier, Louis. *Causes de la décadence du goût sur le théâtre, où l'on traite des droits, des talens & des fautes des Auteurs; des devoirs des Comediens, de ce que la Société leur doit, & de leurs usurpations funestes à l'Art Dramatique*, Paris: Au Parnasse François, 1758.

Chaumont, Chevalier de. *Exposition des principes qu'on doit suivre dans l'ordonnance des théâtres modernes*, Paris: C.A. Jombert, 1769.

—— *Véritable construction d'un théâtre d'opera, à l'usage de la France, suivant les principes des constructeurs Italiens, avec toutes les mesures & proportions relatives à la voix, expliquée par les règles de géométrie, & des raisonnements physiques; Secret très-important, & qu'on découvre au public* [Paris, 1766], Geneva: Minkoff Reprint, 1974.

—— *Véritable construction extérieure d'un théâtre d'opéra* [Paris, 1767], Geneva: Minkoff Reprint, 1974.

Chi, Lily H. "The Quest of an 'Arbitrary' Authority in Early Modern Architectural Theory: Claude Perrault and the Idea of *Caractère* in Germain Boffrand and Jacques-François Blondel," Ph.D. dissertation, McGill University, 1997.

—— "The Use of Architecture: The Destination of Buildings Revisited," in *Chora*: *Intervals in the Philosophy of Architecture* 2, edited by A. Pérez-Gómez and S. Parcell, Montreal and Kingston: McGill-Queen's University Press, 1996, 17–36.

Claretie, Léo. *Histoire des théâtres de société*, Paris: Librairie Molière, 1905.

Cleary, Richard. "Beauty: Absolute or Arbitrary?" *Design Book Review* 34, Berkeley, CA, Fall 1994, 55–7.

—— "Romancing the Tome; or an Academician's Pursuit of a Popular Audience in 18th-Century France," *Journal of the Society of Architectural Historians* XLVIII, June 1989, 139–49.

Cochin, Charles-Nicolas. *Projet d'une salle de spectacle pour un théâtre de comédie*, London and Paris: Chez Charles Antoine Jombert, 1765.

—— *Voyage d'Italie, ou, Recueil de notes sur les ouvrages de peinture & sculpture: qu'on voit dans les principales villes d'Italie* [Paris, 1758; Paris: C.A. Jombert, 1769], edited, with introduction and notes, by Christian Michel, Rome: École française de Rome, 1991.

Cole, Toby and Helen Krich Chonoy, eds. *Actors on Acting: The Theories, Techniques, and Practices of the Great Actors of All Times as Told in Their Own Words*, New York: Crown, 1970.

Coleman, Patrick. *Rousseau's Political Imagination: Rule and Representation in the Lettre à D'Alembert*, Geneva: Librairie Droz, 1984.

Colonna, Francesco. *Hypneromachie, ou discours du songe de Poliphile, deduisant comme Amour le combat a l'occasion de Polia . . .*, edited by Jean Martin, Paris: J. Keruer, 1546.

—— *Hypnerotomachia Poliphili ubi humana omnia nom nisi somnium esse docet*, Venice: Aldus Manutius, 1499.

—— *Le songe de Poliphile ou Hypnérotomachie*, translated by C. Popelin. 2 vols. [Paris: Isidore Liseux, 1883], Geneva: Slatkine Reprints, 1971.

Condillac, Étienne Bonnot de. "Traité des Sensations" [1754], in *Oeuvres philosophiques de Condillac*, 1:219–319; included in vol. 33 of *Corpus Général des Philosophes Français*, edited by Georges Le Roy, Paris: Presses Universitaires de France, 1947.

Connon, Derek F. *Innovation and Renewal: A Study of the Theatrical Works of Diderot*, Oxford: Voltaire Foundation, 1989.

Cordier, Stéphane. *La séduction du merveilleux*, Paris: Diffusion Nouveau Quartier Latin, 1975.

Crary, Jonathan. *Techniques of the Observer*, Cambridge, MA: MIT Press, 1991.

Dacier, Émile. *Gabriel de Saint-Aubin*, Paris: Les Éditions G. Van Oest, 1931.

D'Alméras, Henri and Paul d'Estrée. *Les théâtres libertins au XVIIIe siècle*, Paris: H. Daragon, Éditeur, 1905.

D'Anthenaise, Claude. "Chanteloup ou l'éclat de la folie," *Beaux Arts Magazine* 105, October 1992, 82–92.

D'Ariste, Paul and Maurice Arrivetz. *Les Champs Élysées. Étude topographique, historique et anecdotique jusqu'à nos jours*, Paris: Emile-Paul Éditeur, 1913.

De Cailleux, J. "Le pavillon de Mme du Barry à Louvenciennes et son architecte C.N. Ledoux," *Revue de l'art ancien et moderne* 67, Paris, 1935, 213–24; and *Revue de l'art ancien et moderne* 68, Paris, 1935, 35–48.

Deming, Mark K. *La halle au blé de Paris 1762–1813, "Cheval de Troie" de l'abondance dans la capitale des Lumières*, Brussels: Archives d'architecture moderne, 1984.

Demoriane, Hélène. "La décoration et l'apparat de Condé-en-Brie dus au sens théâtral de Servandoni et Jean-Baptiste Oudry dans le Château du Comte de Sade," *Connaissance des arts*, January 1967, 37–43.

Denon, Dominique Vivant, baron. *Point de lendemain* [1777, 1812], edited and introduction by Michel Delon, Paris: Éditions Gallimard, 1995.

De Piles, Roger. *Cours de peinture par principes* [Paris: J. Estienne, 1708], preface by J. Thuillier, Paris: Gallimard, 1989.

Descotes, Maurice. *Le public de théâtre et son histoire*, Paris: Presses Universitaires de France, 1964.

De Solà-Morales, Ignasi. *Differences. Topographies of Contemporary Architecture*, translated by G. Thompson and edited by S. Whiting, Cambridge, MA: MIT Press, 1997.

Desprez de Boissy, Charles. *Lettres sur les spectacles; avec une histoire des ouvrages pour et contre les théâtres* [1756], 7th ed., 2 vols., Paris: Desaint, 1780.

Diderot, Denis. *Diderot's Salons*, edited by J. Seznec, Oxford: Clarendon Press, 1983.

—— *Diderot's Writings on the Theatre*, edited by Frederick Charles Green. London: Cambridge University Press, 1936.

—— *Encyclopédie; ou, Dictionnaire raisonné des sciences, des arts et des métiers, par une Société de gens de lettres; mis en ordre & publié par M. Diderot . . . ; quant à la partie mathématique par M. D'Alembert . . .*, 17 vols. [Paris: Briasson, 1751–80], New York: Pergamon Press, 1969.

—— "The Indiscreet Jewels" [1748], in *The Libertine Reader*, translated by S. Hawkes, introduction by C. Thomas, New York: Urzone, 1997, 333–541.

—— *Oeuvres esthétiques*, edited by P. Vernière, Paris: Garnier Frères, 1968.

—— *Oeuvres philosophiques*, edited by P. Vernière, Paris: Garnier Frères, 1964.

—— "Supplement to Bougainville's Voyage" [1772], in *The Libertine Reader*, translated by J. Barzun and R. Bowen, introduction by M. Hénaff, New York: Urzone, 1997, 51–112.

—— *Theatre Architecture and Stage Machines. Engravings from the Encyclopédie, ou Dictionnaire raisonné des sciences, des arts, et des métiers*, New York: B. Blom, 1969.

Selected bibliography

—— "Vues sur l'architecture," and "Le monument de la place de Reims," in *Sur l'art et les artistes*, introduction by Jean Seznec, Paris: Hermann, 1967, 64–9.

Du Bled, Victor. *La comédie de société au XVIIIe siècle*, Paris: Calmann Lévy, 1893.

Du Bos, Jean-Baptiste. *Réflexions critiques sur la poësie et sur la peinture* [1719], reprint of 7th ed. [Paris: Chez Pissot, 1770], Geneva: Slatkine Reprints, 1967.

Dumont, Gabriel Pierre Martin (*c.*1720–90). *Parallèle des plans des plus belles salles de spectacles d'Italie et de France, avec des détails des machines théâtrales, au nombre de 54 planches . . . /mis au jour par le sieur Dumont* [Paris, 1760, 1774], New York: B. Blom, 1968.

—— *Recueil de plusieurs parties d'architecture*, Paris, 1765.

Durand, Jean Nicolas Louis. *Précis des leçons d'architecture données à l'école royale polytechnique*, Paris: Chez l'auteur, A l'école royale polytechnique, 1819.

Erouart, Gilbert. *L'architecture au pinceau, Jean-Laurent Legeay. Un Piranésien Français dans l'Europe des Lumières*, Paris: Electa Moniteur, 1982.

Etlin, Richard A. "'Les dedans' Jacques-François Blondel and the System of the Home, c.1740," *Gazette des Beaux-Arts*, April 1978, 137–47.

—— "Nicolas Le Camus de Mézières, Le Génie de l'Architecture," in *Architectural Theory and Practice from Alberti to Ledoux*, edited by Dora Wiebenson, Chicago: Chicago University Press, 1982.

—— *Symbolic Space: French Enlightenment Architecture and its Legacy*, Chicago: Chicago University Press, 1995.

Feray, Jean. "Les théâtres successifs du château de Versailles," in *Opéra de Versailles*, Paris: Les monuments historiques de France, 1957, 3–18.

Fleury, Michel. "Communication de M. Michel Fleury: rénovation d'un immeuble ancien quai de la Tournelle, no63 (5e), et note sur la date du décès de l'architecte Nicolas Le Camus de Mézières," *Bulletin municipal officiel de la ville de Paris*, December 13, 1962, 2961.

Forster, Kurt W. "Stagecraft and Statecraft: The Architectural Integration of Public Life and Theatrical Spectacle in Scamozzi's Theater at Sabbioneta," *Oppositions* 9, Summer 1977, 63–87.

Foucault, Michel. *Les mots et les choses*, Paris: Gallimard, 1966.

Frascari, Marco. "Function and Representation in Architecture," in *Design Methods and Theories 19/1*, 1985, 200–16.

Fréart de Chambray, Roland. *Parallèle de l'architecture antique avec la moderne*, Paris: Edme Martin, 1650.

Frézier, Amédée François. *Traité des feux d'artifice pour le spectacle*, Paris: Chez Nyon, 1747.

Fried, Michael. *Absorption and Theatricality: Painting and Beholder in the Age of Diderot*, Berkeley: University of California Press, 1980.

Fuchs, Max. *La vie théâtrale en province au XVIIIe siècle* [Droz, 1933], Geneva: Slatkine Reprints, 1976.

Funt, D. "Diderot and the Esthetics of the Enlightenment," *Diderot Studies* 11, Geneva, 1968, 75–136.

Gallet, Michel. *Les architectes parisiens du XVIIIe siècle*, Paris: Mangès, 1995.

—— *Claude-Nicolas Ledoux, 1736–1806*, Paris: Picard, 1980.

—— *Claude-Nicolas Ledoux: Unpublished Projects* [Paris: Les éditions du Demi-Cercle, 1991], Berlin: Ernst & Sohn, 1992.

—— *Paris Domestic Architecture of the 18th Century*, translated by James C. Palmes, London, Barrie & Jenkins, 1972.

Galli da Bibiena, Ferdinando. *L'architettura civile, preparata su la geometria, e ridotta alle prospettive* [Parma: P. Monti, 1711], New York: B. Blom, 1971.

Ganay, Ernest de. "La salle de spectacle de l'architecte Ledoux à Besançon," *La Revue de l'art ancien et moderne* 52, Paris, June–December 1927, 2–21.

Gould, Evelyn. *Virtual Theater from Diderot to Mallarmé*, Baltimore: Johns Hopkins University Press, 1989.

Grimm, Friedrich Melchior, Freiherr von. *Correspondance litteraire, philosophique et critique / par Grimm, Diderot, Raynal, Meister, etc.; revue sur les textes originaux; . . . notices, notes, table generale par Maurice Tourneaux*, Paris: Garnier, 1877–82.

Gruber, Alain-Charles. "L'Opera de Versailles est-il l'oeuvre de Gabriel?" *Revue de l'art* 13, Paris, 1971, 87–97.

—— "Les 'Vauxhalls' parisiens au XVIIIe siècle," *Société de l'histoire de l'art français*, 1971, 125–43.

Guellette, Thomas-Simon. *Notes et souvenirs sur le théâtre italien au 18e siècle*, Geneva: Slatkine Reprints, 1976.

Gusdorf, Georges. *Naissance de la conscience romantique au siècle des Lumières*, Paris: Payot, 1976.

—— *Les principes de la pensée au siècle des lumières*, Paris: Payot, 1971.

Harries, Karsten. *The Bavarian Rococo Church: Between Faith and Aestheticism*, New Haven: Yale University Press, 1983.

—— "Theatricality and Representation," *Perspecta (Yale Architecture Journal)* 26, 1990, 21–40.

Harris, John. *Sir William Chambers, Knight of the Polar Star*, London: A. Zwemmer, 1970.

Hart, Vaughan and Peter Hicks, eds. *Paper Palaces: The Rise of the Renaissance Architectural Treatise*, New Haven and London: Yale University Press, 1998.

Hautecoeur, Louis. *Histoire de l'architecture classique en France*, vols. 3–4, Paris: Éditions A. et J. Picard, 1950–2.

Heuzey, Jacques. "Notes sur un dessin représentant la Salle des Machines au XVIIe siècle," *Revue d'histoire du théâtre* 6, Paris, 1952, 60–7.

Hillairet, Jacques. *Dictionnaire historique des rues de Paris*, 2 vols., Paris: Éditions de Minuit, 1963.

Hobson, Marian. *The Object of Art: The Theory of Illusion in Eighteenth-Century France*, New York: Cambridge University Press, 1982.

Jullien, Adolphe. *La comédie à la cour; les théatres de société royale pendant le siècle dernier: la duchesse du Maine et les grandes nuits de Sceaux, Madame de Pompadour et le théatre des petits cabinets, le théatre de Marie-Antoinette à Trianon*, Paris: Firmin-Didot, 1885.

—— *Histoire du théâtre de Madame de Pompadour, dit théâtre des petits cabinets; Les grandes nuits de Sceaux: le théâtre de la duchesse du Maine, d'après des documents inédits; L'opéra secret au XVIIIe siècle: aventures et intrigues secrètes racontées d'après les papiers inédits conservés aux Archives de l'Etat et de l'Opéra* [Paris: J. Baur, 1874], Geneva: Minkoff Reprint, 1978.

—— *Les spectateurs sur le théâtre; établissement et suppression des bancs sur les scènes de la Comédie-française et de l'Opéra*, Paris: Detaille, 1875.

Kalnein, Wend von. *Architecture in France in the Eighteenth Century*, translated by David Britt, New Haven and London: Yale University Press, 1995.

Kaufmann, Emil. *Architecture in the Age of Reason*, New York: Dover Publications, 1968.

—— "Three Revolutionary Architects: Boullée, Ledoux, Lequeu," *Transactions of the American Philosophical Society* 42/3, Philadelphia, October 1952, 431–564.

Kearney, Richard. *The Wake of Imagination*, Minneapolis: University of Minnesota Press, 1988.

Koyré, Alexander. *Newtonian Studies*, Chicago: University of Chicago Press, 1965.

Laclos, Pierre Choderlos de. *Les liaisons dangereuses* [1782], Paris: Éditions Garnier Frères, 1961.

La Gorce, Jérôme de. *Féeries d'opéra; décors, machines et costumes en France 1645–1765*, Paris: Éditions du partimoine, 1997.

—— "Un grand décorateur à l'Opéra au temps de Rameau: Jean-Nicolas Servandoni," in *Jean-Philippe Rameau, Colloque international organisé par La Société Rameau*, edited by J. de La Gorce, Paris and Geneva: Champion-Slatkine, 1987, 579–94.

—— "Twenty set models for the Paris Opera in the time of Rameau," *Early Music*, London, October 1983, 429–40.

Lagrave, Henri. *Le théâtre et le public à Paris de 1715 à 1750*, Paris: C. Klincksiek, 1972.

La Mettrie, Julien Offray de. *Man a Machine; L'homme machine* [1748], La Salle, IL: Open Court, 1987.

La Morlière, Charles-Jacques-Louis-Auguste Rochette, Chevalier de. *Angola: An Eastern Tale* [1749], translated and introduction by Augustus John, London: Chapman & Hall, 1926.

Laugier, Marc-Antoine. *Essai sur l'architecture* [Paris: Chez Duchesne, 1755], Brussels: Pierre Mardaga, 1979.

Selected bibliography

Lavin, Sylvia. "Sacrifice and the Garden: Watelet's Essai sur les jardins and the Space of the Picturesque," *Assemblage* 28, MIT Press, 1996, 17–33.

Lavoisier, Antoine Laurent de. "Mémoire sur la manière d'éclairer les salles de spectacle" [1781], in *Oeuvres de Lavoisier*, edited by E. Grimaux, vol. 3, Paris: Imprimerie Impériale, 1865, 91–102.

Le Brun, Charles. *Conférences sur l'expression générale et particulière, enrichie de figures gravées par B. Picart*, Amsterdam: J.L. De Lorne; Paris: E. Picart, 1698.

—— *A Method to Learn to Design the Passions* [1734], translation of *Conférences sur l'expression*, Los Angeles: University of California, 1980.

Le Camus de Mézières, Nicolas. *Aabba, ou le triomphe de l'innocence, suivi de la Vallée de Tempé*, Paris: Chez Gueffier, 1784.

—— *Description des eaux de Chantilly et du hameau*, Paris: Chez l'Auteur, chez B. Morin, et chez Belin, 1783.

—— [Wolf d'Orfeuil, pseud.] *L'Esprit des Almanachs: analyse critique et raisonnée de tous les Almanachs tant anciens que modernes*, Paris: Duchesnes, Barrois, Morin, Bradel, 1783.

—— *Le génie de l'architecture, ou l'analogie de cet art avec nos sensations* [Paris: B. Morin, 1780], Geneva: Minkoff Reprint, 1972.

—— *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, translated by D. Britt, introduction by Robin Middleton, Santa Monica, CA: The Getty Center, 1992.

—— *Le guide de ceux qui veulent bâtir. Ouvrage dans lequel on donne les renseignemens nécessaires pour se conduire lors de la construction, & prévenir les fraudes qui peuvent s'y glisser* [Paris: Chez l'Auteur et Benoît Morin, 1781]; [2nd ed., Paris, 1786], reprint of 2nd ed., Geneva: Minkoff Reprint, 1972.

—— *Mémoire sur la manière de rendre incombustible toute salle de spectacle*, Paris: Chez Benoît Morin, 1781.

—— *Mes délassemens ou les Fêtes de Charonne*, 1781.

—— *Recueil de differens plans et dessins concernant la nouvelle Halle aux grains située au lieu et place de l'ancien Hôtel de Soissons, par N. Le Camus de Mézières, architecte du roi et de son Université, Expert des Bâtiments*, Paris, 1769.

—— *Traité de la force du bois. Ouvrage essentiel, qui donne les moyens de procurer plus de solidité aux Edifices, de connoître la bonne et la mauvaise qualité des Bois, de calculer leur force, et de ménager près de moitié sur ceux qu'on emploie ordinairement. Il enseigne aussi la manière la plus avantageuse d'exploiter les forêts, d'en faire l'estimation sur pied, etc.*, Paris: Chez l'Auteur et chez Benoît Morin, 1782.

Le Camus de Mézières, Nicolas and Antoine Babuty Desgodets. *Dissertation de la compagnie des Architectes Experts des Bâtimens à Paris, En réponse au mémoire de M. Paris du Verney sur la théorie & la pratique des gros bois de charpente dans leur exploitation & dans leur emploi*, Paris: Chez Babuty Fils, 1763.

Leclerc, Helen. "Au théâtre de Besançon (1775–1784), C.-N. Ledoux, réformateur et précurseur de Richard Wagner," *Revue d'histoire du theatre* 10, 1958, 103–27.

Lecoq, Anne-Marie. "A propos de la nouvelle halle au blé," *Archives d'architecture moderne* 28, Brussels, 1985, 91–4.

Ledoux, Claude-Nicolas. *L'Architecture considérée sous le rapport de l'art, des moeurs et de la législation* [Paris: Chez l'Auteur, 1804], Munich: UHL Verlag, 1981.

—— *Architecture de Claude-Nicolas Ledoux*, edited by Daniel Ramée [Paris: Lenoir, 1847], Princeton, NJ: Princeton Architectural Press, 1983.

—— *Claude-Nicolas Ledoux: Unpublished Projects*, translated by M. Robinson, introduction by Michel Gallet, Berlin: Ernst & Sohn, 1992.

Leith, James A. *Space and Revolution. Projects for Monuments, Squares, and Public Buildings in France 1789–1799*, Montreal and Kingston: McGill-Queen's University Press, 1991.

Le Rouge, Georges-Louis. *Description du Colisée*, Paris, 1771.

Lochhead, Ian J. *The Spectator and the Landscape in the Art Criticism of Diderot and His Contemporaries*, Ann Arbor, MI: UMI Research Press, 1982.

Locke, John. *An Essay Concerning Human Understanding* [1690], edited by A.C. Fraser, New York: Dover Publications, 1959.

Lough, John. *Paris Theatre Audiences in the Seventeenth and Eighteenth Centuries*, London: Oxford University Press, 1957.

Louis, Victor Nicolas. *Salle de spectacle de Bordeaux*, Paris: aux dépens de l'auteur, 1782.

Macek, David G. "Nicolas Le Camus de Mézières: At Play in the Hôtel," Master's dissertation, McGill University, 1997.

Mackintosh, Iain. *Architecture, Actor and Audience*, London: Routledge, 1993.

Madec, Philippe. *Boullée*, Paris: Fernand Hazan, 1986.

Marmontel, Jean-François. *Les éléments de littérature* [1787], in *Oeuvres Complètes*, Paris, 1819–20.

Martin, Angus. *Bibliographie du genre Romanesque français, 1751–1800*, London: Mansell, 1977.

Mayor, Alpheus Hyatt. *The Bibiena Family*, New York: H. Bittner and Company, 1945.

Mercier, Louis-Sébastien. *Du théâtre, ou nouvel essai sur l'art dramatique* [Amsterdam: Chez E. van Harrevelt, 1773], Geneva: Slatkine Reprints, 1970.

Mercure de France [1672–1832], Geneva: Slatkine Reprints, 1968–70.

Middleton, Robin D. *The Abbé De Cordemoy and Graeco-Gothic Ideal: A Prelude to Romantic Classicism*, London: Warburg and Courtauld Institutes, 1963.

—— Introduction to *The Genius of Architecture; or, the Analogy of That Art With Our Sensations*, by Nicolas Le Camus de Mézières, Santa Monica, CA: The Getty Center, 1992.

Millin de Grandmaison, Aubin-Louis. *Sur la liberté du théâtre*, Paris, 1790.

Montesquieu, Charles-Louise de Secondat, Baron de la Brède et de. *Lettres persanes* [1721], Paris: Flammarion, 1964.

Mosser, Monique and Daniel Rabreau. "Nature et Architecture parlante: Soufflot, De Wailly et Ledoux touchés par les Lumières," in *Soufflot et l'architecture des lumières*, Paris: École nationale supérieure des Beaux-Arts, 1986.

Mourey, Gabriel. *Le livre des fêtes françaises*, Paris: Librairie de France, 1930.

Mullin, Donald Charles. *The Development of the Playhouse; a Survey of Theatre Architecture from the Renaissance to the Present*, Berkeley: University of California Press, 1970.

Nagler, A.M. *Sources of Theatrical History*, New York: Theatre Annual, 1952.

Nougaret, Pierre-Jean-Baptiste. *De l'art du théâtre en général* [1769], Geneva: Slatkine Reprints, 1971.

Oechslin, Werner. "Il contributo dei Bibiena. Nuove attività architettoniche," *Bollettino del Centro Internazionale di Studi di Architettura "Andrea Palladio"* 17, Venice, 1975.

Oechslin, Werner and Anja Buschow. *Architecture de fête*, Brussels: Pierre Mardaga, 1984.

Olivier, Jean-Jacques. *Voltaire et les comédiens*, Paris, 1900.

Ottomeyer, H. "Autobiographies d'architectes Parisiens 1759–1811," *Bulletin de la Société de l'histoire de Paris*, 1971, 177–8.

Ouvrard, René. *Architecture harmonique ou application de la doctrine des proportions de la musique à l'architecture*, Paris: Chez Robert Jean Baptiste de la Caille, 1679.

Padel, Ruth. "Making Space Speak," in *Nothing To Do With Dionysos? Athenian Drama in its Social Context*, edited by John J. Winkler and Froma I. Zeitlin, Princeton, NJ: Princeton University Press, 1990.

Parfaict, François. *Mémoires pour servir à l'histoire des spectacles de la foire* [Paris: Briasson, 1743], New York: AMS Press, 1978.

Pariset, François-Georges. "Victor Louis 1731–1800. Dessins et gravures," *Revue Historique de Bordeaux et du département de la Gironde*, numéro hors série, Bordeaux: Bibliothèque municipale, 1980.

Patte, Pierre. *Essai sur l'architecture théâtrale. Ou, de l'ordonnance la plus avantageuse à une salle de spectacles, relativement aux principes de l'optique & de l'acoustique. Avec un examen des*

principaux théâtres de l'Europe, & une analyse des écrits les plus importans sur cette matiere, Paris: Moutard, 1782.

Paul, Joanne. "Of Substantiating Nature: The Elements of Architecture Explained in Eighteenth Century Interpretations, Retold by Fra Carlo Lodoli," Master's dissertation, McGill University, 1995.

Pelletier, Louise and Alberto Pérez-Gómez. *Architectural Representation and the Perspective Hinge*, Cambridge, MA: MIT Press, 1997.

Pérez-Gómez, Alberto. *Architecture and the Crisis of Modern Science*, Cambridge, MA: MIT Press, 1983.

—— "Chora: The Space of Architectural Representation," in *Chora: Intervals in the Philosophy of Architecture* 1, edited by A. Pérez-Gómez and S. Parcell, Montreal and Kingston: McGill-Queen's University Press, 1994, 1–34.

—— "The Hypnerotomachia Poliphili by Francesco Colonna," in *Paper Palaces*, edited by Vaughan Hart with Peter Hicks, New Haven and London: Yale University Press, 1998, 86–104.

—— *Polyphilo or the Dark Forest Revisited: An Erotic Epiphany of Architecture*, Cambridge, MA: MIT Press, 1992.

Pérouse de Montclos, Jean-Marie. *Étienne-Louis Boullée (1728–1799), de l'architecture classique à l'architecture révolutionnaire*, Paris: Arts et Métiers Graphiques, 1969.

—— "Les prix de Rome": concours de l'Académie royale d'architecture au XVIIIe siècle: inventaire général des monuments et richesses artistiques de la France, Paris: Berger-Levrault; École nationale supérieure des beaux-arts, *c.*1984.

Perrault, Claude. *Ordonnance des cinq espèces de colonnes selon la méthode des anciens*, Paris: Chez Jean Baptiste Coignard, 1683.

—— *Ordonnance for the Five Kinds of Columns After the Method of the Ancients*, translated by Indra K. McEwen, introduction by Alberto Pérez-Gómez, Santa Monica, CA: The Getty Center, 1993.

Peyronnet, Pierre. *La mise en scène au XVIIIe siècle*, Paris: Librairie A.-G. Nizet, 1974.

Prat, A. "Le parterre au XVIIIe siècle," *La Quinzaine*, February 1906, 388–412.

Procès-verbaux de l'Académie royale d'architecture, 1671–1793, 10 vols., edited by Henry Lemonnier, Paris: J. Schemit, 1911–29.

Quatremère de Quincy, Antoine-Chrysostome. "Servandoni," in *Histoire de la vie et des ouvrages des plus célèbres architectes du XIe siècle jusqu'à la fin du XVIIIe* 2, New York: Hacker Art Books, 1970, 284–96.

Rabreau, Daniel. "Architecture et fête dans la nouvelle Rome," in *Les fêtes de la Révolution*, edited by Jean Ehrard et Paul Viallaneix, Paris: Société des études robespierristes, 1977, 234–79.

—— "Autour du voyage d'Italie (1750), Soufflot, Cochin et M. de Marigny réformateurs de l'architecture théâtrale française," *Bollettino del Centro internazionale di studi di architettura "Andrea Palladio"* 17, 1975, 213–25.

—— "Des scènes figurées à la mise en scène du monument urbain," in *Piranèse et les Français*, Colloque tenu à la Villa Medicis, 12–14 mai 1976, edited by Georges Brunel, Roma: Edizioni dell'Elefante, 1978, 443–74.

Rabreau, Daniel and Marianne Roland-Michel. *Les arts du théâtre de Watteau à Fragonard*, Bordeaux: Galerie des Beaux-Arts, 1980.

Rabreau, Daniel and Monika Steinhauser. "Le théâtre de l'Odéon de Charles De Wailly et Marie-Joseph Peyre, 1767–1782," *Revue de l'art* 19, 1973, 8–49.

Radicchio, Giuseppe and Michèle Sajous D'Oria. *Les théâtres de Paris pendant la Révolution*, Fasano: Elemond periodici, 1990.

Rémond de Sainte-Albine, Pierre. *Le comédien* [Paris: Desaint & Saillant, 1747], Geneva: Slatkine Reprints, 1971.

Riccoboni, Francesco Antonio. *L'Art du théâtre à Madame XXX* [Paris: C.F. Simon, Fils, 1750], Geneva: Slatkine Reprints, 1971.

Riccoboni, Luigi. *Reflexions historiques et critiques sur les différens théâtres de l'Europe: avec les pensées sur la déclamation*, Amsterdam: aux dépens de la Compagnie, 1740.

Rittaud-Hutinet, Jacques. *La vision d'un futur: Ledoux et ses théâtres*, Lyon: Presse universitaire de Lyon, 1982.

Root-Bernstein, Michèle. *Boulevard Theater and Revolution in Eighteenth-Century Paris*, Ann Arbor, MI: UMI Research Press, 1984.

Rosenblum, Robert, *Transformations in Late Eighteenth Century Art*, Princeton, NJ: Princeton University Press, 1970.

Rougemont, Martine de. *La vie théâtrale en France au 18e siècle*, Paris and Geneva: Champion-Slatkine, 1988.

Rousseau, Jean-Jacques. *Les confessions*, edited by M. Launay, Paris: Garnier-Flammarion, 1968.

—— "Discours sur l'origine et les fondements de l'inégalité parmis les hommes," in *Oeuvres complètes*, Pléiade, Paris: Gallimard, *c.*1959–.

—— *Lettre à Monsieur D'Alembert sur les spectacles*, Paris: Flammarion, 1967.

Rykwert, Joseph. *The First Moderns*, Cambridge, MA: MIT Press, 1980.

—— "Lodoli on Function and Representation," in *The Necessity of Artifice: Ideas in Architecture*, New York: Rizzoli, 1982, 115–21.

Sachs, Edwin O. and Ernest A. Woodrow. *Modern Opera Houses and Theatres*, 3 vols., New York: B. Blom, 1968.

Saisselin, Rémy G. "Architecture and Language: The Sensationalism of Le Camus de Mézières," *British Journal of Aesthetics* 15, 1975, 239–53.

—— "The Space of Seduction in Eighteenth-Century French Novel and Architecture," *Studies on Voltaire and the Eighteenth Century* 319, Oxford, 1994, 417–31.

Saunders, George. *A Treatise on Theatres*, London: I. & J. Taylor, 1790.

Schama, Simon. *Citizens. A Chronicle of the French Revolution*, New York: Alfred A. Knopf, 1989.

Schlumberger, Eveline. "Un génie d'opéra; Servandoni," *Connaissance des arts*, August 1965, 14–23.

Sennett, Richard. *The Fall of Public Man*, Cambridge: Cambridge University Press, 1974.

Servandoni, Jean-Nicolas. *Description du spectacle de Pandore: representation le 15 de mars 1739 jusqu'au 6 d'avril, salle des machines au Palais des Thuilleries*, Paris: Veuve Pissot, 1739.

—— *Lettre au sujet du spectacle des "Avantures d'Ulysse à son retour du siege de Troie, jusqu'à son arrivée en Ithaque,"* Paris: Prault fils, 1741.

Servandoni, Jean-Nicolas and Francesco Geminiani. *La Forest enchantée; representation tirée du poeme italien . . . Spectacle orné de machines, animé d'acteurs, pantomimes & accompagné d'une musique (de la composition de M. Geminiani) qui en exprime les différentes actions; executé sur le grand Théâtre du Palais des Tuilleries pour la première fois le dimanche 31 mars 1754*, Paris: Ballard, 1754.

Servandoni d'Hannetaire. *Observations sur l'art du comédien et sur d'autres objets concernant cette profession en général: avec quelques extraits de différents auteurs & des remarques analogues au même sujet en réponse à de jeunes acteurs de province*, 1772.

Shaftesbury, Anthony, Earl of. *Characteristics of Men, Manners, Opinions, Times* [1711], 2 vols. in 1, edited by J.M. Robertson, introduction by Stanley Grean. New York: Bobbs-Merrill, 1964.

Szambien, Werner. *Symétrie, goût, caractère: théorie et terminologie de l'architecture à l'âge classique 1550–1800*, Paris: Picard, 1986.

Thaon, Bernard. "L'éclairage au théâtre," *Histoire de l'art* 17/18, May 1992, 31–43.

Tidworth, Simon. *Theatres: An Illustrated History*, London: Pall Mall Press, 1973.

Umland, Kenneth R. "Madame Riccoboni et Diderot: un débat sur l'art théâtral au dix-huitième siècle," Ph.D. dissertation, McGill University, 1975.

Vernant, Jean-Pierre. "One . . . Two . . . Three: Eros," in *Before Sexuality: The Construction of Erotic Experience in the Ancient Greek World*, edited by D.M. Halperin, J.J. Winkler, and F.I. Zeitlin, Princeton: Princeton University Press, 1990, 465–78

Vesely, Dalibor. "Architecture and the Conflict of Representation," *AA Files* 8, January 1989, 21–38.

—— *Architecture in the Age of Divided Representation: The Question of Creativity in the Shadow of Production*, Cambridge, MA: MIT Press, 2004.

Selected bibliography

Vidler, Anthony. *Claude-Nicolas Ledoux, Architecture and Social Reform at the End of the Ancien Régime*, Cambridge, MA: MIT Press, 1990.

—— *L'Espace des lumières*, translated by Catherine Fraixe, Paris: Picard, Villes et sociétés, 1995.

—— "The Theatre of Production: Claude-Nicolas Ledoux and the Architecture of Social Reform," *AA Files* 1/1, Winter 1981–2, 54–63.

Viel, Charles-François. *Décadence de l'architecture à la fin du dix-huitième siècle*, Paris, 1800.

Viel de Saint-Maux, [Jean-Louis]. *Lettres sur l'architecture des anciens et celle des modernes* [Paris, 1787], Geneva: Minkoff Reprint, 1974.

Vitruvius, Marcus Pollio. *De architectura*, 2 vols., translated by F. Granger, Loeb Classical Library, Cambridge, MA: Harvard University Press, 1983.

—— *De architectura*, translated by Cesare di Lorenzo Cesariano, Como, 1521; reprint, New York: B. Blom, 1968.

—— *Les dix livres d'architecture de Vitruve*, translated by Claude Perrault [1684], Brussels: Pierre Mardaga, 1979.

Voltaire, François Marie Arouet. "Dissertation sur la tragédie" [1750], in *Oeuvres complètes*, Paris: Renouard, 1819–25.

—— *Semiramis*, edited and introduction by Jean-Jacques Olivier, Paris: Librairie Droz, 1946.

Watelet, Claude-Henri. *Essai sur les jardins* [Paris: Chez Prault, Saillant & Nyon, Pissot, 1774], Geneva: Minkoff Reprint, 1972.

Watkin, David. *Sir John Soane, Enlightenment Thought and the Royal Academy Lectures*, Cambridge and New York: Cambridge University Press, 1996.

Whateley, Thomas. *L'art de former les jardins modernes, ou, L'art des jardins anglois: traduit de l'anglois*, Paris: Chez Charles-Antoine Jombert père, 1771.

—— *Observations on Modern Gardening*, 1770.

—— *Remarks on Some of the Characters of Shakespeare*, 1785.

Wiebenson, Dora. "Reprints: Building Technology in France (1685–1786)," *Journal of the Society of Architectural Historians* 39/4, December 1980, 312–15.

—— "The Two Domes of the Halle au Blé in Paris," *The Art Bulletin* 55/1, March 1973, 262–79.

Wittkower, Rudolf. *Art and Architecture in Italy 1600–1750*, Harmondsworth: Penguin, 1973.

Wunder, Richard P. "The Spread of *Piranesism* to France through Legeay and Challe," in *Piranese et les Français*, Colloque tenu à la Villa Medicis, 12–14 mai 1976, edited by Georges Brunel, Roma: Edizioni dell'Elefante, 1978, 553–66.

Yates, Frances A. *Theatre of the World*, London: Routledge & Kegan Paul, 1969.

Zeitlin, Froma I. "The Poetics of Eros: Nature, Art, and Imitation in Longus' *Daphnis and Chloe*," in *Before Sexuality: The Construction of Erotic Experience in the Ancient Greek World*, edited by D.M. Halperin, J.J. Winkler, and F.I. Zeitlin, Princeton, NJ: Princeton University Press, 1990, 417–64.

Index

Page references for illustrations are in *italics*; those for notes are followed by n