Liquid Monumentality:

A Search for Meaning

by

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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including my required final revisions, as accepted by my examiners.

I understand that my thesis may be made available electronically to the public.

ABSTRACT

Contemporary architecture suffers from an acute malaise: it has lost its sense of meaning, and in turn, its sense of significance. In our world of economy and utility—the liquid world—architecture can only allude to a higher purpose, a feigned declaration of its inability to contend with the current state. Yet this was not always the case. For thousands of years everything from the minutest of details to the greatest of narratives found their expression in architecture, and specifically, in a culture's understanding and application of monumentality. The monument embodied the spirit of its times, and in its near-immortality provided a refuge for the loftiest of hopes and dreams. While it may appear that words like immortality and spirit are at odds with the ceaseless and constant change of the globalized world, change is not a new concept of our era. Since the beginning of history monumental architecture tempered its solidity with an implicit appreciation for the transience it sought to overcome. *Liquid Monumentality* reconstructs this dialectic of permanence and change in an attempt to answer one question: is the monumental still relevant in our liquid age?

ACKNOWLEDGEMENTS

I initially wrote a few fairly standard paragraphs for my "acknowledgements". In truth, it was one of the first things I did. It seemed like something I could easily get out of the way while stuck in a state of terror at beginning my thesis in earnest. I then read John Maxwell Hamilton's *Casanova Was A Booklover* and realized I had it all wrong.

I would like to acknowledge the person to whom this thesis is dedicated—my Mother. Without her I would be nothing, or at the very least, certainly not the person that I happily am today. Thank you so much for everything you have done and continue to do for me.

I am deeply indebted to the efforts of my friend and mentor, Dr. Robert Jan van Pelt. You have taught me how to be both a better thinker and a more complete human being. I once said that you are the smartest man I know, to which you replied I should meet more people. That was almost six years ago, yet my opinion has only increased. This thesis owes much to you. If this final text is any closer to the realm of great writing than the cellar of mediocrity from where it came, it is only thanks to your dedication.

To my advisors, Professor Philip Beesley and Dr. Anne Bordeleau, thank you for your invaluable insights. I could not have hoped for a better collection of scholars to aid me in my studies. The early outlines of this thesis took shape under the watchful eye of Professor Beesley, a tireless individual who has done much to shape my perception of architecture over the years, while Dr. Bordeleau shared many pertinent references that form the core of this thesis and offered thoughtful feedback at key moments.

I cannot overlook the contributions of my external examiner, George Baird. I consider myself extremely fortunate to have received criticism and commentary from such a distinguished architect and theorist who provided an important point of departure for my own explorations.

Finally, thank you to the many people not mentioned by name who assisted me along this journey. There are countless individuals for whom I am forever grateful.

For my Mother, my limitless fountain of support

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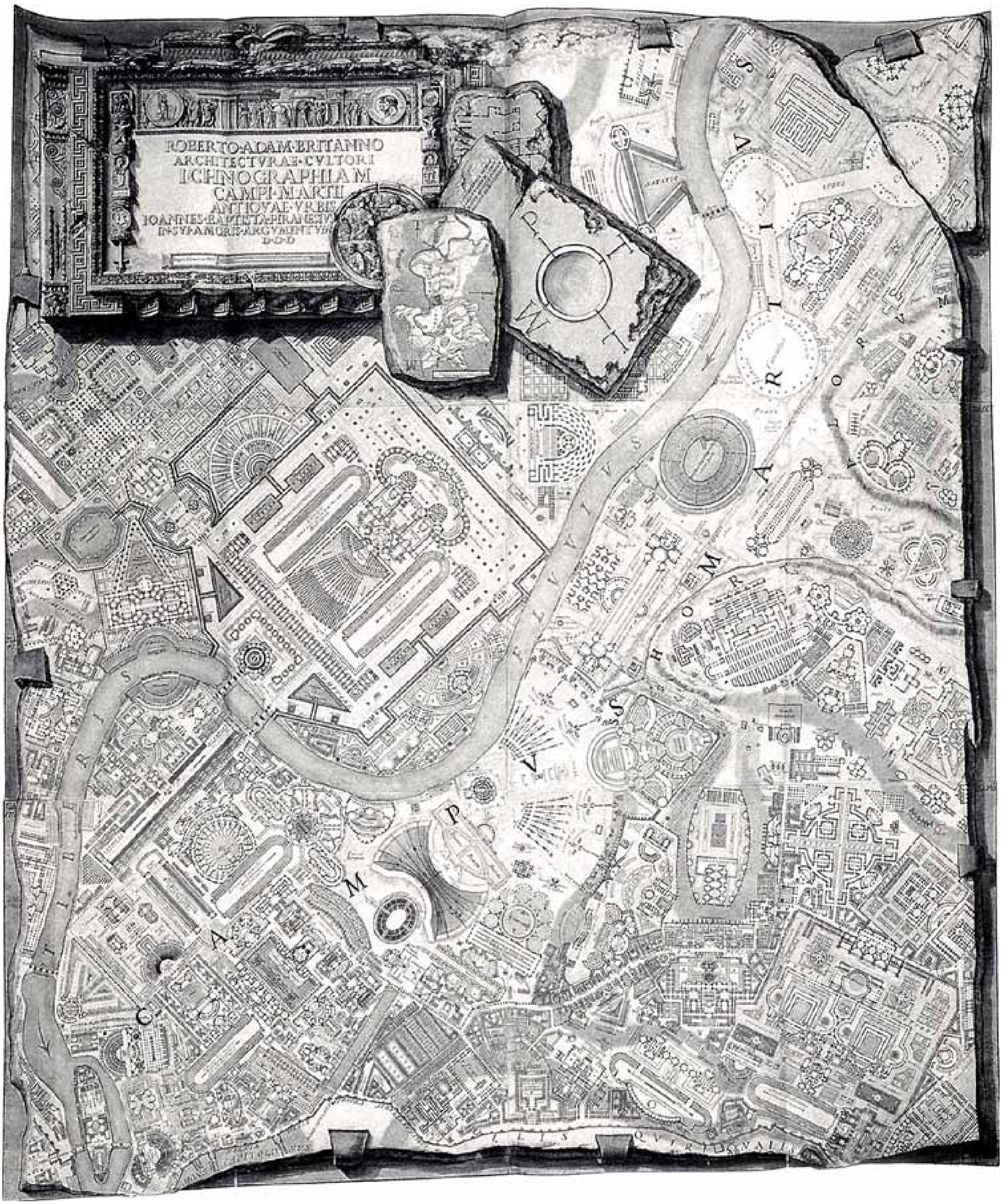
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PREFACE

This is a story of my architectural interests and beliefs. It is thematic rather than chronological, and consists of works that signal a rupture with the established traditions of their time in the spirit of the writer Johann Wolfgang von Goethe, who stated:

> Let him who fails to learn and mark
> Three thousand years still stay,
> Void of experience, in the dark,
> And live from day to day.[1]

I have attempted to reconcile the seemingly disparate sources and times contained within these pages as an alternate history of architecture seen through my eyes in support of my own convictions. The frequency of images is not a ploy to write less; rather, they offer a binary narrative, much like the complementary braids of monumentality and liquidity woven throughout this thesis. The captions can be read as a subtext similar to the format used in the architectural historian Joseph Rykwert's *The First Moderns*. While you may observe a discrepancy in the dating of images, this is intentional. If a date directly proceeds the title of the piece it denotes that work's time of construction, whereas if it is at the end of the first sentence, usually after the medium, it represents the date of that image's creation. When I found it to be obvious or repetitive I did not state the medium, however, these aberrations are not for a lack of care.

1.1 (opposite) ***"Ichnographia", or Plan of the Campus Martius*****. Giovanni Battista Piranesi. Engraving. 1762.**
Giovanni Battista Piranesi's reconstruction of the *Campo Marzio* is both an archaeological future and a historical past. Its combination of real and imaginary elements offer an image of ancient Rome that tells us little of its actual state. These fragmented traces are symbolic of Roman antiquity, yet strangely devoid of their original significance. History exists almost exclusively as a surface treatment, reduced to what the architectural historian and theorist Manfredo Tafuri referred to as a gigantic "useless machine". This feigned mask of archaeology was Piranesi's testament to the value of the city as an incubator for architecture and the importance of reinterpretation and reinvention within the discipline. The multiple scales, times, and locations cast the *Campo Marzio* into a permanent state of flux that signifies the end of classical architecture and the beginning of modernity. As Tafuri noted, "it is the struggle between architecture and the city, between the demand for order and the will to formlessness, that assumes epic tone."[2]

INTRODUCTION

> The prodigious tomb or temple itself, shining on a crag, poised in some pure space like a water-bird, will bring men back to life in its own stones, although these too will wear away—remember: our heart beats fast, while the wind winds a slower clock and the rains erode more patiently than tears. Our best inventions, feelings, dreams, need a handsome, safe, enduring habitation, not one rotted out by ordinary life, dusty ideas, damp passions, ignoble fears; and men distant from this time, by means of that Mass, this poem, novel, painted face, may see in these sacred things, human consciousness at its most rich, harmonious, complete, and consequently have a chance to live, if not a longer, then perhaps a finer life, before another new days blots them out, though they shine while they shine like a star.[1]
>
> **William H. Gass**

What is the purpose of architecture? Most people today would answer this question by referring only to the practical or financial aspects of a building. Questions such as "does this building provide adequate shelter against the natural world?", "is this building a viable investment?", and most importantly, "will this building create trouble?", dominate the architectural mindscape of our contemporaries. All of the answers to these questions aim at facilitating the thoughtless use of our architecture, which is now a commodity constructed at the least expense that should demand a minimum of energy, maintenance, and liability. In this context a good building is one that goes *unnoticed*. In every building the business at hand must move forward unabated. When the building draws the user to pause for a moment and invites him or her to gaze at the intricacies of its design, the chain of production begins to slow down. As this occurs, profit suffers, growth diminishes, and recession threatens.

This utilitarian outlook towards architecture does not preclude a view towards splendor or other elements of design that enable a visually distinct reading and stand out at a range of scales from the regional to the global. On the contrary, aesthetics and design have become an essential component of economic life. Many cities endeavour to build iconic buildings that establish a brand to attract tourists and generate revenue. The traditional qualities that allowed design to distinguish itself, such as beauty and the sublime, are factors in an economic cycle evident in much of our current architecture.

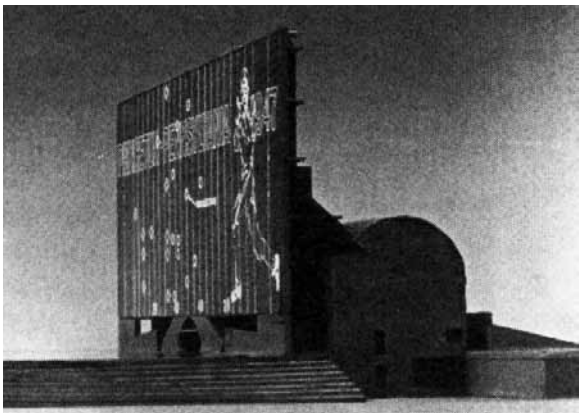
The Parisians discovered the potential for aesthetics to bring the pragmatic to higher levels of profitability in the late nineteenth century with the Eiffel Tower, a temporary building created for an exposition that quickly became a permanent landmark that beckons visitors from across the world to the so-called "City of Light" (figure 2.1). The city of Paris advanced the use of design as a source of revenue even further with Piano and Rogers' Pompidou Center, the epitome of contemporary cultural consumption. The rest of the world has adopted the "Lesson of Paris" through buildings like Frank Gehry's Guggenheim in Bilbao or Daniel Libeskind's

Royal Ontario Museum in Toronto, and we can find these same forces presently at work in the United Arab Emirates, where architectural commodification is creating a tourist economy under the guise of "culture" (figure 2.2).

Modern parlance states that the Pompidous and Guggenheims are the temples and cathedrals of the contemporary world, but are these recent buildings really the equal of their purported counterparts from the past? When we examine what the temple or cathedral meant to a city then it would appear to be something completely at odds with the blatant economic foundations that underscore the hallmarks of the urban world today. For decades and sometimes even centuries cities devoted a large amount of their revenue to the construction of these venerable buildings. As the financial reward of increased income from pilgrims could never equal the investment required, we must ask what inspired these communities to sacrifice their limited resources on architecture? It turns out that buildings like the temple and the cathedral were justified by their spiritual meaning. The return on the investment was an attempt at answering the larger question of what it means to be human.

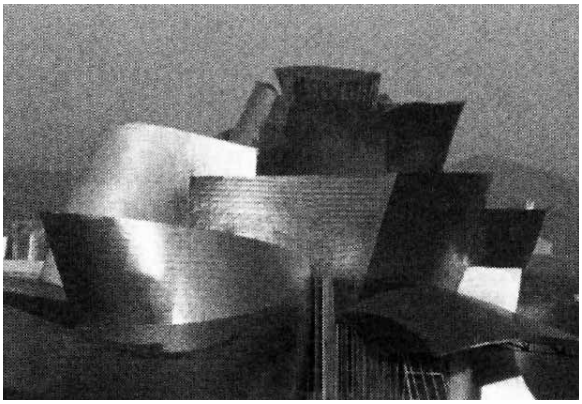
This response exists at a variety of scales, from the loftiest of ideologies to the intimate domain of the individual. While scholars have invested a great deal of effort in documenting the way Catholic doctrine shaped the general appearance of the

2.1 *Eiffel Tower*, 1887–89. Gustave Eiffel. Postcard.
The Eiffel Tower is an icon of the world and a primary source of inspiration for the many individuals who have turned to it in an attempt to better understand the modern era. As a symbol of contemporary life we may compare it to historical examples such as the Tower of Babel. The Eiffel Tower's wrought iron frame rises delicately above the Seine as a single pinnacle, a stark contrast to the all-consuming Tower of Babel. Yet unlike the Tower of Babel, its modern parallel takes shape at the hands of the engineer, not the architect. The Eiffel Tower is ultimately an exercise in efficiency and material science; one that affords a new vantage point *over* the city alongside the provision of a new image *for* the city.



A Bill-Ding-Board for the National Football Hall of Fame

Centre Georges Pompidou



Guggenheim Bilbao

2.2 *A Bill-Ding-Board for the National Football Hall of Fame, Centre Georges Pompidou,* and *Guggenheim Bilbao*; 1967, 1971–77, and 1997. Venturi, Scott Brown, and Associates; Renzo Piano and Richard Rogers; and Frank Gehry. Compared by author.

At first glance these three buildings appear to have little in common, but under their *surface*—a quality each work possesses in ample amounts—they provide an explanation of both the state of architecture in the contemporary age and the nature of building in the digital age.

Robert Venturi's Bill-Ding-Board amplifies his postmodern concept of monumentality into the total reading of a building. Its architecture is nothing more than an expansive wall masked under the display of data. This "decorated shed" is a literal translation of *Learning From Las Vegas* that is evident throughout the developed world in the form of big box stores and urban centers teeming with an abundance of information.

The Pompidou subscribes to the modern world through a similar kind of deception. Renzo Piano and Richard Rogers exposed the "organs" of the building in order to create an enormous container for art with an unadulterated and infinitely adaptable *plan libre*. The fire department declared the spaces too large to exist as continuous undivided volumes, a development that instantly relegated its raison d'être to a superficial facade. Instead of a completely flexible building, the Pompidou is now a preeminent symbol of the global commodification of art.

Frank Gehry's iconic Guggenheim is an example of "clone" architecture. Like Minoru Yamasaki's World Trade Center and its perspicacious anticipation of the digital age, clone architecture relies exclusively on intangible data. Anyone can use these digital instructions to create an infinite number of copies in an infinite number of locations, an elaborate virtuality that forces us to question the future of the architect as well as the idea of authenticity in the contemporary age.

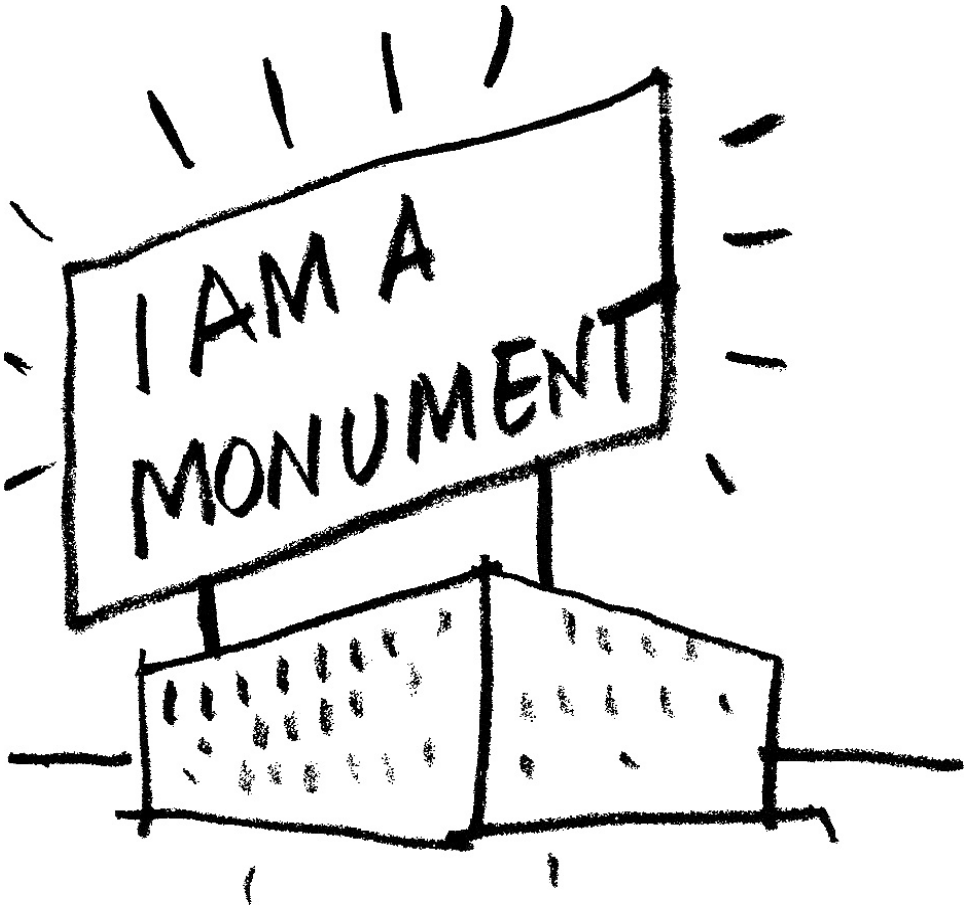
Each of these buildings offers a polemic on the modern monument, yet they appear to inadvertently succumb to the same conclusion that Walter Benjamin arrived at in *The Work of Art in the Mechanical Age of Reproduction*: unlike the monumentality of the past, the works of today lack a temporal and spatial awareness and ultimately fail to achieve the "aura" evident in authentic works of art.

Gothic cathedral, much can be found within a particular stone, worn smooth by passing hands over the course of several centuries. In these complex landscapes each individual can find something that inspires him or her, and all of us who have been to these places know of their potential to embody the secrets of our own, most private life. Like the author Jan Morris realized, many of the works of the past capture values that go far beyond pure aesthetics. Morris described her own search for identity in Christ Church, Oxford when she stated "An ancient holy building is conducive to secrets, and my secret became so intermingled with the shapes, sounds and patterns of the cathedral that to this day, when I go back there to evensong, I feel an air of complicity. I found a passing fulfillment in the building, a kind of dedication."[2]

What would be the result if we were to take the Guggenheim as an answer to the question of what it means to be human? Does the new Royal Ontario Museum inspire one's mind to reach beyond its sharp angles and sleek steel surfaces? For all its apparent complexity, the Royal Ontario Museum is a single solution to a finite problem. It seems overwhelmingly obvious that the majority of our buildings do not enter into communion with the greater forces of life or provide a foundation for the individual to attain any sort of personal discovery. Unlike Morris' experience, the supposed contemporary replacement of the cathedral has no hidden secrets and no associated revelations. When viewed from a critical perspective, a modern "cathedral" like the Royal Ontario Museum is nothing more than commercial architecture masquerading as a palace of cultural significance. The corner of Bloor and University proves to be of little difference from any site along the Las Vegas strip.

In *Learning from Las Vegas* the architect Robert Venturi posited that the only concern of the modern American building is its economic potential as a generator of revenue—when stripped of this financial pretense the building is simply a billboard (figures 2.2 and 2.3). For Venturi this type of architecture is nothing more than an example of branding, with shallow facades that compete for consumers' money and result in a strong inclination towards novelty that dictates architecture must achieve an ever-greater level of visual excess. While this differs from the purely utilitarian building in its desire to capture our attention, the building as superficial image is just as devoid of meaning. Demanding to be noticed, one quickly realizes that there is nothing of lasting importance to observe in buildings that only talk amongst themselves.

The story of architecture must not end in Las Vegas. It is with this belief that I propose to venture down a new road in the long history of our architectural search for meaning, for when I ask what is the purpose of architecture, the thought of economy or utility, while necessary, is nowhere near the fore. Instead, I dream of an eternal structure that shelters our highest values; an architecture that is more than an invisible and merely functional layer of our world. Architecture must again be seen for what it has been since its origins in Mesopotamia six thousand years ago up until the most recent emergence of the modern world: a vast communicative medium with an authoritative and compelling voice that reaches back to the distant past, has much to say still today, and that aspires to speak to an increasingly uncertain future.



2.3 ***Monument*****. Robert Venturi. Drawing. 1972.**
More than just an amusing sketch, Robert Venturi's study of postmodern America elucidated the state of architecture in the contemporary age. In this drawing Venturi distilled the reality of architecture today; one that asserts that significance and meaning are no longer located *within* a work, but *upon* its surface. This is the world of iconic design, where architecture is, at best, a crude mask. Once reduced to these terms it is obvious that there is nothing monumental about a billboard.

The crucial question then is how are we to restore a world that does not notice its buildings and does not believe in architecture with a sense that the built world matters as an anchor of collective and individual existence? This is undoubtedly a tall order. Nevertheless, a strategy exists that has the potential to revive architecture as an element of significance amidst the banality of today's built world. This strategy centers upon a building type that we have greatly neglected, yet one that I also believe contains the power to restore architecture with a sense of purpose once again. This type is the monument.

For millennia the monument provided a constructed record of the greatest values found within a people at a certain place and moment in time. Monuments used to reflect permanence in a world that knew change to be the mask of the unchanging, but the monumental became irrelevant when it desired to project stability in a world that had become, as the sociologist Zygmunt Bauman so aptly put it, "liquid". The liquid world is one of constant transformation in which individuals compete exclusively for

their own private interests, and as Bauman explained, it emerged after the ruling elite replaced the solid and permanent collective institutions of the past with ephemeral trends built on a free market economy. In this world the same forces of profitability that control our built environment ensure a continuous cycle of renewal that prevents forms from ossifying into lasting symbols of meaning.

It is in the liquid world that functional architecture can be successful while monumental architecture is relegated to insignificance. As a simple enclosure that provides infinite flexibility throughout its limited existence, the commercial box is the paragon of liquidity. We may reject these architectures of economy, but we must also realize that this liquid world is, ironically, permanent. It is here that the locus of *Liquid Monumentality* resides. The monument of the past was the reflection of a permanent truth, whereas the monument of today must engage with changing opinions. What would result when the solid, durable, and unchanging is confronted with the realities of the liquid world? Can we reconcile the realms of solidity and liquidity in order to create a new monumentality applicable to the twenty-first century?

The synthesis of solidity and liquidity has been attempted before. The architect Le Corbusier formulated a vocabulary of architecture that used contemporary materials like concrete, glass, and steel in a manner that rivalled the finest monuments of the past. Le Corbusier's buildings are crystallizations of the world that brought them into being—frozen moments in the history of Modernism. At the same time they invite us to reflect on the world through dynamic forms that directly relate to their users. The state of monumentality can be vague, but it is certain that buildings such as the Royal Ontario Museum are not monuments in the true sense of the word. Unlike the works of the past, the Royal Ontario Museum is an architectural one-liner that only reinforces the cult of the image and lures curious spectators into paying the cost of admission. This is the architecture we must escape.

The rich potential for a new monumentality leads me to believe that all is not lost for architecture. Rather than subsisting through the notion that buildings merely are, we must realize that buildings may be great. When architecture is understood in all its glory it may take on the form of an art capable of telling the most important stories that exists beyond the mortality of the human body; reaches out to the past, present, and future; and expresses the spirit of its times in a physical construction. I believe in architecture, and I also believe it is possible to return to the higher purpose that we have seemingly lost. What we need today is an architectural revitalization.

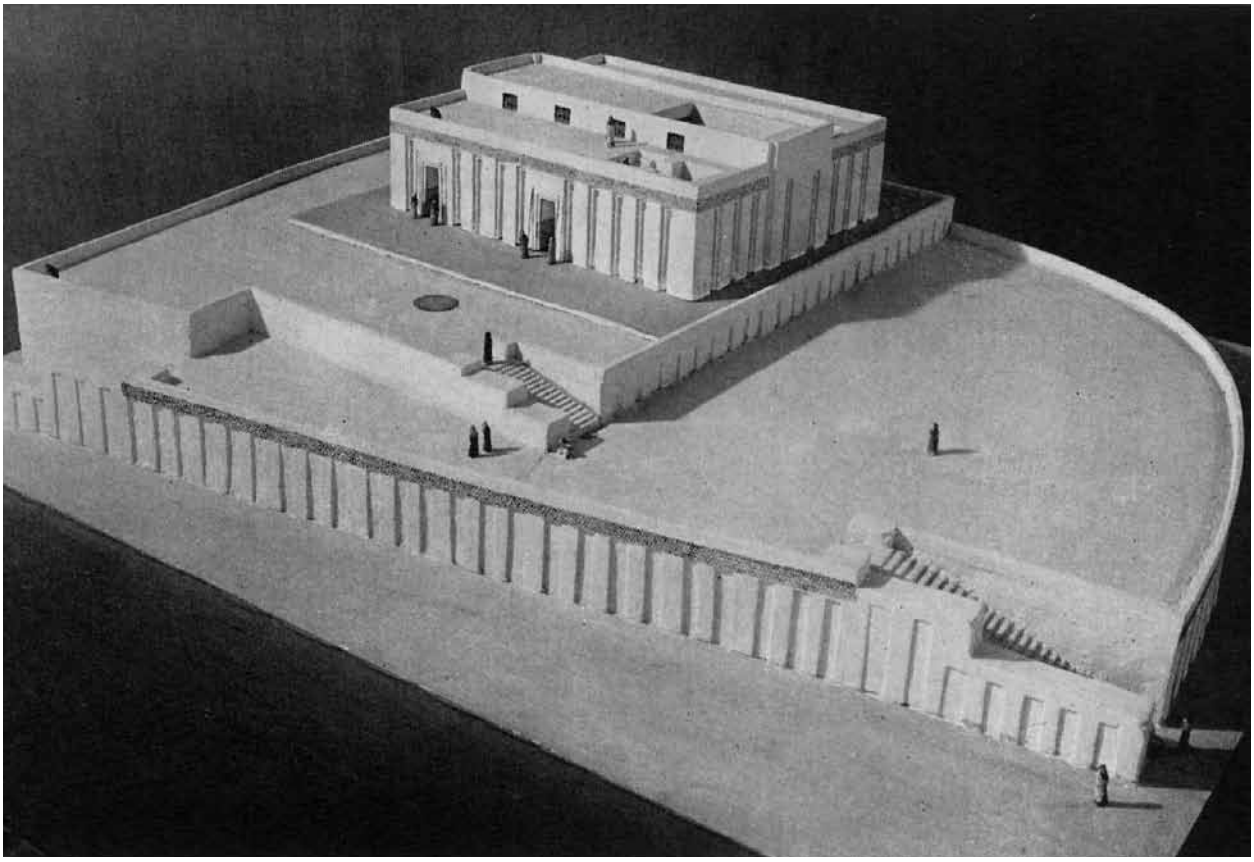
The monument of tomorrow will not be the monument of the past. It is not about buildings that balloon to enormous scales and consume vast amounts of resources. Rather, new monumentality must demonstrate that architecture can provide value in both an economic and spiritual sense. It will prove that architecture cannot be a matter of pure utility, and it will realize that if we are to move beyond our architectures of economy we must use the conditions of the liquid world as unique and necessary prerequisites. If we could truthfully reflect the circumstances that surround us we could create forms relevant to our age of change. *The synthesis of the past's permanence with today's transience will provide a new language of architecture*

capable of enriching our lives and representing the complex truths that characterize our world. If architecture could once again be seen as the foundation of society, much like the cultures of antiquity believed it to be, life would stand to gain a layer of stability needed evermore in our era of change.

LIQUID MONUMENTALITY

THE BEGINNINGS OF MONUMENTALITY

In Mesopotamia the earliest beginnings of architecture provided a tool for communicating with the cosmic reaches of the world (figure 3.1). According to the architectural historian Sigfried Giedion, "the first appearance of the man-made temple [in Mesopotamia] is synonymous with the appearance of monumentality in architecture. The age-old yearning to establish contact with invisible forces was, for the first time, given an architectural form."[1] The Mesopotamian temple emerged from the desire to cast metaphysical values into permanent constructions, a type of sublimation that its creators accomplished through the use of form, scale, and materiality. The temple characterized the world around it through its own unique vision of truth; one that connected the heavens above to the flat disc that constituted the Sumerian and Babylonian model of the earth.



3.1 ***Painted Temple, Al 'Uqair*****, before 3000 BCE. Iraq Museum, Baghdad. Physical model.**
The Mesopotamian stepped temple is the first example of a highly articulated architecture with monumental ambitions and a direct precursor to the ziggurat. Sigfried Giedion believed that these works marked the beginning of both architecture and monumentality. Giedion attributed its greatest importance to its treatment of the interior as a space of exceptional significance, a consideration that would appear in later works with very different results. This emphasis on interior quality is a consequence of the fact that the Mesopotamian temple was a building open to everyone irrespective of their social rank, a public mandate that allowed the temple to bridge the cosmic and everyday worlds.

The stepped forms of the early Mesopotamian temple and the subsequent iteration of the ziggurat invoke a metaphorical ascent to a realm above the transience of the natural world. This desire for spiritual significance underscored a consciously monumental mandate that resonates with the beliefs of Giedion, who explained how "Monumentality derives from the eternal need of the people to own symbols which reveal their inner life, their actions and their social conceptions."[2] While their size ensured that they were materially distinct from their surroundings, the temples also supported a common bond with the average citizen through their public scope.

The reverence that the Sumerians and Babylonians held for their temples offers us a fundamental approach towards understanding their monumentality. The use of the wall as an architectural element of boundary and division led to the development of interior space, and unlike many of the later versions found in Greek and Roman architecture, the interior of the Mesopotamian temple was a public space that simultaneously communicated with the cosmic world and resisted the change of the mortal world. Ancient Mesopotamia developed around the volatile Tigris River, a fertile land, yet albeit one that left its settlements vulnerable to uncontrollable forces. The temple, open to all, became a way to overcome the uncertainties wrought by severe floods. Even when the swollen Tigris completely submerged the lands that surrounded the temple, its soaring height and firm construction ensured its position as an immovable landmark that dominated the landscape. This monumental form effectively resisted the flow of the mercurial river—a traditional symbol of change.

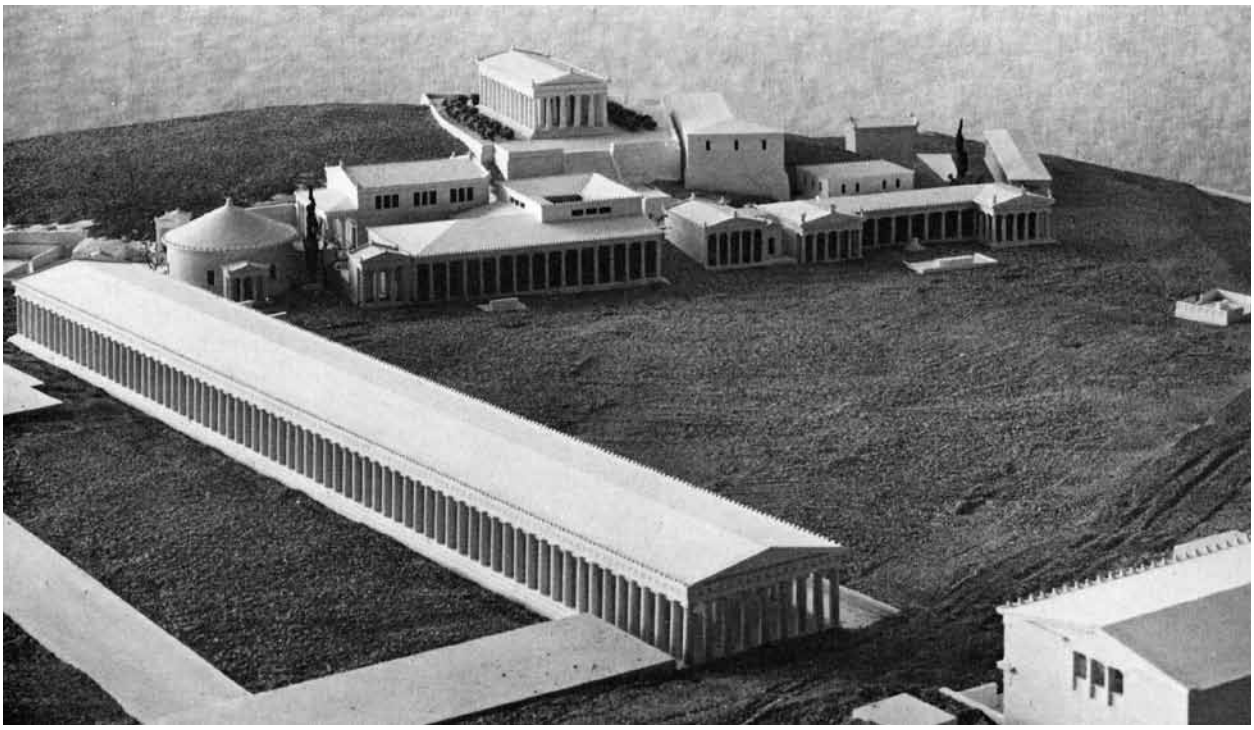
The Egyptian pyramid is an extension of the monumental project initiated in Mesopotamia (figure 3.2). The evolution from the multi-stepped Mesopotamian ziggurat to the simple geometry of the pyramid had important repercussions. Unlike the ziggurat, which embodied in its height a realpolitik—the higher the building, the greater the power—the pyramid gained an explicitly utopian dimension in the abstraction of its form. The philosopher Ernst Bloch believed that utopian ideals could facilitate a better future guided by a social and technological consciousness.[3] He celebrated the Egyptian pyramids as the only architectural symbols to achieve "absolute geometrization", and felt that all other experiments in pure form could never match their perfection.

The pyramids related to the daily life of the ancient Egyptian citizen as "crystals of death", a literal translation of the culture from which they were born. When understood in this way the pyramid recalls the lifeless body waiting for the powers of the afterlife to revive it into a living reincarnation. Yet unlike the Mesopotamian temple, the pyramid exists for an individual Pharaoh rather than the commonality of a people, and unlike our contemporary culture, the Egyptians did not fear death. Their land was the place of new life and rebirth, and for them the pyramid signified regeneration after death. It withstood the world of change by freezing death into a tranquil and utopian form, something that was only possible in the predictable and consistent landscape of the Nile delta. The monumentality of the pyramids mirrored the world around them, while their purpose as an index of the life cycle cast them as monuments of an intensely dynamic nature.

3.2 ***Great Pyramids of Giza*****, c. 3200 BCE.**
The Great Pyramids of Giza exhibit a number of monumental qualities. At their most basic reading the pyramids are a remarkable testament to the past and the last of the Seven Wonders of the Ancient World still in existence. Their lengthy *durée* echoes their massive scale, which remained unsurpassed for thousands of years, but unlike the Sumerians and Babylonians, who developed their buildings around carefully considered interiors, the Egyptians were unable to articulate interior space and could only relate to the natural world through sheer size alone.

The pyramid overcame the uncertainties of life with a massive and singular appearance that stood in relation to the universe through a concerted effort at supplying its own vision of the real. It condensed the heavens to a single point at its apex and then transmitted this energy to the earth below through the innate perfection of the triangle. For Bloch, "the fanatical geometrization of all Egyptian art expresses its architectural utopia: the crystal of death as foreseen perfection, cosmomorphically reproduced."[4] While it may be easy to focus on the pyramids as incredible works of materiality and technology, their monumentality resides largely in their symbolic character and utopian underpinnings.

The ancient Greeks used architecture as the very foundation of their society—the first time it permeated all aspects of life. Like the Sumerians and Babylonians, the Greeks realized the need for equality, yet like the Egyptians, they also realized the need for buildings that rise above the corporeal world, an awareness that allowed their architecture, and the architecture of ancient Athens in particular, to achieve a vibrant collective complexity. In *The Human Condition* the social philosopher Hannah Arendt grouped the ancient Athenian division of life into two spheres: the private and the public. The private realm, one of necessity and fleetingness, resided



3.3 ***Agora of Ancient Athens*****, c. 200 BCE. Physical model.**
In ancient Athens architecture was the ultimate mediator between the public and private realms, a careful division supported through strong connections to the past, present, and future. The *nekropolis* provided a link to the past, while the *agora*, the place of politics, existed in the present and its major architectural type was the *stoa*, a vessel of human thought as well as a reserve for the continued existence of the city.[5] The Temple of Hephaestus and Athena Ergane at the top of this image was one of several places where Athenians communed with the future through an ideal image that radiated down to the everyday world. The shrine and portico of the temple offered a stable point of reference that contrasted the mortality of the individual. For the ancient Athenians architecture ensured the vitality and liveliness of their political life and guarded the most treasured elements of their existence

in the architectural type of the house. A household was a prerequisite of Athenian citizenship, and consequently, of the ability to participate in public life. The public sphere, or "that which can be seen by anyone", existed in the shared world of the common and was one of freedom and permanence.[6] The qualities of action and speech engendered this world of equals and its major architectural type was the *agora* (figure 3.3).

The agora of ancient Athens—the place of the present—was halfway between the necropolis and the Acropolis—the places of the past and the future. It was here that the citizens of Athens administered the affairs of the city. In the agora political vitality revealed itself as a continuous cycle of renewal. As functions changed, so did buildings, unlike the everlasting greatness of the city contained within the Acropolis. Through the continuity of the past, present, and future, the Athenians factored change into a very solid concept of the world. Aware of the mortality of the individual, their architecture went to great lengths to create a timeless collective immortality, but for all its desire to articulate the essential elements of life, the architecture of ancient Athens did not yet know true monumental form. The poet and philosopher Johann Gottfried Herder realized this when he wrote "no

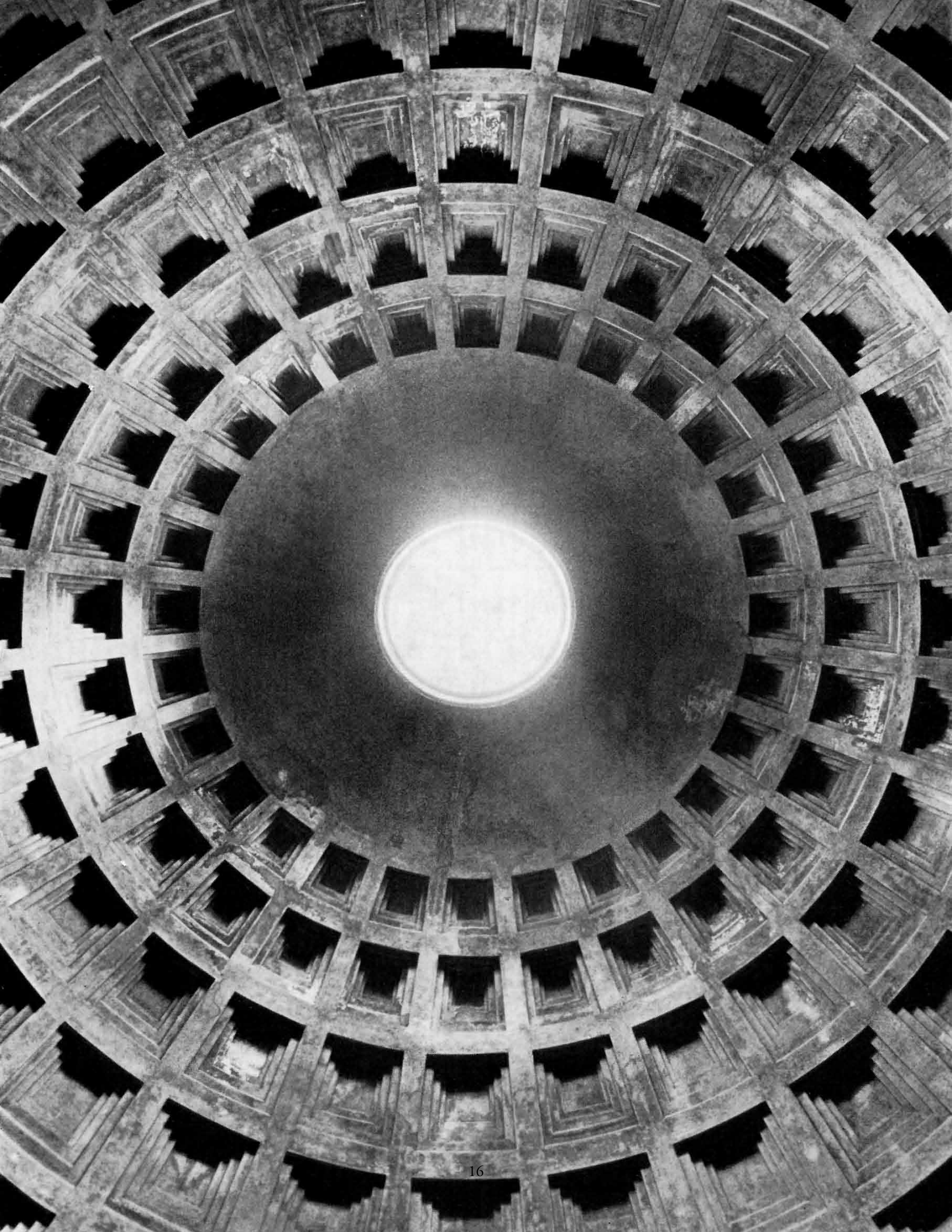
human monument can endure wholly and eternally upon earth; being formed in the succession of generations by the hand of time for temporal use, and evidently prejudicial to posterity."[7] Ancient Athens ultimately provides us with an explanation of the purpose of architecture, and as the architectural historian Robert Jan van Pelt stated, "classical Athens may be judged as a complete city, a nexus of stone and people that fulfilled the idea of the city as a bulwark of stability within a torrent of change."[8] This interpretation of Greek architecture as a system of solidity able to resist the flow of the fluid world accentuates ancient Athens' nature as an early hybrid of monumentality and change.

If the temples and pyramids of Mesopotamia and Egypt were attempts to resist the world of change, and the architecture of ancient Athens at stabilizing it through a superior order, then the Roman Pantheon is a building that harnesses change in order to allow us to become one with the world (figure 3.4). Like the earlier examples, the Pantheon is an archetype of monumentality, however, it represents an implicit concept of utopia that differs from the symbolism found in past works. It is a literal reminder that we are all citizens of the world created by a culture where regeneration occurred during one's life and not after. The Pantheon is firmly rooted in the present, a context that allows its occupants to reconcile their position within the greater universe.

With the Pantheon the question of scale assumed a central role in the monumental discourse. Compared to the pyramids, more substantial works in a material sense, the Pantheon is bigger. Though physically smaller, its mental scale is boundless. This scale is the result of two important qualities: a large and articulated interior, and a great cosmic relation. The ziggurat is for the masses, the pyramid for a kingdom, and the agora for a *polis*, yet the Pantheon operates at both an individual and a cosmic level. It is a building that maintains a continuous relationship between people. Interior and exterior are seamless conditions in this synthesis of Mesopotamian, Egyptian, and Athenian monumentality.

The dome and oculus of the Pantheon are its greatest triumphs. The dome relates the earthly to the heavenly, while the oculus coexists with the natural world through the dynamic play of light and sky. The rays of the sun penetrate the heart of the building and breathe life into its farthest reaches. This combination of transformative attributes and an unsurpassed relationship between the human and the cosmic positions the Pantheon as a world within a world as well as a preeminent model of monumentality and change. Although architects have returned to the power of the pure sphere as a symbol of the earth, no building has managed the same confident utopian conviction found in the animated forms of the Pantheon.

Whether they speak to the survival of a culture, the memory of an individual, the persistence of a way of life, or of our relationship to the universe, the temple, pyramid, agora, and Pantheon all rely on a considerable physical presence. They are built works that an individual can enter in a literal manner. These early monuments used material form to challenge the natural world and achieve their significance. Even the Pantheon, with its great mental scale, is an undeniably massive building, but as



3.4 (opposite) ***Dome of the Pantheon*****, 125 CE.**
The oculus of the Roman Pantheon is the sole source of light and a marvel of architecture and technology; without it, the Pantheon would be a lifeless mass. The oculus effectively draws our focus towards the interior and emphasizes the Pantheon as a microcosm of the world. The Pantheon achieves this cosmic representation through the merger of Platonic forms—the cylinder and hemisphere—and carefully delineated regions. The reticulated surface of the building and its inscribed circles provide a stable plane of reference, the deep cornice of the cylindrical drum demarcates the earthly realm from the heavenly, and a matrix of coffers set into the hemispherical dome represent the celestial bodies in a reference to the planets and days of the Roman calendar month. Light enters the Pantheon as a "real" element that sets it into continuous motion, while its ability to mimic the complex natural world and incorporate change as a fundamental design feature distinguish the Pantheon as a high point in monumentality.

3.5 ***Fresco from the Villa of P. Fannius Synistor at Boscoreale*****, c. 40–30 BCE.**
In *The Principle of Hope* Ernst Bloch heralded the Pompeian wall painting as the earliest depiction of the imaginary architectural utopia. This cycle from Boscoreale is an example of the late Second Style, known for its use of trompe l'oeil-like relative perspective and bright colours such as green, magenta, red, white, and yellow. The Pompeian wall painting surrounds the viewer like an illusion and is imbued with a powerful capacity that built works rarely possess due to the many constraints of reality. As a precursor to the printed book it provided a mythical backdrop for everyday life that allowed its viewer to maintain a dialogue with the intangible aspects of life. The wall is no longer a physical barrier, and instead opens onto an expanded space much like a tableau. The Pompeian wall paintings demonstrate that monumentality can exist at any scale and does not have to be built, and that monumentality is possible based on the strength of an idea alone.

the idea of monumentality developed, novel methods of representation emerged that did not rely on the overt physicality of the past. The well-preserved wall paintings of Pompei exhibit a completely new concept of the monumental work (figure 3.5). With the Pompeian frescos monumentality entered the personal realm.

Bloch praised the Pompeian frescos as the first painted architectural utopia. These "buildings on a wall" jettisoned traditional concerns like cost, public opinion, and longevity, and instead focused on eliciting joy in their viewers. In contrast to Bloch, Vitruvius reproached their "impracticable element", which perhaps explains their limited application outside of Pompei, yet within Pompei and the surrounding region these paintings adorned the walls of the most affluent houses and villas, used as a mark of distinction, if not practicality. Every citizen who could afford to embraced this remarkable concept in a testament to the emotive potential of monumentality. The second and fourth styles of Pompeian wall painting feature expansive urban scenes and are of particular interest to us. These ideal cities—always devoid of people—provided a mythical backdrop for life to unfold.

The Pompeian wall paintings prove that monumentality can occur at any level, and like the mental scale of the Pantheon, realize a cosmic reading far beyond their physical limits. Their relatively small size belies a total environment that exists outside the bounds of mortality. This new utopian world, liberated from the constraints of everyday life, suffused the walls of Pompei with an unwavering monumental character, while their stagelike disposition introduced an innate and carefully composed appreciation for change to otherwise static surfaces. As the earliest examples of "paper architecture", they connect the centrally focused works of the past with monuments that operate on a surrounding force, such as the printed book, which envelops the reader much like an interior. Pompei is the prototypical city, an urban laboratory where many of our modern values originated.

After the decline of the Roman Empire and its high standard of living the monumentality of the pyramids and Pantheons became untenable. Suddenly, works like the wall paintings of Pompei were not only an extremely alluring way to attain monumentality, but the only way. In this climate even frescos appeared lavish. This reversal of fortune meant that if monumentality hoped to continue its development it would have to do so at a modest scale, but as we have already seen, a compact appearance does not preclude a significant meaning—mental breadth is often irrespective of physical size and a single concept or idea can sustain a monument alone. The early Catholics that operated in the ruins of Rome drew these same conclusions and used them to inform the monumental mandate of Christianity, a revelation that the artist Albrecht Dürer revealed in his portrayal of *St. Jerome in His Study* (figure 3.6).

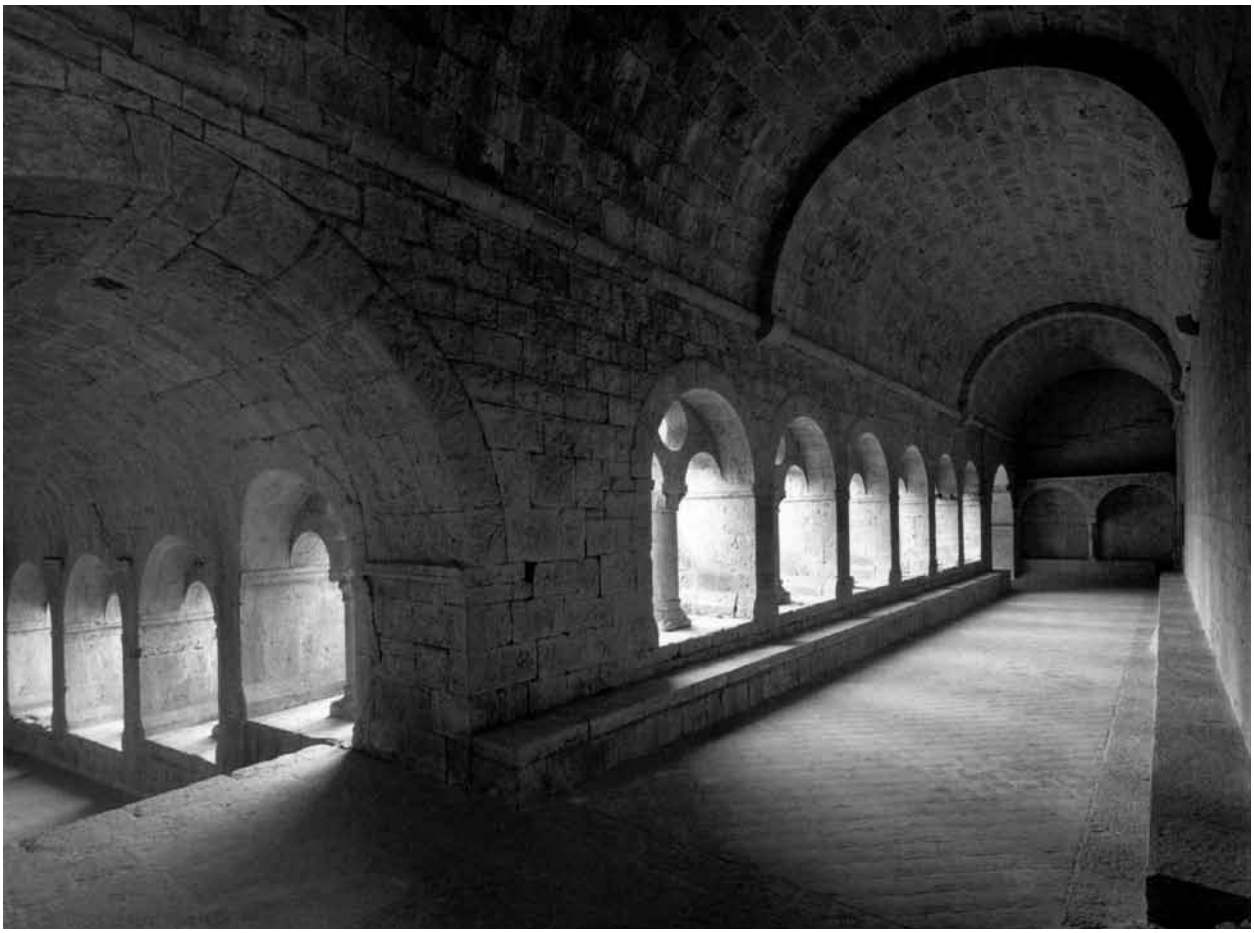
In its formative years Christianity was an almost exclusively immaterial concept. Notwithstanding a few consecrated places, the successor to the paganism of Rome existed as a universal ideal located within the hearts and minds of man. For these followers the body was the temple, a belief that found a tangible expression when St. Jerome created the sacred text. The Bible is a monumental idea that embraces the entire world and surpasses even the cosmic ambitions of the Pompeian wall painting; with the Bible the whole world is in your hands. Like the Cross worn around the neck, it facilitates a gigantic leap in scale that connects its owner with the heavens, and as a bridge to modern western civilization the Codex marks the disappearance of the

3.6 (opposite) *St. Jerome in His Study*. Albrecht Dürer. Engraving. 1514.
In *St. Jerome in His Study* Albrecht Dürer depicted the incredible energy and spirituality of St. Jerome's engagement with the sacred text. St. Jerome, a Catholic priest and father of the early Church, translated and revised the Bible from the Greek and Old Latin texts into the Vulgate, an early fifth century Latin edition. The Bible was sacred from its outset, unlike the scrolls of the classical world. Its relatively small size yields an idea that encompasses the entire world, and like the Pompeian wall painting, allows the individual to embrace the largest of concepts.

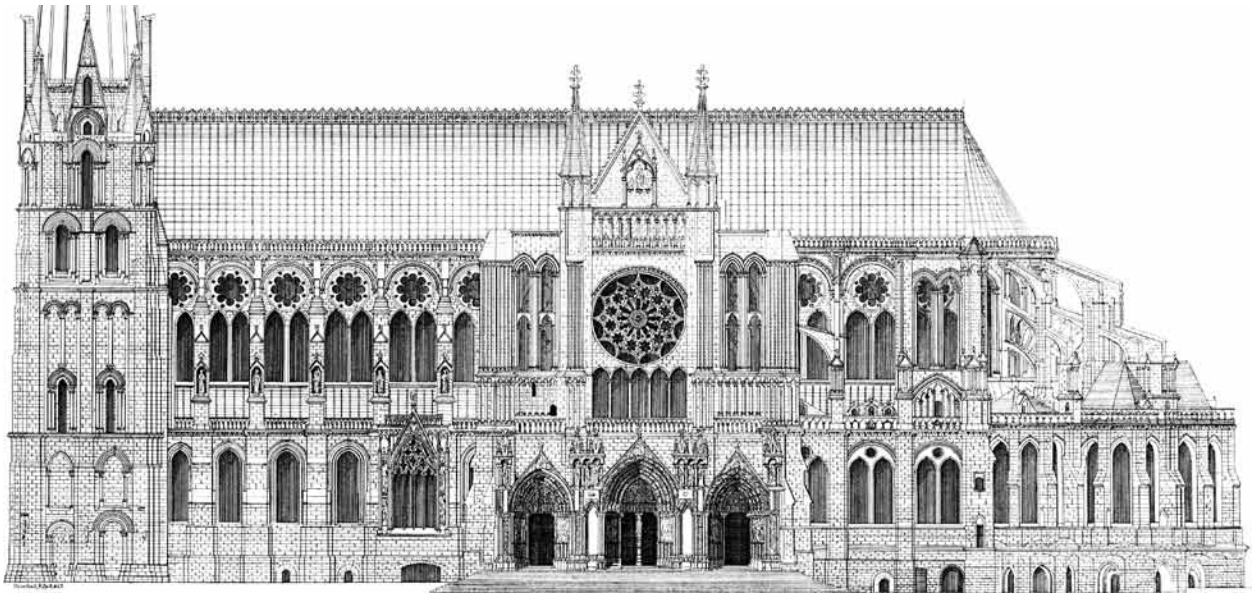
Dürer's image reinforces the monumentality of the subject through a triangular relationship that unifies the major elements. The sleeping animals represent the natural world, St. Jerome's halo speaks to the cosmic world, and the skull signifies the mortal world. The skull, directly opposed to the halo with the Cross set in between, reminds the viewer of the limitations of life and invokes the memory that "this was a man". In our present world Dürer's skull indicates a loss of appreciation for the immortal. Modern life has forgotten the positive values of a clear division between the earthly and eternal realms and instead only fears death.

scroll, and with it, the end of antiquity. The reader enters these beautifully gilded and carved works like a worshipper enters a church, and in turn, their physical distinction is a product of their monumental message. Christianity is ultimately a system that negotiates the changing world, and the Bible, its early tool.

The Bible presupposed an interest in its message, the ability to read, and access to a rare, handmade edition. In order to achieve a broader exposure its ideas needed a physical construct that reached beyond the adapted Roman buildings in which the early Catholics practiced their faith. The spirituality of Christianity found its first truly original architectural manifestation in the monastery and its typological cloister. In buildings like the Cistercian Abbey of Le Thoronet the teachings of the Bible gained an early yet limited material form (figure 3.7).



3.7 ***Le Thoronet Abbey, West and South Cloister Galleries*****. c. 1170–1200.**
The Cistercian abbey of Le Thoronet celebrates a world of solidity. Masons used stone and light to render the monastic values of austerity and knowledge into the man-made realm. Its unsurpassed illumination animates the masses of stone, while the architectural form of the cloister suggests a social structure based on democratic values much like those found in ancient Mesopotamia. The monumentality of the monastery reinforces the vow of a life dedicated to the good of the world and the enlightened soul of the individual. The art historian Alois Riegl would have classified Le Thoronet as a combination of "age-value" and "historical value"; it is both a witness to the passage of time and a well-preserved paradigm of monastic architecture.[9]



3.8 ***Chartres Cathedral, South Elevation*****. Georg Dehio and Gustav von Bezold. Drawing. 1901.**
Chartres Cathedral is the perfect embodiment of High Gothic architecture. A number of technological innovations made this possible, like the flying buttress, an outrigger that transfers compressive forces to the extremities of the cathedral. The flying buttress allowed these sprawling stone constructions to reach previously unimaginable heights and dematerialized the facade with clerestory windows that fill the church with light. While the pyramids surpass its size, they lack the highly articulated interior that defines Chartres as a pivotal attempt at answering the question of what it means to be human. In addition, the three rose windows—derived from the Roman oculus—interpreted and conveyed a larger understanding of the world for what was at the time a largely illiterate population through their physical depiction of a theocentric world view.

The monastery is centered on its cloister, a physical creation of Paradise and a visually distinct space that implies a sense of plurality and imparts the monastery with its communal arrangement. In many ways the cloister marks a return to works like the Mesopotamian stepped temple, where monumentality represented everything and spoke to both the everyday nature of life as well as the highest of values and beliefs. At the same time the monastery is unique in the importance it placed on light. Light allowed the hermit monk to work in his cell, and light celebrated moments of communion. Although the Pantheon also relies extensively on light, it differs insofar as its purpose is to connect the individual with the world, while the rays of the monastery enlighten the soul.

The monastic use of light allowed Christianity to channel the mutable world. The Church realized the power of change and attempted to quantify it in order to control the physical realm. The division of time first explored in the monastery is the most evident example of this program. According to the architectural theorist Sanford Kwinter, the monastery was a prototypical clock.[10] For example, in Benedictine monasteries seven bells partitioned the day into periods dedicated to specific tasks. These bells transformed static events into bodies perceived *over* time, and with them this traditionally immeasurable element became a device that assimilated the natural world into a cultural equation. The modern clock face is the pinnacle of this program as well as a symbol of its ultimate demise, and as Kwinter explained, "Time, forced now to express the false unity and rationality of all being, ceased to be real."[11]

The cathedral marks the final phase of Christianity's monumental project. Unlike the monastery, which existed for a select number of resolute monks, the cathedral is a universal building open to everyone. The earliest cathedrals emerged concurrently with the first monasteries and continued to evolve for centuries until they reached the perfection of the Gothic cathedral exemplified by Chartres (figure 3.8). The cathedral is an extension of the monastery that applies its monumental stability and order to the greater world. In the cathedral community is no longer implied through a single architectural typology, but rather, by virtue of its architecture and program as a whole.

Bloch likened the Gothic cathedral and its array of columns and supports to a "tree of life"—the inverse of the Egyptian pyramid's "crystal of death".[12] Its forestlike use of stone elevates its sanctity from the earthly confines of the everyday. Flooded with light, the soaring heights invoke the cosmos and unite the present with the future in an effect similar to the Pantheon. The master masons that built these edifices of man combined technology and monumentality in a search for utopia that reaches back to the legendary Temple of Solomon, and every aspect of the Gothic cathedral reinforces this incredible vitality of organic life.

Elements like the windows and chapels situate the cathedral as a commemorative structure. The cathedral eulogizes significant accomplishments and inspires the average person to strive for spiritual enlightenment. Unlike the Roman triumphal arch, which glorified the individual, the cathedral praises the commonality of people. This public function is also apparent in its management of time, an extension of the monastery's seven bells. The bell and clock controlled the populace and dictated when one could wake, pray, work, and eat, however, it was the extraordinarily fluid use of stone that captivated people and allowed the cathedral to thrive for centuries, and as Bloch concluded, every example of utopian architecture is a combination of the total austerity of the pyramid and the total profusion of the Gothic cathedral.

IN THE PURSUIT OF AN IDEAL

During the great cultural proliferation of the Renaissance a new form of monumentality flourished that defied the earthly solidity of the cathedral. This appreciation for monumentality recalls both the cosmic aspirations and physical intangibility of the Pompeian wall paintings and the Bible, qualities that scholars then expanded on with the introduction of developments in history, time, mathematics, and science. In Renaissance works the underlying idea is almost always more important than its physical attainment, a conceptual evolution that inspired the architect Luciano Laurana's *The Ideal City* (figure 4.1).

Laurana's painting bridges the solid and monumental values of the past found in the centrally planned building—an architectural form rediscovered in the Renaissance—with emergent techniques like perspective, an objective tool for analytically understanding and ordering the visual world. It uses urban form as an allusion to the philosophical question of the human condition and as part of a larger dialogue on how architecture can shape a better world. In *The Ideal City* monumentality is no longer a reaction to the literal world, but rather an imagined response to a new world facilitated by shifts in the understanding of change. Although it is similar to the Pompeian frescos, Laurana intended his painting to serve as an aid for mental contemplation, a testament to the fact that with the Renaissance material appearance ceased to be an indication of substance. Even in large built works we may find meaning in a single guiding concept.

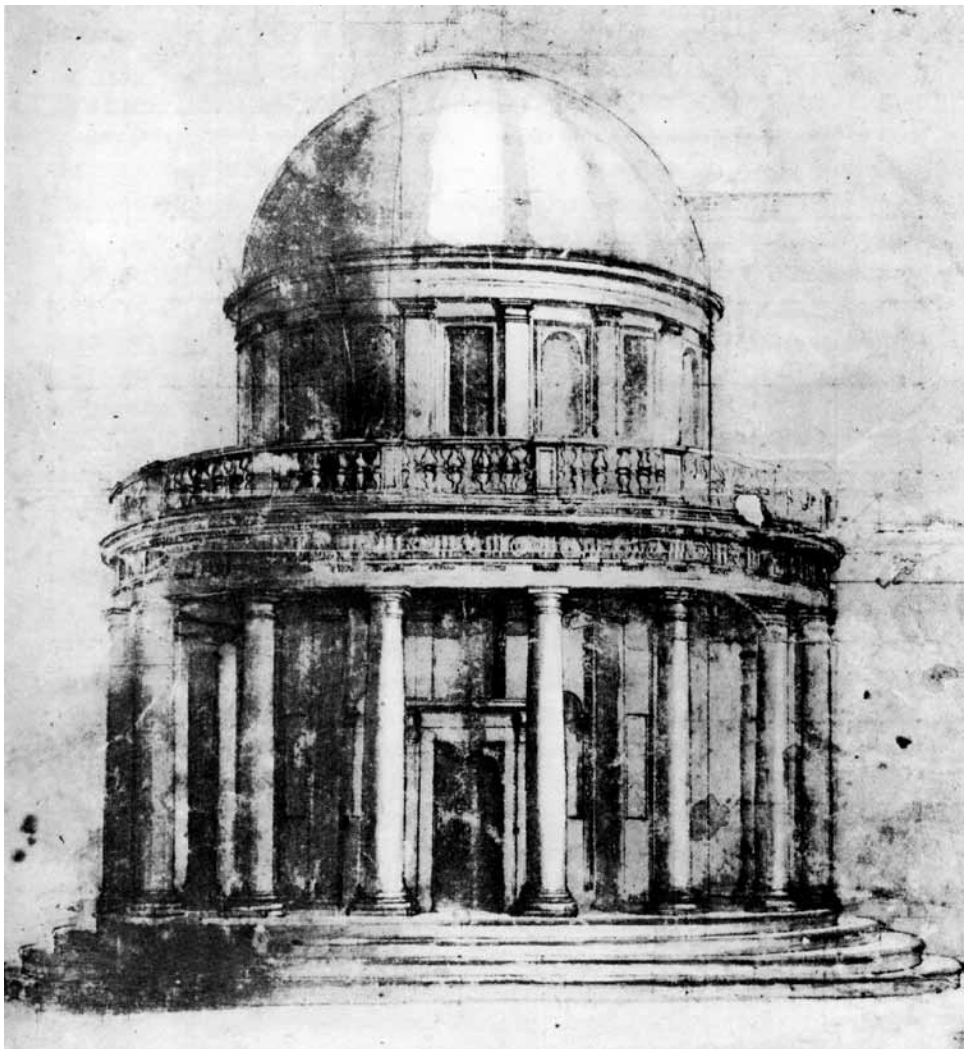
4.1 *The Ideal City*. Luciano Laurana. Oil painting on panel. c. 1470.
The Ideal City is an early example of linear perspective. Art historians originally attributed it to the mathematician, painter, and perspectival theorist Pierro della Francesca, however, recent evidence indicates that it was likely the creation of the architect Luciano Laurana. Laurana operated in Urbino at the time of its greatest cultural prosperity and collaborated with Leon Battista Alberti, a relationship that placed him in a convenient position to employ the new theories of perspective proposed by Alberti and Filippo Brunelleschi.

The painting immediately draws our attention to the peripteral, templelike building that occupies the site of greatest importance—the traditional location of the church. This strong visual focus is further reinforced by the evenly dispersed *palazzi* and heavily delineated paving, elements that emphasize the one point perspective and invest the image with the appearance of a stage. The surreal nature of the scene invites the viewer to examine the traditional limits of life using architecture as a tool for the liberation of the mind, while the lack of inhabitants positions *The Ideal City* as a backdrop for latent possibilities to unfold and underscores the potential for architecture to shape the changing world.

Donato Bramante's Tempietto is a milestone in monumentality that signals a major transition in the architectural appreciation for time (figure 4.2). Until the Tempietto everything existed in the present, but with its creation time expanded in a historical sense and the once cohesive elements of time and space diverged. Bramante's ingenuity is evident in his ability to reference the past in order to support a reinterpreted present. This historical excavation rooted the Tempietto in a singular place and time that could not exist anywhere else, unlike previous works, where significance was largely independent of a specific temporal or spatial location. Bramante transformed Laurana's theories into a physical manifestation of architecture that celebrates time as a cardinal value, and as a result we may view the Tempietto as a continuation of the classical rediscovery explored in *The Ideal City*.

The Tempietto is a cosmic work that ties the heavenly spirituality of the cathedral to the commemorative aspect found in classical works such as the Seven Wonders of the Ancient World and the Roman triumphal arch, and like in the Pantheon, Bramante used the form of the Roman peripteral temple to invoke the phenomena of sun and earth. The Tempietto operates on a vertical connection that Bramante emphasized through the sectional relationship of the building, while the rhythm of its peristyle establishes a link to the urban realm and summons the papal benediction of *urbi et orbi*, or "to the city of Rome and to the world." This harmony and intellectual vigour elevates its original program as a work of remembrance to the level of an urban monument that mediates between the human, the city, and the universe. The stature and breadth of the Tempietto is remarkable given its size, and as an early personification of Renaissance ideals, it anticipated the resurgence of Rome as well as the many vital discoveries this rebirth would yield.

The Tempietto is also an example of the interest Renaissance artists, architects, scholars, and theorists directed towards the study of ancient monuments. These individuals realized the merits of classical monumentality and then resurrected these dormant values through careful research and sensitive design. It was at this time that the Seven Wonders of the Ancient World emerged as primary symbols of antiquity, an event further popularized by the prominent Dutch painter Maarten van Heemskerck's reconstructions. The provenance of the seven wonders, known in ancient Greek as the *thaumata* or "things to be seen", remains uncertain. Herodotus, the fifth century BCE father of Western history, marvelled at the notable architecture that surrounded the Mediterranean in his *Histories*. Herodotus was particularly drawn to their size, yet many of the seven wonders had not even been built at this time, and of those, only the Great Pyramids remain today. By the first century BCE the present list was largely intact. In one of his elegies preserved in the *Greek Anthology*, the poet Antipater of Sidon remarked: "I have set eyes on the wall of lofty Babylon on which is a road for chariots, and the statue of Zeus by the Alpheus, and the hanging gardens, and the colossus of the Sun, and the huge labour of the high pyramids, and the vast tomb of Mausolus; but when I saw the house of Artemis that mounted to the clouds, those other marvels lost their brilliancy, and I said, 'Lo, apart from Olympus, the Sun never looked on aught so grand.'"[1]



4.2 *Tempietto*, c. 1501–02. Donato Bramante. Drawing.
Tradition states that the Romans crucified St. Peter on the Vatican Hill, however, some individuals, like the Catholic Monarchs Ferdinand and Isabella of Spain, believed that St. Peter was actually crucified on the Janiculum, a view they reinforced through the construction of Donato Bramante's martyrium in the courtyard of San Pietro in Montorio. Unable to compete directly with the Vatican and St. Peter's Basilica, which he would later redesign, Bramante created a miniature building that in its elegance and simplicity is far more monumental than St. Peter's could ever be.

The Tempietto marked a return to an architecture of remembrance not seen since the early Christian era. Bramante used a combination of ancient archetype and architectural model first proposed by the artist, architect, and theorist Francesco di Giorgio—a hybrid of the peripteral temple and the Roman rotunda. In an effort to attenuate its modest size Bramante also designed a concentric colonnade that enclosed the Tempietto, though this feature was never built.

Bramante reinforced the perspectival illusion of his design with a carefully ordered peristyle that radiates out to the city and the world beyond. Unlike the standard eighteen or twenty Corinthian columns found in the peripteral temples of the past, the sixteen Doric columns endow the Tempietto with a reserved yet powerful thrust, while the hemispherical dome and tall drum unite the earthly crypt with the heavenly sky as well as the present age with the forgotten past, an implicit reference to both the cosmic and temporal ambitions of this monumental work.

4.3 *Colossus of Rhodes*. Maarten van Heemskerck. Engraving. 1572.
The Colossus of Rhodes was one of the Seven Wonders of the Ancient World rediscovered during the Renaissance and admired by scholars and artists alike. Although accounts vary, it most likely did not straddle the harbour as Maarten van Heemskerck chose to depict here. The Rhodians erected the Colossus in the early third century BCE to commemorate their successful defense against the invading armies of Antigonus I Monophthalmus. After the aggressors abandoned their siege the Rhodians sold the equipment that remained and used the proceeds to finance this statue of riveted bronze plates that covered a reinforced structure of iron bars at least thirty metres in height.

The Colossus of Rhodes appeals with its epic scale and has certainly gained in power from its mythic character. While it may only invoke some of the most basic values of monumentality, it is an early example of commemoration, and the fact that the Rhodians spent such a large sum of money on its construction is a testament to their faith in monumentality. The Colossus collapsed during an earthquake shortly after it was built and lives on today exclusively through memory. This disjuncture between its actual state and its legendary existence accentuates the complex and enigmatic qualities of monuments, which often owe more to a process of *becoming* than to a willed act of creation. The modern city of Rhodes plans to reconstruct the Colossus, and if built, this new work will stand between sixty and one hundred metres tall, however, in this case scale would simply be an attempt at increased tourism in a blatant act of cultural consumption.

The Wonders are part of a narrative tradition that extols the triumphs and accomplishments of the civilizations that built them and our contemporary perception of monumentality owes much to works like the Colossus of Rhodes (figure 4.3). While the previous examples detached themselves from any sort of specific reading through their cosmic nature, the Colossus marked a major military victory in honour of the sun god Helios. The Rhodians' devotion and initiative led to what would become a landmark of the entire ancient world. Much like we travel today to visit

cultural marvels, the Colossus of Rhodes was a popular attraction during its relatively short life, a fact affirmed by frequent references in classical literature. Although the Colossus was always physically impressive, our modern perception is a product of the Renaissance attitude towards the past, which distinguished between conceptual ambition and material form. The implications of this are vast, and when seen in this light even the Pantheon, with its inscription to Agrippa, is a commemorative building that celebrates change by sublimating historical events into a permanent and monumental form.

4.4 *Tower of Babel*. Pieter Bruegel the Elder. Oil painting on panel. 1563.
The story of the Tower of Babel is a quintessential narrative of both Christianity and architectural fantasy. Pieter Bruegel recreated its thwarted monumentality using the lost foundations of classical Roman architecture rediscovered by architects and scholars at the time. Whether it is viewed as a work in progress or a work in decline, the salient architectural forms condense utopian virtues in a homage to the art of architecture and emphasize the Renaissance sense of temporality in a shift from the static representations of the past to a fluid understanding of the present. Unlike the normative tower that springs forth from its surroundings, the Tower of Babel consumes the entire city from within led by the architect as a rival of God. Another interpretation of the Tower of Babel can be found in the writings of the architectural theorist Luis Fernández-Galiano, who posited that the building is a container of memory that operates on the sustained flow of energy. For Fernández-Galiano, "The ruins of the Tower of Babel are the archetypal representation of the mortality of architecture: the confusion of tongues interrupts the flow of information that holds up the building; without it, entropy breaks up what has been organized."[2]

Change, by its very nature, is difficult to represent in a static work. Change may be recalled through memory, like in the Colossus of Rhodes, or through the use of dynamic elements that mimic the natural world, such as those found in the Pantheon and the monastery. The artist Pieter Bruegel the Elder took the expression of change even further in the *Tower of Babel* when he recounted this famous Biblical narrative on the danger of pride through a combination of the Judeo-Christian tradition of hubris and the Renaissance expansion of history (figure 4.4). Bruegel effectively captured the fleeting quality of time *within* the work, a revelation that highlighted the newfound temporality of painting. Although the boundaries of the canvas constrain the physical reading of the image, its monumentality is comparable to works like the wall paintings of Pompei and Laurana's *The Ideal City*.

The monumentality of Bruegel's *Tower of Babel* is also a product of its depiction as a ruin of the Roman Empire, and as such the painting commemorates the sense of grandeur that emerged alongside the rediscovery of this ancient civilization. Bruegel borrowed the form from the Roman Colosseum, perhaps in a reference to the Christian persecution it witnessed. The failure of the tower to reach the heavens marks the demise of classical values in the face of Christianity, yet in Bruegel's rendition it appears to flounder due to poor engineering rather than the divine linguistic differences of the original story. Parts of the tower rise while others collapse, the foundations remain incomplete, the levels are crooked, and its spiral form has no real beginning or end. Bruegel's ability to convey these diverse characteristics within an animated interpretation of a timeless tale underscores the potential for art to address the essential questions of human existence.

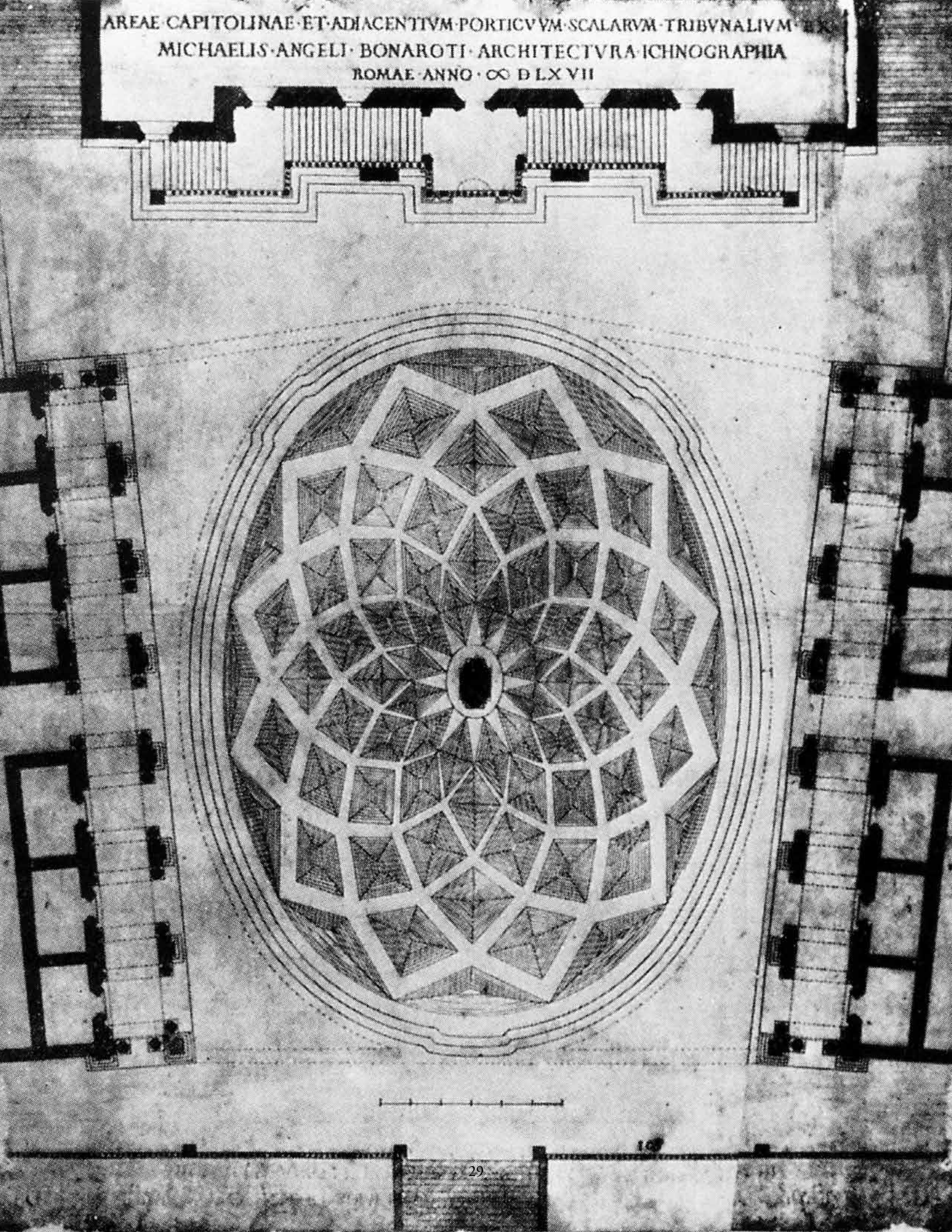
For a millennium after the fall of the Roman Empire monumental works subtly communicated their messages and values. Driven by ideals, individuals created powerful examples like the Bible and the Tempietto that belied their diminutive

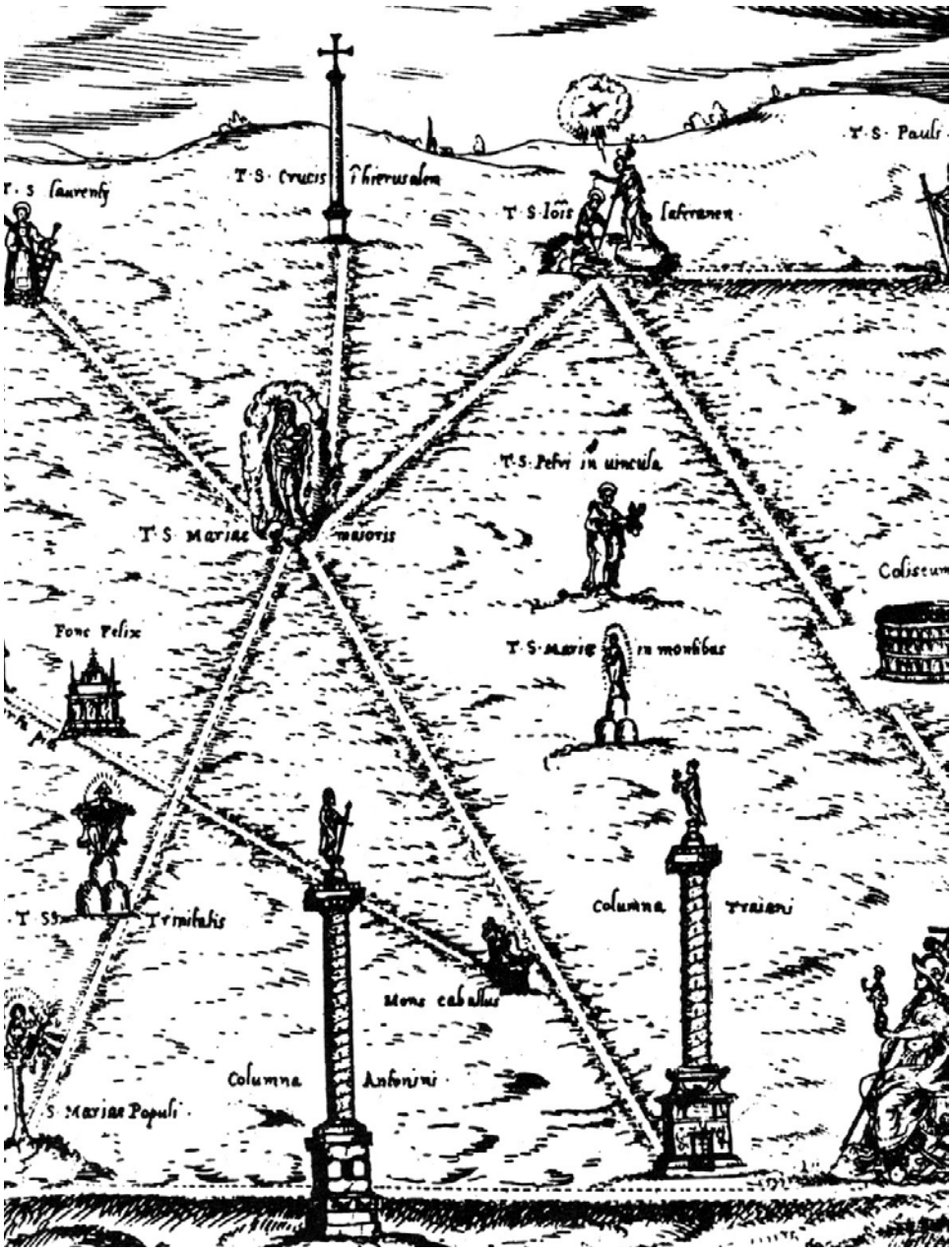
4.5 (opposite) *Plan of the Campidoglio*, 1538–64. Michelangelo Buonarroti. Engraving. For Michelangelo the Campidoglio was the *umbilicus mundi* of the world, a belief his piazza reinforces in every way. The site originally contained the Palazzo Senatorio [top] and Palazzo dei Conservatori [right], two buildings perched atop the muddy Capitoline Hill with limited connections to the greater city of Rome. Michelangelo redesigned the facades of the two *palazzi* and created a third to mirror the Palazzo dei Conservatori: the Palazzo Nuova. In doing so he established a harmonious trapezoidal form and realigned the Campidoglio away from its historic past found in the Roman Forum towards the new Catholic core of Rome located at St. Peter's.

In addition to redefining the form of the piazza, Michelangelo utilized the *cordonata*, a long, shallow ramp, to comfortably link the Campidoglio with the city below. The cordonata induces the effect of a stage that allows daily life to unfold. Finally, an intricate layer of paving radiates out from the equestrian statue at the center of the piazza. This organic pattern further emphasizes the Campidoglio as a crystallization of the greater cosmic world with Rome set at its symbolic heart.

The Capitoline Hill can be thought of as Rome's monumental core for a number of reasons today. Alongside the Campidoglio it bears a memorial to King Vittorio Emanuele and the ancient church of Santa Maria in Aracoeli. These buildings engage with the city at a variety of levels and scales and offer a condensed view of history. The elements of the Capitoline Hill bridge antiquity, the Middle Ages, and the contemporary world, spanning Rome as the capital of an Empire, of Christianity, and of a nation state.

AREAE CAPITOLINAE ET ADIACENTIVM PORTICVVM SCALARVM TRIBVNALIVM
MICHAELIS ANGELI BONAROTI ARCHITECTVRA ICHNOGRAPHIA
ROMAE ANNO ∞ D LXVII





4.6 ***Diagram of Sixtus V's Rome*. Giovanni Francesco Bordino. Engraving. 1588.**
Pope Sixtus V's legacy reaches far beyond the theological and spiritual guidance commonly associated with the papacy. Throughout his tenure he pioneered several concepts of urban design that persist to this day. Sixtus used Baroque theories of tension to liberate the city from its ancient foundations of compression through focal points connected by vast, uninterrupted roads. Repositioned obelisks served as prominent landmarks, while structures such as significant Roman buildings and major churches anchored other nodes.

This hierarchical, networked style of planning is an early example of the potential for monumentality to give shape to the city, but it was the Renaissance rediscovery of the past and the subsequent appreciation for monumentality that made Sixtus' approach possible in the first place. His redevelopment of the classical capital of the world solved lingering congestion problems and allowed large numbers of pilgrims to easily access its countless features in a direct precursor to modern tourism, a lesson that planners like Baron Haussmann in Paris have replicated around the world.

size. The expansive Gothic cathedrals also lacked a centrally directed mandate for monumentality and were instead the result of a localized and independent desire for transcendence, and even Bruegel's *Tower of Babel* is a foundation myth told from the viewpoint of an outsider, but by the Renaissance history had repeated itself, with Christianity firmly entrenched as the dominant power. The Renaissance resurrection of the classical world allowed the Church to make use of a material monumentality similar to that of ancient Rome, and accordingly, Rome was an appropriate center of the new Christian world that marked a return to the last place where an intensive program of monumental architecture existed. Yet unlike the largely visceral works of antiquity, Renaissance Rome operated on a fundamentally intellectual level. At the Campidoglio, Michelangelo translated the cerebral values of the Renaissance into an abstract built form that captured both the glory and the supreme authority of the Church (figure 4.5).

Michelangelo's piazza straddles the Capitoline Hill, the most central and revered of Rome's seven hills. Its towering position over a field of ruins forms an obvious and tangible link to the past that recalls the public identity and scale commonly found in classical architecture. Michelangelo fused this important setting with the latent energy of antiquity in a work of commemoration that resonates across the broader urban region and positions the Campidoglio as the social, political, and cultural center of the world. To support this monumental reading Michelangelo used the latest discoveries in mathematics and science to inform the geometric paving pattern of the square, a symbolical reference to a world centered on Rome. The architect and theorist Val Warke proposed that the Campidoglio performs "both iconographically and iconologically as a microcosm of a city that is itself a microcosm of the universe."[3] Every element of the square embodies a sense of organic life, and like the animated *Tower of Babel*, Michelangelo's design summons a changing worldview that facilitates this cosmic reading. The Campidoglio is the architectural manifestation of utopia—the ideal city on earth—something only possible following the secularization of sacred concepts that occurred during the Renaissance. The piazza creates an interior experience that is similar in effect to the paintings that decorated the houses of Pompei, a condition that would soon grow to encompass the entire city of Rome.

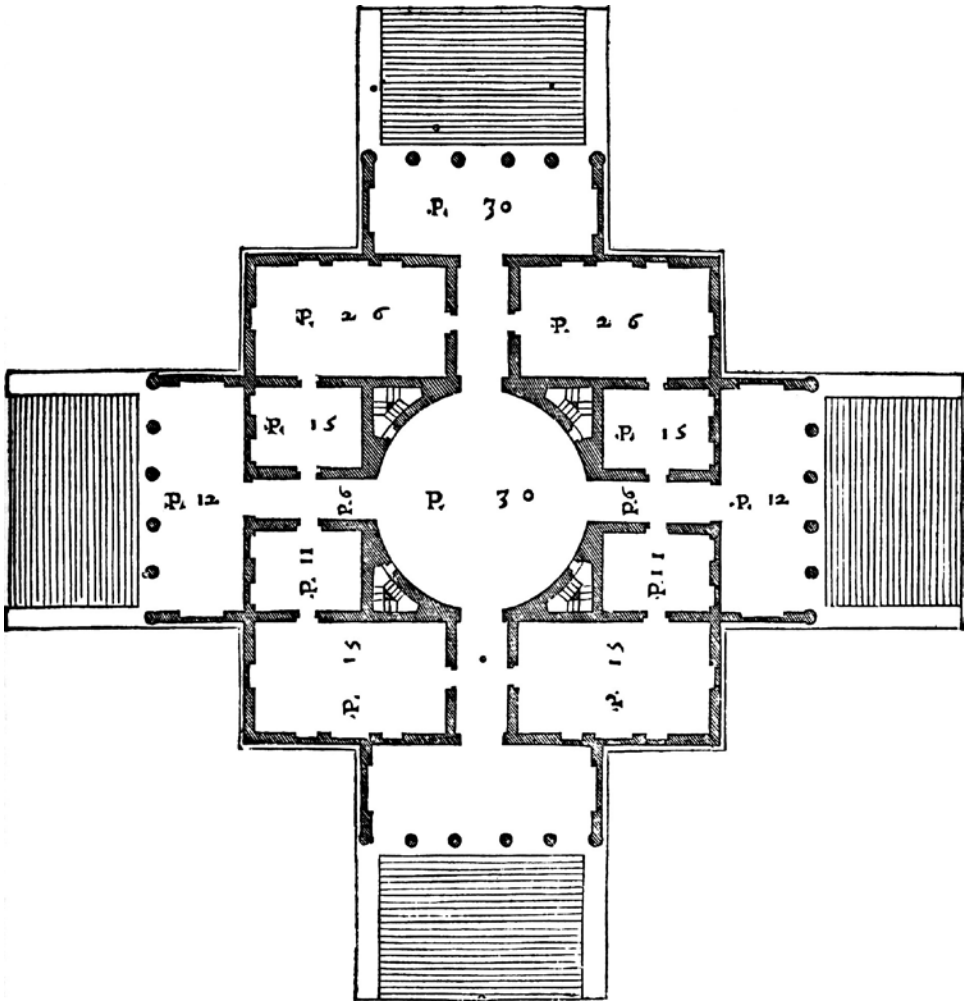
It took hundreds of years for the city to fully realize Michelangelo's vision for the Campidoglio, however, shortly after he completed his designs the newly elected pope Sixtus V embarked on an ambitious program of urban renewal that permanently changed both the face of Rome and the prevailing concept of monumentality (figure 4.6). Driven by purely pragmatic concerns such as access and visibility, he used existing "monuments" to redefine the city. Sixtus viewed monuments as buildings of social, historical, or aesthetic significance that endured over time, similar to the architect Aldo Rossi's idea of "urban artifacts" and "permanences". In *The Architecture of the City* Rossi explained how "the city is something that persists through its transformations, and the complex or simple transformations of functions that it gradually undergoes are moments in the reality of its structure."[4] For Rossi the city was a man-made object that represents the progress of human reason, and as such its monuments are physical signs

of the past that reveal its persistence. These "isolated and aberrant artifacts" constitute the city and characterize a form of the past that we continue to experience today. Sixtus harnessed Rome's artifacts in a "dynamic process" more akin to "evolution than preservation"—the definition of Rossi's theory of "propelling" permanences. While we may find Sixtus' "surgery" an obvious choice given our sprawling modern cities, when we consider the densely woven and largely homogeneous fabric of sixteenth century Rome, the idea of monuments that establish areas of focus connected via axial thoroughfares is unprecedented. These roads brought many benefits, including ease of access, broad vistas, and the ability to quickly and efficiently quell uprisings of the *turbae populorum*. With this revolutionary update Rome gained a new spatial reading and the city became a room.

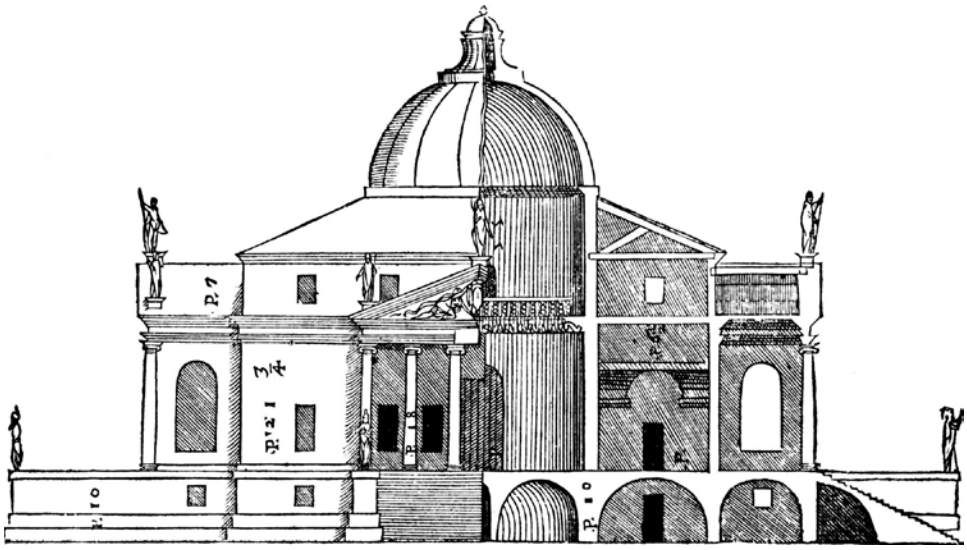
The architectural historian Kurt W. Forster referred to this process of renewal as *instauratio*, which he defined as "the periodic and partial remaking of a section of the city." Forster went on to state that "Through the acts of *instauratio* the city reacquires something of its continually dissipating essence and a truer image of its own potential."[5] In Sixtus' Rome this transition shifted the urban experience away from the singular monuments of the past towards a new plurality of the present, a phenomena that marked the emergence of the modern tendency to monumentalize the entire city and which we can relate to today through the ubiquitous "postcard city". This spontaneous transformation stymies the productive city and hinders the discussion amongst equals, or *synoikismos*, that places like ancient Athens relied upon for their very existence. Although ancient Athens had numerous focal points, they were active, rather than the inherently passive configuration apparent in cities like Rome today. With Sixtus' liberation of the solid masses of the past into a fluid and asynchronous present we became free to experience history at our own will. Unlike the Tempietto, which reflects an extremely specific place and time, Sixtus' Rome is a continuous field of experience composed of elements severed from their original context, a modern sensibility towards monumentality promoted by the historicized worldview of the Renaissance.

4.7 (opposite) *Villa Rotonda* from *I Quattro Libri dell'Architettura*. Andrea Palladio. 1570.
The reinterpreted classical precedents and perfect forms of Andrea Palladio's architecture are hallmarks of the High Renaissance. His designs equally embrace concepts of beauty, harmony, and economy—values rarely found in the same sentence. Palladio derived his ideal of beauty from classical architecture, his harmonious arrangements from a parametric system of precisely proportioned rooms, and his faith in economy from a simple yet flexible structure of brick and stucco. As the culmination of this architectural reinvention, the Villa Rotonda represents the zenith of Palladio's agricultural villas as well as his belief that a building should mirror the social position of its owners.

In the Villa Rotonda Palladio borrowed heavily from the Roman Pantheon, a common heritage evident in the elevated center and symmetrical elevations that denote a sacred space and open the building onto its pastoral surroundings. Palladio created a temple for living that speaks to the role of man as both master and servant to the changing world, however, the Villa Rotonda is such a powerful form that it makes dwelling almost impossible, and in this sense Palladio's true legacy lies in his use of rational methods that imbued common architectural typologies with complex monumental characteristics.



Piano Nobile



Elevation/Section

At the same time that Sixtus transformed Rome the north of Italy experienced a very different type of historical rediscovery and expansion. The architect Andrea Palladio worked at the scale of the individual building and used his residential commissions as case studies for his architectural theories. Palladio's designs captured and celebrated the energy of the Renaissance through the reinterpretation and reinvention of classical monumentality. While the polymath and humanist Leon Battista Alberti discussed the importance of classical monumentality as it pertained to sacred architecture extensively in his treatises, it was Palladio who disseminated Alberti's teachings and championed the notion of a higher order for *all* works of architecture regardless of their type.

The scope of this propagation cannot be overlooked, for it was Palladio who first compiled his oeuvre in the didactic *I Quattro Libri dell'Architettura*—the precursor to the contemporary architectural monograph. Palladio's treatise should not be confused with the monograph, however, for its primary purpose is to instruct, and the many illustrations of his own work are merely examples of some of the permutations possible through his approach. Although Palladio divided the treatise into nine sets of prescriptive rules, such as walls, stairs, columns, doors, and windows, the individual designer remains rather free in their use. This clarity of approach allowed his treatise to reach an unprecedented audience and catapulted the Palladian style into vogue across the continent and eventually even as far abroad as America, yet for all his attempts to create a universal language of architecture, the most inventive of Palladio's designs, the Villa Rotonda, stands as somewhat of anomaly (figure 4.7).

The Villa Rotonda's classical precedent is unmistakable. Much like Laurana and Bramante, Palladio found inspiration in the soaring cosmic reaches and profound humanistic ambition of the Pantheon. The fundamental difference between Palladio and those who came before him lies in the way he applied the lessons of antiquity; instead of an imaginary utopia or a commemorative public structure, Palladio used the sign of the temple to indicate a private house. He invested this ordinary architectural typology with a monumental reading, a process that questioned the very nature of what it means to inhabit this world.

Located at the apex of a hill that features a commanding view over Vicenza and the surrounding countryside, the Villa Rotonda and its four symmetrical fronts enjoy a privileged vista, a gesture that is more significant than the disposition might initially suggest. The ancient Greeks built their temples on top of or facing natural phenomena in the belief that the happiness of the local deity who lived within its *temenos* would ensure his or her benevolence—a requirement for the continued existence of the community it served. The void at the center of the Villa Rotonda serves a similar role as a symbolic space that equates the master of the house with the gods, but this architectural form is so powerful that it denies the very function of the building. Unlike the Pantheon and its microcosmic recreation of the universe with man set at its center, or the Tempietto, whose sectional relationship links the tomb of its founder with the heavens above, the Villa Rotonda represses its occupants in an attempt to control their lives in the name of a higher order or purpose. Although it

4.8 *Plan of Palmanova*, 1593. Vincenzo Scamozzi. Drawing.
Vincenzo Scamozzi's walled town of Palmanova exists in its original form to this day. The Venetian Republic built it as a response to the new mobile artillery of the time, but it was also the first city designed around such consummate mathematical ideals. As Baroque geometrization developed towards the end of the sixteenth century artists and architects appropriated its inherent perfection as a language that symbolized the cosmic world, yet the sublime beauty of Palmanova's nine-pointed star is simply an added bonus for what was an exercise in military science.

is an incredible work with perfectly harmonious proportions, the Villa Rotonda and its uncompromising central void foreshadow the total implosion of the city witnessed just twenty years later in Palmanova.

Medieval cities were often crowded and unpleasant places. By the Middle Ages most former Roman settlements had fallen into total disrepair, with the merits of urban design largely forgotten. Yet as we have seen in examples like Sixtus' Rome, the Renaissance placed a renewed interest on large scale planning. One of the earliest documented urban designs is attributed to Alexander the Great, who instructed his chief architect Dinokrates to build a town in his likeness carved out of a mountain. Alexander died before construction could begin, but his monumental vision continued to captivate Renaissance thinkers. Vincenzo Scamozzi, an architect who inherited several of Palladio's unfinished commissions upon his death including the

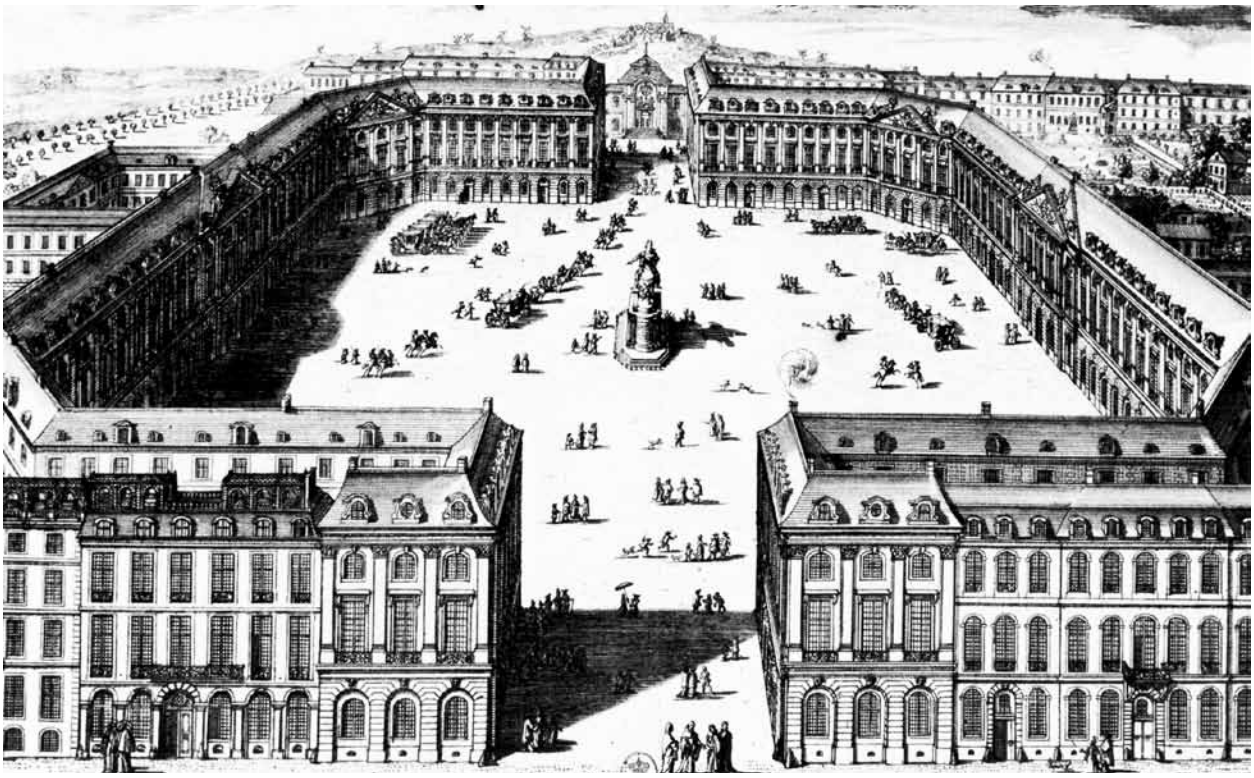
Villa Rotonda, was the first to realize this task. His design for the town of Palmanova continued Michelangelo's utopian discourse from half a century before, but unlike the Campidoglio, which relied on the simulation of the natural realm, Scamozzi employed a cosmic vision of the world supported by Baroque geometry (figure 4.8). The architectural theorist Dalibor Vesely commented on the implications of this new way of seeing when he stated "The geometric representation of cosmic space, which closely associated geometry with the divine, was an important step in forming 'absolute' space."[6] This concept of absolute space reached its climax in the seventeenth century with the discovery of Kepler's laws of planetary motion and Descartes' Cartesian coordinate system. Palmanova incorporated the latest developments in divine mathematical beauty, yet it was first and foremost a result of technological advances in artillery and the correlated evolution in military engineering.

When we look at the image of Palmanova we are immediately drawn to its intense centripetal pull, a consequence of the fact that we often see cities in plan, however, few people from its time would have had access to this privileged view. We must imagine it instead as a heavy mass lumbering across the horizon, and it is in this sense that Palmanova finds its greatest relevance. Up until works like the Villa Rotonda and Palmanova monumentality existed at the core of something. Even the Pompeian wall paintings and the Bible, examples that operate on a surrounding force, contain an energy that subsumes the human actor as an integral part. The symbolic heart of Palmanova is a vacuum, a nothingness that serves as a dictatorship with little regard for the human occupant. In the past monumentality emerged from within, but in Scamozzi's design utility supplanted monumentality, the result of which is a gaping void. The Venetian Republic invested all of their energy in the exterior, an inversion that ultimately signified the collapse of the city and anticipated the way we experience the urban world today, seen from an automobile in the countryside on ring roads that circumvent historic centers.

The transition from central to peripheral forces that occurred in Palmanova soon found a new expression in the emerging modern self. Architects and urban planners placed a renewed emphasis on the quality of civic life as populations across Europe exploded throughout the sixteenth and seventeenth centuries in response to improved

4.9 (opposite) ***Place Royale*** **and** ***Place Louis-le-Grand*****, 1605–12 and 1685–1720. Baptiste du Cerceau and Jules Hardouin-Mansart. Engraving.**
The Place Royale and Place Louis-le-Grand, or Place des Vosges and Place Vendôme as we know them today, are two residential squares in Paris that span the Baroque and Rococco periods. Place Royale is many things, including the oldest planned square in Paris, the first example of European royal city planning, and a prototype of the residential square with uniform facades that Henri IV conceived of as part of an intensive construction program intended to stimulate growth following the Wars of Religion. Unlike the Place Royale, which was a viable business venture and a civic amenity meant for the people of Paris, the Place Louis-le-Grand was a gesture of flattery for Louis XIV plagued by financial problems from the beginning. Its design and proportions served only to articulate the space of the square itself and the statue of Louis XIV at its center, however, the statue was as an empty and antiquated vessel, and fittingly, it was the first element removed. Together, these squares continue to provide the city with monumental spaces that offer a stage for the fleeting modern self.

Place Royale



Place Louis-le-Grand, Second Version

living conditions. This metamorphosis achieved its most tangible state in the program to convert Paris into the capital of France. Initiated by Francis I and continued by successive French monarchs, the transformation of Paris produced a number of innovate buildings and urban designs, with the Place Royale and Place Louis-le-Grand set at its figurative beginning and end (figure 4.9).

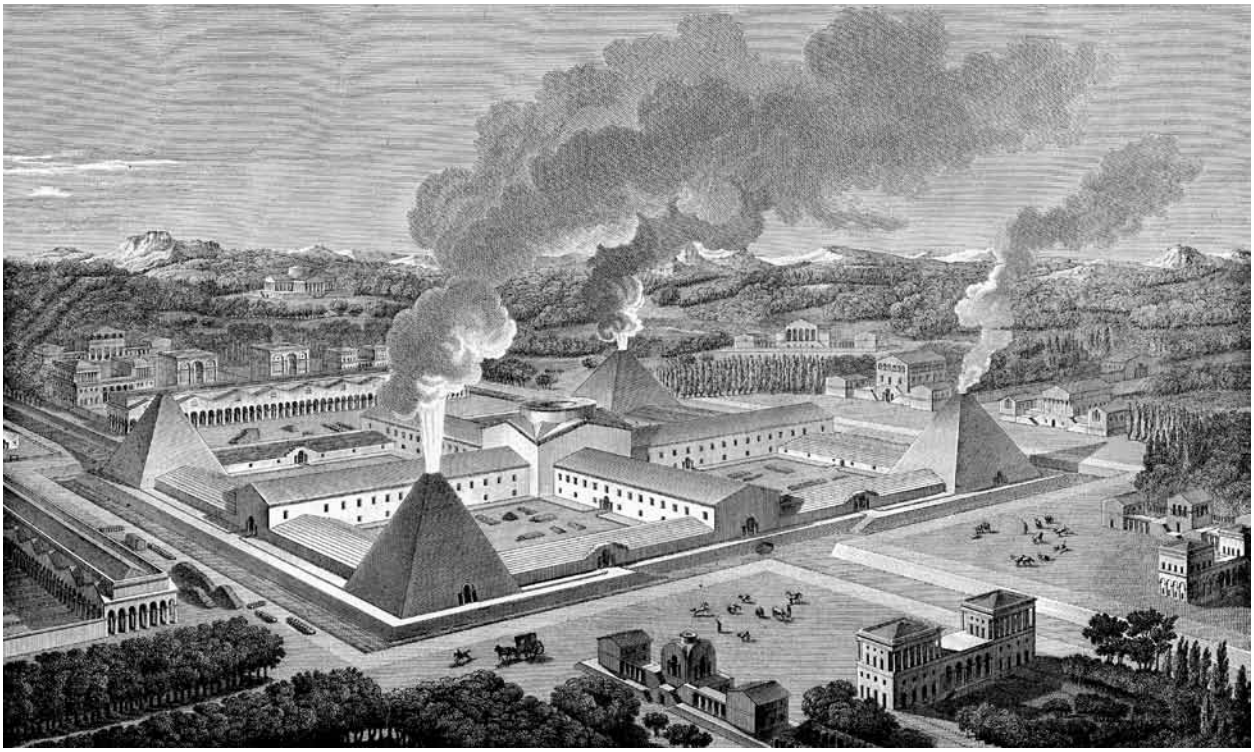
The Parisian royal square is a hybrid of the Place Ducale in Vitry-le-François and the *hôtel*, a prominent aristocratic building type developed as a response to shifts in the social hierarchy of France as well as the increasing separation between public and private space. The royal square expanded on the Renaissance concept of space introduced around the middle of the sixteenth century by the émigré architect Sebastiano Serlio. The architect and theorist Michael Dennis summarized the importance of this when he wrote, "In Italy the discovery of perspective and the resultant enthusiasm for willfully controlled architectural space had completely transformed architecture. Space was the medium of the age, the principal means of articulating a new view of the universe."[7] This idea of space is fundamental to our understanding of the royal squares. The architectural historian and theorist Colin Rowe saw them as stabilizers of the street, a view echoed by Dennis, who described them as social mediators that connect the individual with the communal.[8] These containers for modern life demonstrate that the desire to turn the city into an interior was not limited to Sixtus' Rome.

The role of the squares as urban-scaled "rooms" that encourage the interaction of a diverse range of people and mediate between the public and private realms is certainly monumental, however, their monumentality is also a direct function of the way they accommodate change. Unlike the Mesopotamian temple, which resisted the flow of the corporeal world through its solidity, the facades of the Place Royale and Place Louis-le-Grand bound and energize the unified yet flexible spaces found within their confines. The two distinct conceptual strategies that these squares evolved around is also significant. The Place Royale was developed on royal land leased by citizens on the condition that they built their houses with a public arcade at the ground floor and uniform facades and roofs. All of the houses are four bays wide, and while they appear to be identical, this is only implied, as their depths differ according to the existing context and the needs of the homeowners. In this system the facades that define the square mark a "collaboration between public gesture and private amenity", and as Dennis went on to explain, "This balance between public and private, between individual expression and collective identity, reflects a rare but provocative moment of formal and social history."[9] On the other hand, for the architect and theorist John Habraken, the Place Louis-le-Grand represents an example of "two-level organization".[10] In the Place Royale every house is of equal width, whereas the Place Louis-le-Grand consists of varying lot widths and irregular sites. Its facades unify the heterogeneous houses behind them and are as much an element of public infrastructure as the roads and sidewalks that pass through the square. The Place Louis-le-Grand provides a spatial framework that distinguishes between what is permanent—the public realm—and what is mutable—the private realm. This innovative outlook towards monumentality and change led Dennis to conclude that:

the square itself is a stable, symmetrical city "room" hiding, and allowing, the peripheral domestic freedoms beyond. That it conceals the variety around it is its strength, not its weakness, for the requirements of the *res publica* are rarely coincidental with the *res privata* and insistence on integration of the two is as untenable as the complete hegemony of one. The Place Louis-le-Grand exploited the principle of discontinuity to the advantage of both the public and private realms.[11]

PSEUDO-MONUMENTALITY AND THE ENLIGHTENMENT TRAP

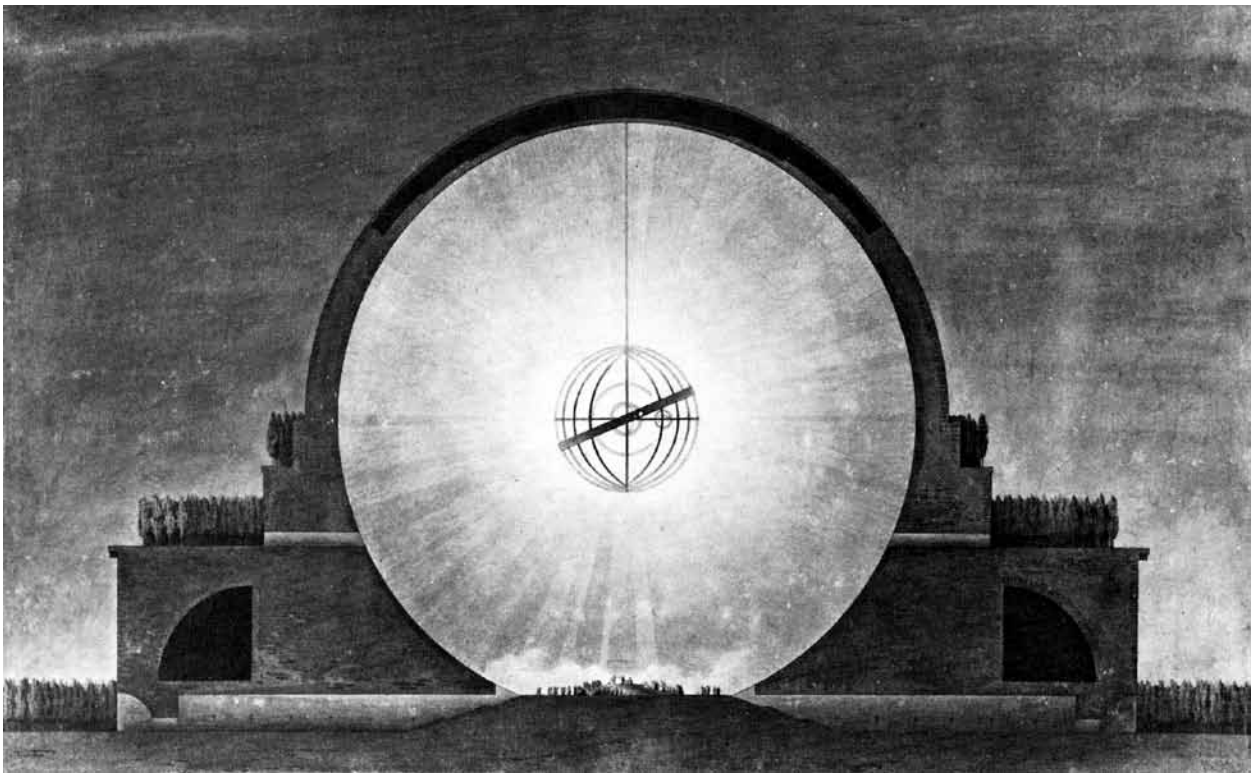
By the end of the eighteenth century the reinvention and reinterpretation that characterized the Renaissance had fallen into a trap. Architects who once strove for innovation became complacent under the belief that the classical works of the past answered the question of architecture once and for all. This was a socially turbulent time that witnessed the rapid industrialization of traditional agricultural and crafts based economies—radical shifts that engendered the urban dweller and the modern psyche and precluded the continued relevance of classical architecture. Yet the energy of the Renaissance was so pervasive that even leading figures like the "revolutionary" architects Claude-Nicolas Ledoux and Étienne-Louis Boullée could not fully escape the dominant neoclassical style. This rift between the ideal world of the past and the real world of the present personified the failure of architecture to keep pace with an industrialized society and ultimately culminated in a crisis that persists to this day.



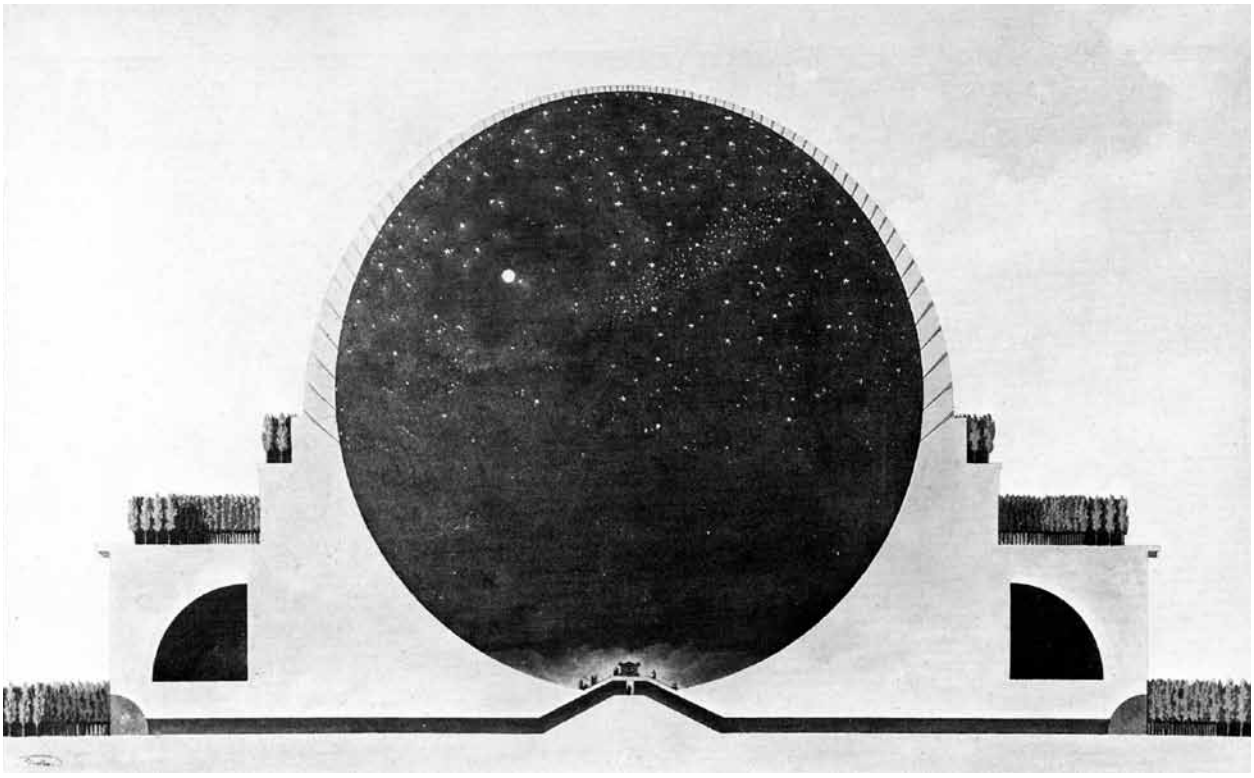
5.1 ***Saline de Chaux (Saltworks of Chaux), Vue Perspective de la Forge (Perspective View of the Ironworks)*** **from** ***L'Architecture*** **(pl. 150), 1774–79. Claude-Nicolas Ledoux. Published 1804.**
The desire to find an architectural synthesis between the industrial and social realms inspired Claude-Nicolas Ledoux's designs for the utopian town of Chaux. His solution consists of pure forms, symmetrical planning, and articulated and complex symbols nestled within the individual structures. This drawing contains many of the geometrical and stylistic treatments that Ledoux employed in his optimal union between production and necessity. The Egyptian pyramid is the most palpable example of this, with flues that bellow acrid smoke from the workshops below. Even this simple move endowed the dismal conditions with a regality previously unseen in places of production. Ledoux elevated functional buildings to a state of grandeur, and in doing so pioneered a monumentality that paid tribute to the Industrial Revolution.

The monuments explored until now share a common trait: they each respond to forces of change and immortalize the cultures that brought them into being. Whether they desired to project stability in an uncertain world or attempted to invoke images of a better future through the latest in cultural developments, these monuments are largely spiritual works of a civic nature. In Ledoux's Ideal City of Chaux, a royal saltworks of which only a few buildings were constructed, a very different application of monumentality is evident (figure 5.1). Ledoux's use of classical precedents in an increasingly modern world resulted in an architectural portmanteau that relegates monumental values to surface level treatment. Though working conditions were notoriously poor at the time, the design restricted itself to static experimentation with the solidity of the past. The Ideal City of Chaux is as much a question of the ideal city of work as it is an exercise in social control and the science of labour. In *Collage City* Colin Rowe summarized the implications of this when he wrote "For whatever its unlikely format, La Saline de Chaux is a proposal dedicated to the service of production; and if its (. . .) configuration may be construed as a tribute to the mythic potency of the classical utopia, it is still a distinctly subversive tribute. Simply the manager has pre-empted the place of the prince; and, if it is now not the law-giver but *le directeur* who is the informing power of the city, it is just as possible that we are here, very incipiently, presented with a new idea for the constitution of the state."[1] This inversion of power and social responsibility from public to private interests is one of the defining trends of the post-Enlightenment world. At the same time, Rowe's statement highlights the potential for monumentality to grapple with such challenging and intangible concepts.

The Ideal City of Chaux is an example of *architecture parlante* or "speaking architecture", a method of design that Ledoux espoused in which buildings express their purpose or function through their form. The saltworks feature many elements of literal allegory: water flows through the center of the river master's hut, while the workshop of the hoop maker takes the shape of a giant barrel. In this regard it is interesting that Ledoux used a pyramid to represent the ironworks, for as we have already seen, the pyramid was an ancient Egyptian symbol of immortality and regeneration in the afterlife. Ledoux further emphasized this Promethean rebirth through the atmospheric plumes of smoke that dominate the carefully composed vision and form an integral part of the architecture. The smoke animates the scene and insinuates a wider reach at a time when buildings gained a global sensitivity and ceased to simply affect their immediate setting. The anticipation and fear of the coming machine age is echoed in much of the literature of the period, which often recall the dramatically altered landscapes through accounts of blackened cities and skies, an endless din of noise, withered vegetation, and volcanic nights. A particularly amusing metaphor relates the tale of two "dragons" unleashed upon London to strike the populace deaf, suck the water out of the Thames, consume all the Newcastle and Scotch coal, poison the air, and leave the city in blind darkness.[2] While certainly humorous, these were clearly real concerns that architecture had to address if it was to have a meaningful role in the industrial world.



Version with Armillary Sphere



Version with Stars in the Sky

The Enlightenment focus on production and industrialization explored in Ledoux's architecture could not have materialized without the advances in science and art that occurred at the time. This accumulation of knowledge relied on the hegemony of reason and nothing symbolized this epoch more than the discoveries of Isaac Newton. It is therefore only logical that one of the most ambitious architectural designs of the Enlightenment, Boullée's Cenotaph for Newton, is a conspicuous tribute to the great scientist (figure 5.2). Like the saltworks, the Cenotaph also looks to and reinterprets the past through an enlightened lens, an exercise that Boullée used to question our role in the world and the essential relationship between the mortal and the eternal. Boullée destabilized traditional notions of space through the careful contrast of central and peripheral forces, a distinction that effectively condenses the entire world to a point of singularity. These offsetting forces describe two unique conditions: the state of an individual, and the state of an Empire. Although many of the designs of the revolutionary architects returned to the Platonic forms of the past, as Rowe realized, they used these forms to evoke the contemporary eminence of Newton rather than the ancient authority of Plato.[3]

Boullée devised the Cenotaph as a meeting place for a new world government of scientists, mathematicians, scholars, and artists who would propagate the cause of Newton, but like the wall paintings of Pompei and Luciano Laurana's *The Ideal City*, the Cenotaph was always a theoretical creation that existed purely at the level of the imagination. The images of the Cenotaph shown here express two very different environments. In the first view Boullée represented the center of the world through the "light" of science. This is a daytime scene set against the backdrop of night—a signifier of death. There is no threshold like in the Pantheon or the Villa Rotonda, and instead the occupant gains access by way of a peripheral entrance. The second view is in many ways the antithesis of the first. Its vast experiential space invokes the cosmic world in a contrast with the lively daytime scene outside, and unlike the first image, the user emerges in the very center of the Cenotaph. The work of Ledoux and Boullée is of an undeniably monumental impulse, but there is an emptiness in these reinterpreted classical forms that belies their relevance to the industrial world. The architectural historian Leonardo Benevolo noticed how contradictory our common understanding of the revolutionary architects is when he posited that "Those who appeared to be the

5.2 (opposite) ***Cenotaph for Newton*. Étienne-Louis Boullée. Drawing. 1784.**
Étienne-Louis Boullée challenged the architectural tradition of his time and dared to envision revolutionary forms that recalled the cosmic truths of antiquity. Through the use of precedents like the Roman Pantheon and the imperial mausolea he developed an architecture of abstract geometries stripped of all ornament and deployed at grand scales. The Cenotaph worships Isaac Newton as a hero and represents his scientific achievements through a cosmocentric reading. Newton's work was a fitting reference for this attempt to reinterpret the monumental architecture of the past as his discovery of universal gravitation and the three laws of motion were cornerstones of Enlightenment thought. Boullée designed several different versions of this one hundred and fifty metre wide sphere embedded within a cylindrical base—an analogy for the celestial realm. One can only imagine the effect such a reading of the world would induce at this size, and this was the point, as Boullée never intended any of his designs for the Cenotaph to be built.

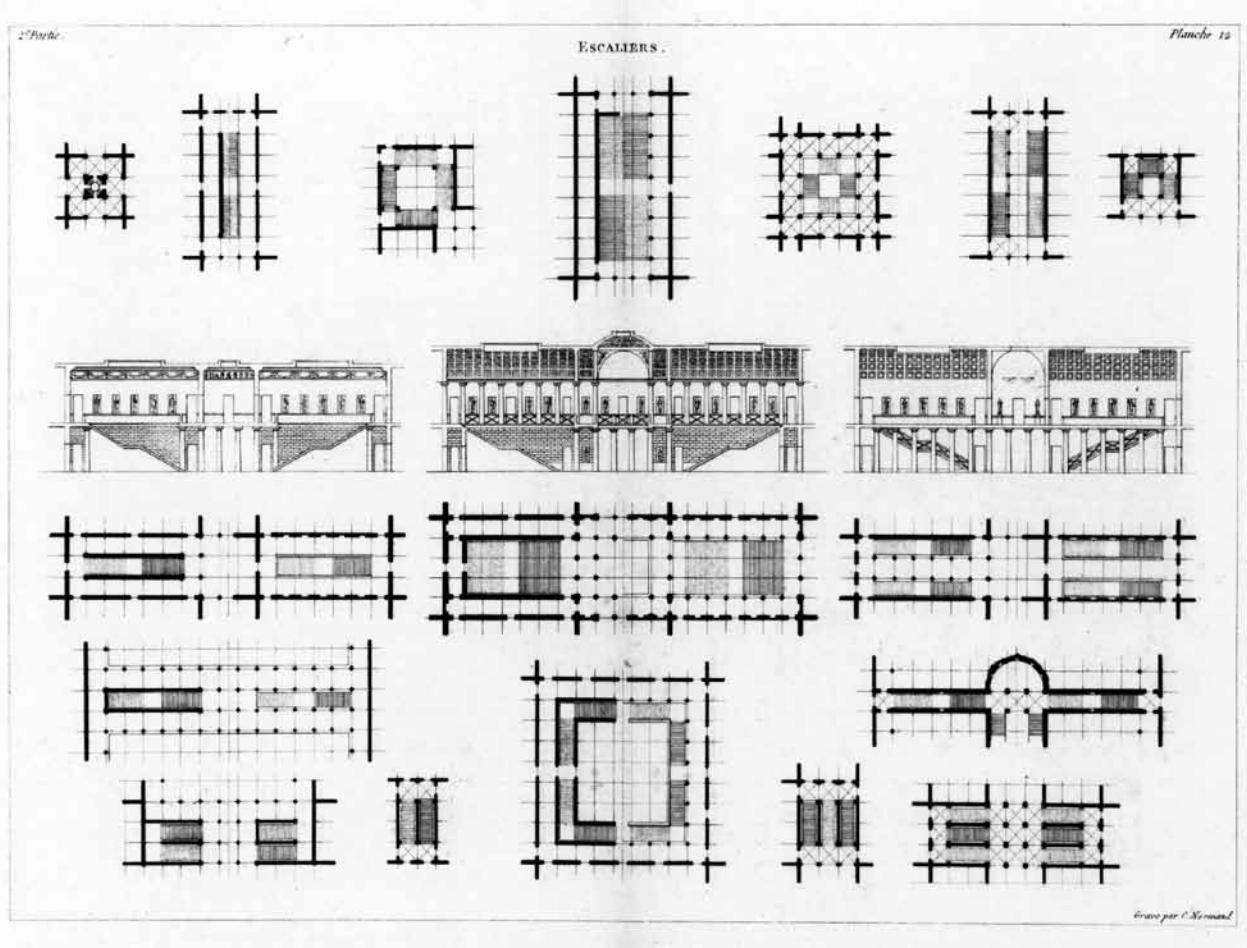
boldest innovators (. . .) did not in fact break the bounds of academic convention and did not represent the most *avant-garde* section of the thought of the time. The role that has been attributed to them, that of precursors of the modern movement, is based on abstract formal comparisons and does not stand up to historical investigation."[4]

The abstract formal comparisons that Benevolo alluded to are almost laudable if we view them against the significant shifts in perception that paralleled the rise of the Beaux-Arts style. This period marked a turning point in history: before the nineteenth century events were inherently connected and designers could rely on the innate knowledge of people, but around the turn of the century this connection faded and only the explicit carried any meaning. There is no single defining moment that precipitated this transformation; events such as the French Revolution, Western colonialism, and the growing spectre of private commercial interests all contributed to the new modern society of strangers, a world that necessitated the increasingly obvious use of design.

The architectural theories of Jean-Nicolas-Louis Durand, a former student of Boullée, are symptomatic of these conditions (figure 5.3). Rowe explained how the overwhelming emphasis on Enlightenment thought led to the belief that "if a Newton could conclusively demonstrate the rational construction of the physical world, then why should the inner workings of the mind and, better still, the workings of society not become equally demonstrable."[5] Durand's work consists of two distinct parts: classification according to type, and objective design according to method. Unlike Palladio, who looked to the past with a specific view, Durand's gaze was universal and used type in order to create an absolute language. The architect Leandro Madrazo concluded that with Durand's theory of combination and juxtaposition "Architecture became part of a system of abstract ideas and concepts, self-sufficient and detached from the natural world, its ultimate purpose to replace nature itself."[6]

For Durand, architecture was a matter of public and private utility that ensured the preservation and well-being of both society and the individual. The means to achieve this consisted of suitability and economy. As Benevolo stated, "Suitability demanded that the building be solid, healthful and comfortable, economy that it be as simple, regular and symmetrical in form as possible."[7] Durand's binary approach to architecture and engineering created one world of abstract forms and another of technical rules and procedures. Benevolo classified this school of thought as "empirical neoclassicism", where style was a mere convention that ceded its importance to practical, distributive, and constructional problems. The de facto use of ancient forms to remind people of "noble" examples from Greek and Roman history burdened architecture with a "heavy cultural mortgage" and an indifference for aesthetic definition.[8]

In *The Formal Basis of Modern Architecture* the architect and theorist Peter Eisenman expanded on the shortcomings of Durand's strategy in his discussion of the role of the architect as an interpreter of the latent intent or essence of a building. The architect imparts a physical form to the generic requirements of a building, a process Eisenman defined as "formal". The Beaux-Arts school is instead a "formalistic" process: designers invoked the past "for the beauty of the thing in itself and not as a



5.3 *Escaliers (Stairs)* from *Précis des leçons d'architecture données à l'école polytechnique* (pl. 12). J. N. L. Durand. 1802–05.

A number of factors contributed to the unique architectural climate of Jean-Nicolas-Louis Durand's early nineteenth century France, such as the increasing concern that architecture had fallen behind the scientific progress of the eighteenth century, a period when architecture, like art and literature, became a matter of public interest. This was also the time of Napoleonic rule. Distrustful of architects, Napoleon tied greatness to economy and placed an emphasis on engineering. As a professor at the Ecole Polytechnique, Durand found himself in a favourable position to exploit this attitude towards architecture and used it to create an analytical system of design.

Durand's work consists of two distinct parts. The *Recueil et parallèle des édifices de tout genre, anciens et modernes* is a study of significant historical architecture that combines elevations, plans, and sections drawn at the same scale into a dialectic of the past and present. Durand distilled general principles from complex architectural forms through a process of regularization that removed individual features and revealed their underlying order. The *Recueil* is an early typological analysis of architecture that reduced formal variations to their fundamental essence.

The second component of Durand's architectural theory is the *Précis des leçons d'architecture données à l'école polytechnique*. In this collection of drawings he used standardization to rationalize architecture. The *Précis* consists of "ingredients" that the designer then translates into a building. This method relies on a primary grid of geometry, elements of which are seen in this image of typical stair configurations. The architect transforms geometry into architecture, and as a result, geometry was the foundation for all of Durand's concepts.

Durand worked towards a science of architecture that could answer questions such as, "What distinguishes a courthouse from a museum, or one museum from another?" The most important values of his theory were *convenance* and *économie*, qualities that relegated architecture to a matter of material requirements and turned functionality into an aesthetic value. Durand studied the solid works of the past, condensed them to their basic form, and then created a system for their objective recombination that spoke to Enlightenment values at a time when design could no longer claim to express a single universal truth.

5.4 ***The Architect's Dream*****. Thomas Cole. Oil on canvas. 1840.**
This painting summarizes the universal appeal that monumentality enjoyed during the Romantic Era. Thomas Cole transformed canonical works of architecture that range from an ancient Egyptian pyramid to a Gothic cathedral into a linear series of artistic memories. The carefully composed scene presents a theatrical stage of dramatic light and shadow with the viewer set atop a monumental column reclining on books. It is the accumulated experience of architecture, but it cannot coexist. This awkward alliance implies an architectural void that is characteristic of the inability to relate to the changing conditions of the nineteenth century.

response to the nature of the specific organism."[9] Durand's buildings fail to articulate and evolve from the precise needs of their program. The non-functional repetition in his *Précis* separated compositional methods from meaning and resulted in an arbitrary and subjective architecture. This architectural dilemma only deteriorated as people continued to grasp for familiar reference points in a society increasingly dominated by machines.

Though Durand had little interest in style, the qualities promoted in his work sublimated into deeply rooted cultural values. Unfortunately, this arbitrary nature meant that what was at first a reaction to Enlightenment thought quickly lost touch with its reason for existence. Architects who once reinterpreted the past were suddenly content with celebration and preservation. Without new life, architecture—and monumentality—reached a point of stagnation. In *The Modern Cult of Monuments: Its Character and Its Origins* the art historian Alois Riegl indirectly examined this reversal through his concept of "unintentional monumentality", which he described as the modern cult and preservation of works based on their artistic and historical value. Each unintentional monument represents a specific moment in the development of

5.5 *The Professor's Dream*. Charles Robert Cockerell. Watercolour. 1848.
Like Cole's *The Architect's Dream*, Charles Robert Cockerell's rendition addressed the state of memory and monumentality in the mid-nineteenth century. Yet unlike Cole, who used a linear narrative, Cockerell's painting features a circular relationship of elevational views. This arrangement flattens the architecture onto a two-dimensional plane, a commentary on surface-based neoclassical architecture as well as a tool for the comparison of a wide variety of works in a unified vision. *The Professor's Dream* ultimately symbolizes a crisis in monumentality, for while it acknowledges the validity of a number of architectural styles, the neoclassical tradition of the time was the only accepted way to build.

our collective history and an essential element of our modern perception of time. The cult of preservation separates works from their original purpose and significance, and conversely, the people who built the unintentional monuments of the past were concerned with their own ideas rather than our future understanding. Our contemporary appreciation of these monuments revolves around what Riegl identified as "age-value", a circumstance in which historical significance yields to a general awareness of the passage of time. The fact that age-value lays claim to mass appeal through its equal embrace of every artifact led Riegl to herald it as the most modern quality of monumentality as well as the trait most likely to prevail.[10]

Riegl's theories respond to the Romantic historicism that confronted anyone operating in the nineteenth century, yet they are also a reaction to the conscious appreciation of ancient monumentality that began during the Renaissance with the notion of the recovery of an integral true identity. Riegl was likely aware of paintings like Thomas Cole's *The Architect's Dream* and Charles Robert Cockerell's *The Professor's Dream* (figures 5.4 and 5.5), both of which attest to Durand's influence and illustrate the rise of cultural history through the postulate that even the smallest element in

a developmental chain is irreplaceable.[11] These paintings embody Riegl's approach to monumentality and foreshadow the advent of modern techniques in archival and reproduction, however, the image of monumentality presented here is clearly incompatible with an increasingly fluid world. Sigfried Giedion was fully aware of the danger of age-value when he referred to the blind worship of historical architecture as "pseudo-monumentality", a practice in which "The models of the past were not imbued, as in the Renaissance, with a strong artistic vision leading to new results (. . .) They were used indiscriminately everywhere, for any kind of building. Because they had lost their inner significance, they had become devaluated, mere clichés without emotional justification."[13] By the time Giedion said this Durand's principles dominated almost every significant public work of architecture, from universities, museums, and

5.6 ***A Bird's-eye View of the Bank of England*****, 1830. John Soane (drawn by Joseph Gandy). Watercolour.**
John Soane and Joseph Gandy's idiosyncratic relationship produced many remarkable works of architectural representation, though none is as complex and unorthodox as this image, which captures the entirety of Soane's forty-five year tenure as Architect to the Bank of England. We will never know the full extent of Gandy's influence—a trained architect himself—on the elder Soane's designs, yet it is certain that this retrospective view had little input from Soane, who by this time was nearly blind and relied extensively on his beleaguered draftsman.

For Gandy, historical awareness correlated with future sensibility, a principle he used here to ensure the immortality of Soane's architectural legacy within a lineage of prospective antiquity. His illusionistic view conflates an array of architectural conventions into a technical and historical guide that imagines the fall of architecture and the fall of England. Gandy's ruins also anticipated Riegl's theories, which state that as age-value or decay becomes more extensive, its effects on the viewer become more intensive. This entropic union of nature and temporality foreshadowed the continuous cycle of becoming and passing away that would come to define the twentieth century, and as the art historian Brian Lukacher remarked, Gandy's views show that "space can be transformed into the artifice of reflection, into an intangible image that belies architectural reality"[12]

opera houses, to train stations, courthouses, and town halls. The pervasive nature of pseudo-monumentality was a major impetus for the modern movement, though the importance it placed on aesthetics meant that many noble aspects of monumentality were marginalized or altogether forgotten.

Durand's theories enjoyed the popular support of many architects and academics, yet this fact alone does not account for their prevalence. Nineteenth century Europe experienced broad political reforms marked by an open struggle between conservative and democratic ideologies and the continued scrutiny and debate of monarchic power structures following the French Revolution and the Battle of Waterloo. The conflicted and reserved nature of the period meant that architecturally innovative designs were few and far between, a fact that the private interests of an industrialized country like England only exacerbated. This unique political and economic climate provided a model environment for the dispersion of Giedion's pseudo-monumentality.

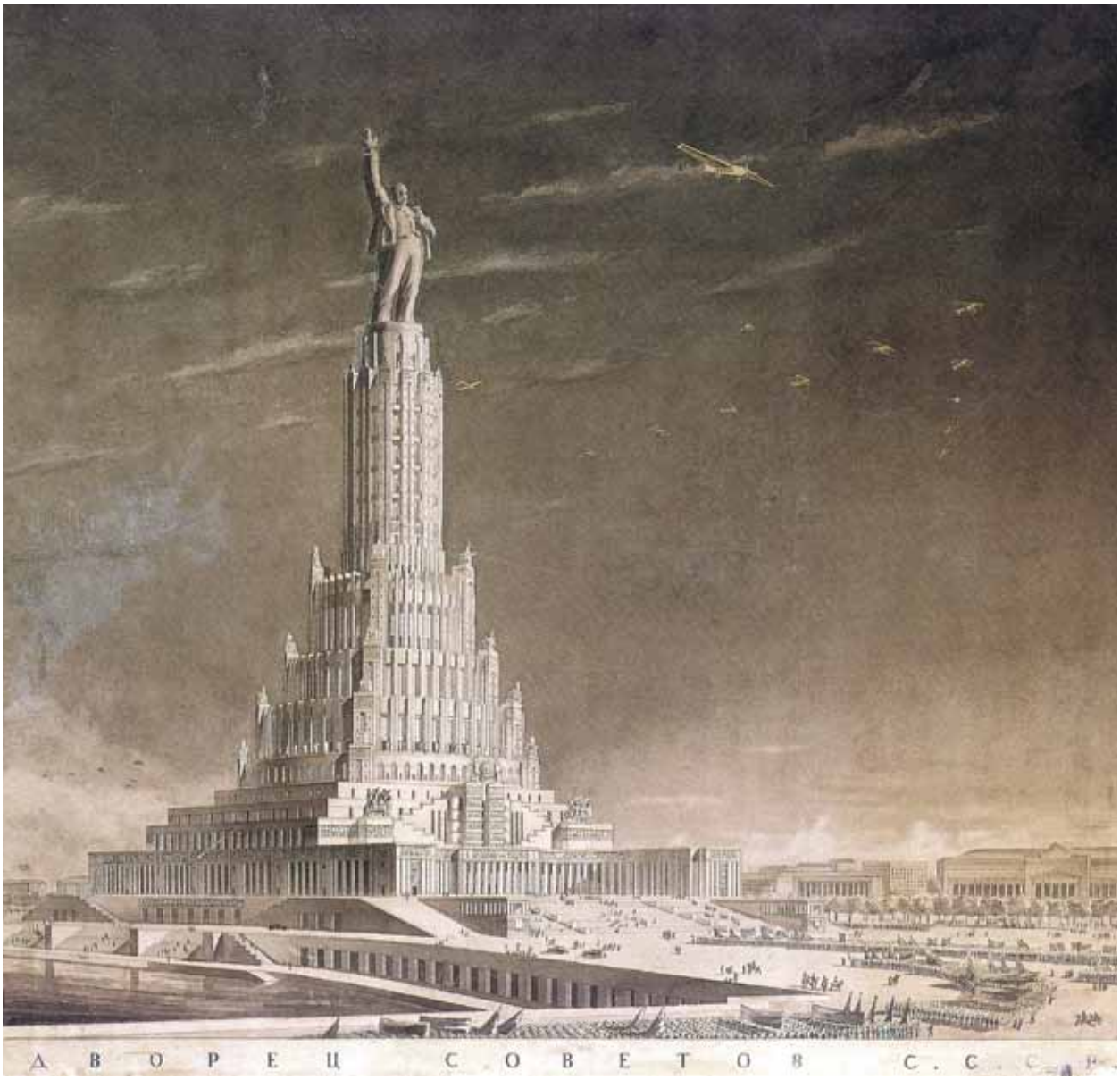
The architect John Soane and his architect-draftsman Joseph Gandy both lamented the formulaic designs of the time and felt that London failed to reflect the magnitude of its historical stature. While it would be easy to attribute their desire for an architecture that immortalized Britain's post-Napoleonic supremacy to the Enlightenment fascination with monumental public works, the way in which Soane and Gandy operated was very much at odds with the pseudo-monumentality of their contemporaries. Though they also looked to the past, their explorations offer a critical commentary on the cultural significance of history that provided them with a "reflected and distorted vision" that could answer the question of how architecture may become more meaningful.[14] The weight that Soane and Gandy placed in history certainly parallels Riegl's concepts, a connection that culminated in Gandy's synoptic drawing of the Bank of England in ruins (figure 5.6). This archaeology of a future past plays on the emotions of the viewer, a phenomenon Riegl elaborated on when he wrote "from man we expect accomplished artifacts as symbols of a necessary process of human production; on the other hand, from nature acting over time, we expect disintegration as the symbol of an equally necessary passing. We are as disturbed at the sight of decay in newly made artifacts (premature aging) as we are at the traces of fresh intervention into old artifacts."[15]

Gandy's ability to bring architectural views to life through the picturesque and the sublime suggests a new architectural experience that is both serial and layered. As the art historian Brian Lukacher declared, "For Gandy, the artistic mission of the perspective drawing entailed nothing less than creating a historical vision of architecture: a poetical recovery of the classical past in which both temporal and spatial dimensions would be made startlingly visible."[16] This "poetical recovery" transforms our role as an observer into a wandering explorer that encounters the ruins in a process of discovery where we are no longer in control of our involvement. Yet there is also some danger in the way Gandy focused on theory and pictorial representation, and in their Royal Academy lectures both Soane and Cockerell warned architects not to lose themselves in endless speculation about the origins and evolution of architecture. As Gandy's life wore on his ambitious search for architectural

significance rendered him a neglected genius misunderstood by his peers. Perhaps Gandy grappled with qualities that were too transcendent for their time, however, while his utopian dream of architecture as a universal language remains unrealized, his timeless narratives secured the historical memory of Soane's work through an eternal dialogue between architecture and nature.

Although Gandy flirted with what we would denounce as pseudo-monumentality, he tempered his forays into the past with a careful consideration of programmatic requirements and an almost blind hope for a better future. For Gandy, meaningful architecture could not exist without historical awareness, a belief that supported his conviction that architecture is a public medium well suited for the expression of universal values and truths; however, as we have seen through examples like Ledoux's saltworks, architecture increasingly existed in the private domain, an inversion that reached an entirely new level in the political landscape of the early twentieth century. While at first glance most communist, fascist, and socialist buildings appear to be public in nature, their public character has little in common with the ancient Athenian appreciation, which defined the public as a collective body of citizens greater than the sum of its parts. The public appearance of the totalitarian works of the last century was an illusion that concealed oppressive leaders who attempted to establish their legitimacy through references to the past, and in fact, even democratic federal architecture in the United States exhibited similar characteristics that encouraged the insignificance of individual voices in relation to the hegemony of society. These regimes all rejected the modern world and instead sought to replace it with the appearance of a stable classical order that could provide a permanent backdrop to their frequent changes in directive, but as this solid model of truth no longer reflected the nature of life, it could never succeed.

The Palace of Soviets is a particularly unique example of politically motivated pseudo-monumental architecture in that a large divide separates the original intentions of the competition from the final result shown here (figure 5.7). What began its life as a paradigm of monumental modern architecture gradually evolved into the architect Boris Mihailovich Iofan's scheme, which contains borrowed neoclassical forms, absurd proportions, and a colossal statue of Lenin that caps the entire display. The statue, the most important element of the design, stresses the importance of scale. Since pseudo-monumentality incorporated formal languages as absolutes it could only distinguish itself through sheer size alone. This process of magnification epitomizes Venturi's theory of postmodern architecture as a billboard, but interestingly, it also represents a paradoxical inversion of scale. The enormous statue of Lenin simultaneously miniaturizes the building and obliterates the human individual. There is a certain humour in this, for Lenin's Mausoleum—the precursor to the Palace of Soviets—is quite diminutive and barely suitable for public viewing. One was too big, and the other, too small. While it may be hard to see Iofan's entry as anything more than an architectural folly, we must remember that the Soviets considered its construction a top priority. The Palace of Soviets was ultimately a victim of its own megalomania; the most monumental building ever designed was the one that made monumentality ridiculous.



5.7 ***Palace of Soviets*****, 1931–33. Boris Mihailovich Iofan. Drawing.**
The Palace of Soviets is an important reference for both modern architecture and pseudo-monumentality. Stalin and his Council of Construction conceived of it as a Communist convention center and mausoleum for Lenin that would anchor their redevelopment of Moscow. In the first of four stages most entrants submitted modern designs and architects like Le Corbusier created highly regarded schemes that used playful geometric forms to embody an architecture of revolution. As the project evolved it became a sacred space and a symbol of the Soviet determination to overtake America's burgeoning global importance. The organizers continuously revised the brief to reflect these intentions and entries such as Le Corbusier's became a lightning rod in the battle for contemporary monumentality, with many architects of the opinion that the Soviet Union "betrayed" modern architecture.

In the final two stages the preoccupation with monumentality became increasingly palpable. The conscious desire for a design that overtly expressed Soviet power led to this final iteration in which the Council of Construction forced Iofan to accept coauthors largely responsible for its appearance. In this form not even a trace of the many innovative solutions from the original competition remained. Construction came to an abrupt halt with the Nazi invasion of Soviet Russia, and after the war the city converted the foundation into a swimming pool before eventually rebuilding the cathedral that originally occupied the site. This infatuation with pseudo-monumentality resulted in an enormous billboard that spoke to antiquity far more than the modern world.

To think that the Palace of Soviets was an isolated occurrence belies the mass appeal of pseudo-monumentality. Its singular scale only foreshadowed the total approach found in Adolf Hitler and Albert Speer's master plan for the redevelopment of Berlin, where the subversion of monumental architecture in support of a political dictatorship reached its climax and ultimate fall under the Third Reich (figure 5.8). There is a certain irony that the place that played such a pivotal role in the development of modern architecture became what Benevolo described as "the theatre of the most grotesque experiment in stylistic disinterment."[17] Hitler and Speer extrapolated the heavy-handedness of the Beaux-Arts to its crazy extreme; it was no longer about guiding the stranger, but of manipulating the stranger. The use of architecture as a method of control, and perhaps more importantly, the capacity for monumentality to achieve such malign results, raises a number of social and philosophical concerns. As Benevolo noted, Hitler and Speer's plan for a new Berlin was "a *reductio ad absurdum* of the link, now ineluctable, between architectural decisions and moral ones."[18]

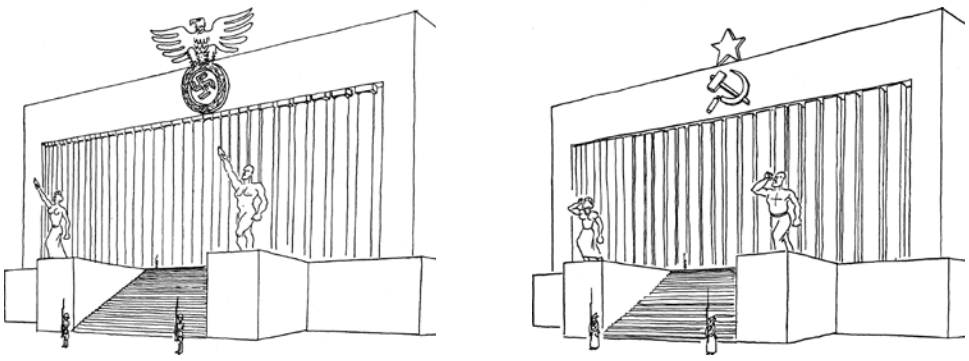
In order to understand the monumentality of Hitler and Speer's architecture we must first examine its political purpose. New Berlin was the reconstitution of ancient Athens, an idea that the philosopher Martin Heidegger borrowed from the poet Friedrich Hölderlin, who called for a national renewal founded on a German revival of the Greek beginning. Heidegger saw the rise of National Socialism as an unparalleled opportunity for Europe to regain the grandeur of Dionysian Greece, a Greece that, as Robert Jan van Pelt stated, "had been rediscovered on a poetic level by Hölderlin and on a philosophical level by Heidegger himself."[19] Nazi architecture deified Hitler as the only man who could realize the return of this lost legacy. Its forms symbolized the connection between Hitler as the leader and Hitler as the constitution of the people; the Führer allowed the *Volk* to "become conscious of itself and its destiny. He was the unifying link that joined the traditional manifestations of the state, the party and the Volk into a new and dynamic synthesis."[20] Since the Führer represented the Volk, the Nazi architecture that celebrated his rise to power also claimed to celebrate the people and their struggle, but as van Pelt realized, "the victory as embodied in the new city plan was (. . .) the triumph of the stranger Hitler over all."[21]

5.8 (opposite) *New Berlin*, 1943. Adolf Hitler and Albert Speer. Physical model.
Adolf Hitler and Albert Speer's designs for Berlin occupy a distinct place within the architectural lineage of the twentieth century. The pair aspired to create a new empire that placed architecture as its very foundation. Speer envisioned New Berlin as the successor to classical civilizations like ancient Athens and imperial Rome and formulated his theory of "ruin value" as a tool to inspire heroic thoughts in future generations. Hitler and Speer's imitation of the past resulted in a Berlin of gigantic proportions completely out of touch with the human scale. In their design only one order of movement existed, an axial arrangement that forces the individual to serve the needs of the Reich at all costs. The central element of the scheme would have been the Kuppelberg or "Dome-Mountain", the *axis mundi* of the Third Reich and a clear allusion to the Roman Pantheon. Their design is a testament to the dangers of architecture when used only to advance political intentions, however, it is important that we learn from these works and not allow them to taint the many positive values of monumentality.

The triumphal arch and its mythic character was a key element of Hitler and Speer's plan. Twice as large as Napoleon's Arc de Triomphe in Paris, the 1 800 000 names inscribed on its granite surfaces eulogized the casualties of World War I and created a direct link between Hitler and the forgotten souls that helped him achieve his power.[22] Part of a larger narrative with the Kuppelberg, the arch marked the catastrophe of 1918, while the dome commemorated an everlasting victory that never came. The inability to distinguish between the mortal and the immortal is perhaps the greatest flaw of New Berlin. The triumphal arch and the Kuppelberg were designed for Hitler, while the Acropolis was a building for the gods. Hitler and Speer reconstructed the Acropolis, but their design replicated history purely through intent, and as van Pelt remarked, "The granite mass of the buildings, which were to stand for a thousand years, literally now became the symbolic content of Nazi architecture. Their meaning was their permanence."[23]

Even in the monumental solidity of the past permanence alone was never a raison d'être. This breakdown in architectural meaning and significance is synonymous with the disastrous connection between politics and architecture that transpired throughout the first half of the twentieth century, a failure that van Pelt underscored when he noted:

> What had been real and legitimate in Athens, and what should be in our age credible to us, the Nazis used as a conscious architectural trick. In Periclean Athens the necropolis, the Agora and the Acropolis anchored the reality of urban life in the consciousness of the people. In Germany architecture and urban design became tools of deception, a carefully designed stage for the rituals handed down by the Ministry of Propaganda."[24]



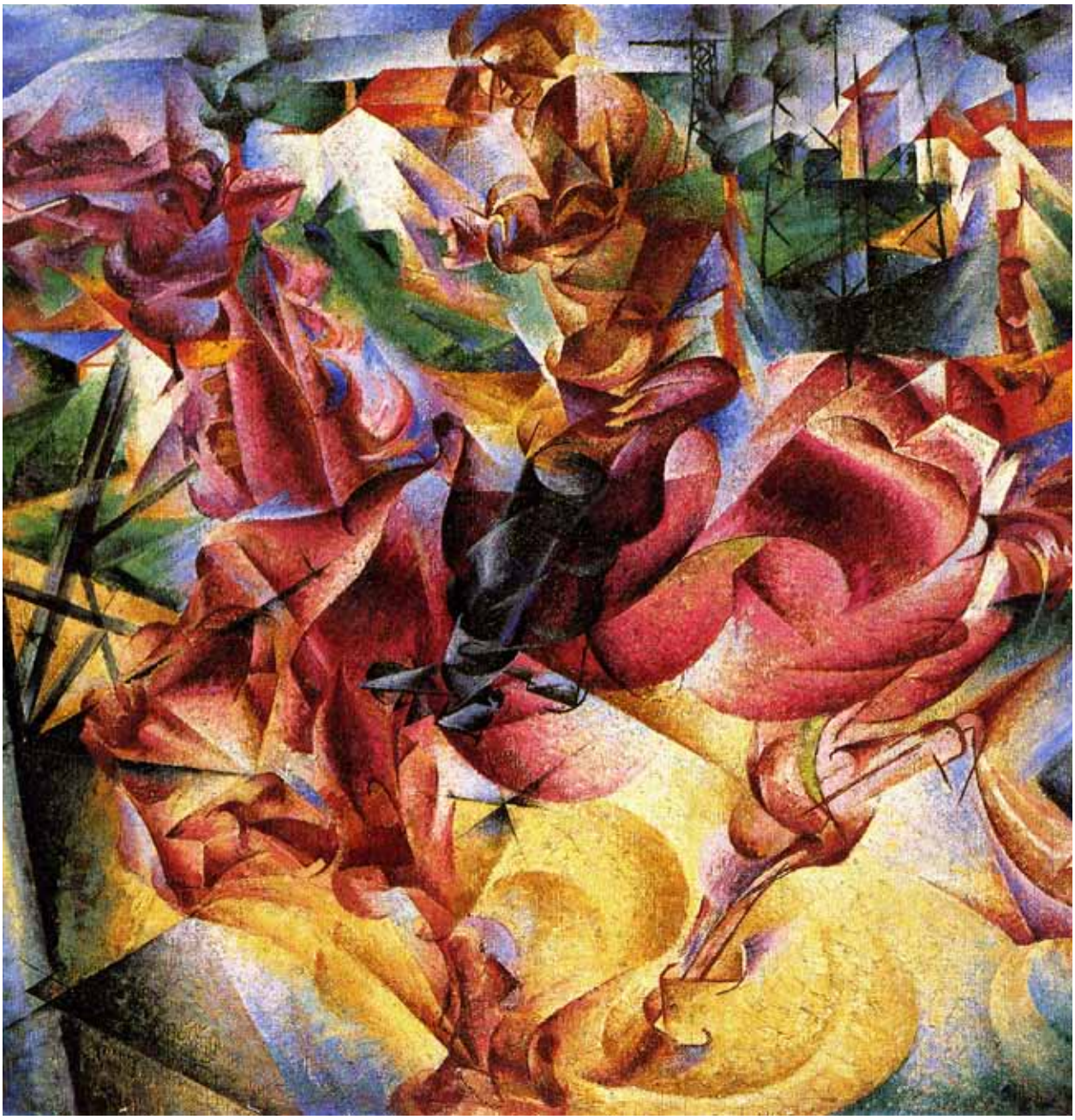
5.9 *Third Empire* and *Marxist non-Aryan* from *Cartoon History of Architecture*. Osbert Lancaster. 1975.
In the *Cartoon History of Architecture* Osbert Lancaster reduced various icons and styles of building to their architectural essence. His drawings indicate the similarity between the purported monumentality of socialist and communist ideology. Both of these works are examples of pseudo-monumentality that merely borrow from the past in the hope of furthering their relevance for the present. We may speculate that these sketches refer to the International Exposition of 1937 in Paris, where the Nazi and Soviet pavilions engaged in a symbolic duel along the main concourse. Though the two regimes claimed to be so unlike each other, they treated architecture in exactly the same way.

The fact that two regimes who claimed to be so unlike each other arrived at an identical proposition is a telling sign of the inability of pseudo-monumentality to respond to the politicized twentieth century, an irony that Osbert Lancaster illustrated in his *Cartoon History of Architecture* (figure 5.9). Monumentality was always about a particular vision of the meaning of life, yet when two very different sets of ideological values proved to be aesthetically indistinguishable it undermined the ability of architecture to represent our existence. These shortcomings ultimately led modernists to call for a total break with the past, a collapse that Benevolo summarized when he concluded, "The historical lesson, however painful, was eloquent, showing that forms had no cathartic power and that artistic tradition could be emptied of meaning from within, when its moral propositions changed."[25] Benevolo went on to declare that "For its part the neoclassical repertoire, well-worn by continual repetition, had lost any intrinsic ideological significance it had ever had, and was valued precisely because it had become an empty form into which any content could be poured."[26]

A MODERN MONUMENT

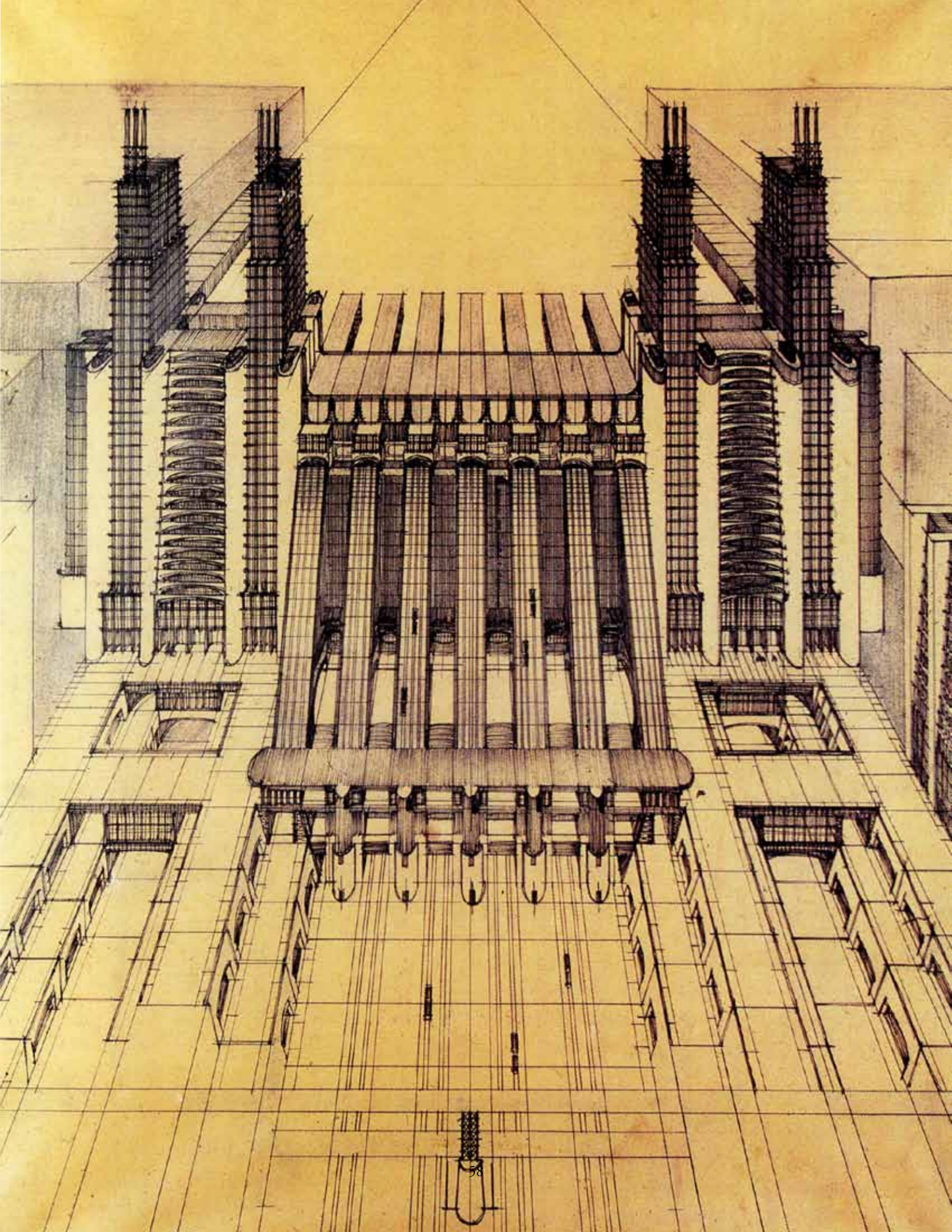
The twentieth century experienced a profound shift like no other in history; the rise of the machine and our associated interaction with technology fundamentally changed society. What began as the promise of a better life throughout the eighteenth and nineteenth centuries finally materialized into a substantially higher quality of living, yet at the same time this world marked a sudden departure from the eternal and permanent values of the past. Transience and expendability were the new ideals of modern existence, attributes starkly opposed to the tradition that defined bourgeois academicism and its belief in linear continuity. Though every era has some degree of novelty, the problem of modernity was a philosophical question rather than one of historical periodization that had numerous implications for the development of what Sanford Kwinter termed "modernist space".[1] The poet and ideologue Filippo Tommaso Marinetti believed that the solution to modernity revolved around the use of modern principles in the realm of aesthetics. While this may sound readily apparent, we must remember that neoclassicism was still the dominant style and his idea and the way he set about to achieve it was nothing short of revolutionary. Marinetti described his reorientation of art in the *Futurist Manifesto*, a brief text published on the front page of *Le Figaro* in which he consecrated man's marriage to technology through a celebration of the beauty of the machine and the virtues of speed, and declared that like the ancients who drew their inspiration from the natural world, we must look to the new mechanical world in order to understand the modern self.

The rapid industrialization of northern Italy that followed the *Risorgimento* provided the Futurists with many of their most endearing subjects, such as the automobile, the crowd, the train station, the power station, and the factory. However, not unlike Isaac Newton and his influence on the Enlightenment more than a century before, this period yielded scientific discoveries that were at the root of almost all modernist thought, a view that Kwinter elaborated on when he wrote "As changes of state and *qualitative* transformations began to impose themselves as significant problems for scientific investigation, matter increasingly came to be seen as active, and space as plastic, flexible, sensitive, and organic."[2] Albert Einstein's work on special relativity effectively dispelled both the classical notion of absolute space and time and the epistemological hold of space over time through the theory that all uniform motion is relative, and as Kwinter noted, "Einstein's physics was an attempt to think the pure event, independent of a material medium or substratum."[3] Around the same time the sculptor Adolf von Hildebrand published *The Problem of Form in Painting and Sculpture*, a treatise that argued that space is an autonomous and homogeneous aesthetic realm indistinct from solid objects. In an effort to resolve the problem of being in this new chaotic world of forces and fragments the Futurists incorporated space into the body of time through the concept of a "continuous multiplicity".



6.1 *Elasticity*. Umberto Boccioni. Oil on canvas. 1913.
In *Elasticity* Umberto Boccioni captured the Futurist fascination with speed and the idea of the human body in perpetual motion. He translated dynamic sensations into permanent forms that express an object's "atmosphere" rather than its figure. The saturation of simultaneous shapes demonstrates his belief that "time and space are full and have a plastic consistency".[4] Space is bound together with time, a union that endows the canvas with aesthetic continuity. As a modern symbol of vitality and strength, *Elasticity* reflects the "physical transcendentalism" central to Boccioni's Futurist theory.

Observers often compare Futurism to Cubism, yet the two movements are intellectually quite distinct. The Futurists dedicated their work to the continuous "field" of an object in motion, while the Cubists expressed the value of time through a series of views of an object or form. In *Elasticity* the predominance of curves and the interpenetration of shifting planes propel the horse and its rider across the canvas. Elements like the horse's hooves and the smokestacks on the horizon create striking explosions of energy and imply a global effect beyond the limits of the painting. These plastic zones of influence ultimately replace the static past with a modern appreciation of space and time that reflects the intangible and fleeting forces of the contemporary world.



Kwinter observed that with the loss of the past's unity the monumental as a closed work bounded by a clear beginning and end could no longer exist and the modern work was now "open". This triumph of the dynamic over the static is a central feature of Umberto Boccioni's *Elasticity*, a painting that depicts the action of a man riding a horse set against an industrial backdrop much like Claude-Nicolas Ledoux's saltworks (figure 6.1). The rider's mastery of speed, and thus time, implies a great dominance of space. Boccioni achieved this effect through his concept of the field, a shallow layer of space that borrows from Einstein's work in electromagnetic and gravitational forces as well as the philosopher Henri Bergson's ideas on relative and absolute motion and the role of intuition and memory. The field radiates out from the center of an object, and as Boccioni explained in *The Plastic Foundations of Futurist Painting and Sculpture*, "areas between one object and another are not empty spaces but rather continuing materials of differing intensities" with "only a greater or lesser intensity and solidity of space."[5] *Elasticity* captures the direct sensation of speed experienced through the symbiotic connection of a man and a horse, a metaphor for the automobile—the Futurist symbol par excellence. The rider's relationship to his steed creates an inversion of scale similar to the Palace of Soviets, yet unlike the statue of Lenin, which miniaturizes both the architecture and the individual, Boccioni's painting magnifies the greatness of modern man.

The Futurist principles of speed and continuous motion found their architectural expression in the work of Antonio Sant'Elia. Sant'Elia inherited the industrial lineage of Enlightenment architects like Ledoux, though his designs are a clear reaction to the pseudo-monumental preoccupation with classical forms. In his *Messaggio* Sant'Elia renounced tradition in favour of a radical renewal of architecture not subject to historical continuity. He specifically targeted the monumental as a massive and static building type when he proclaimed that the modern age was a new era informed by its taste for the practical that existed in "light and maximally elastic materials" like

6.2 (opposite) ***Airplane and Railroad Station, with Cable Cars and Elevators on Three Street Levels*****. Antonio Sant'Elia. Drawing. 1914.**
This drawing of a transport interchange is part of Antonio Sant'Elia's *La Città Nuova*, which developed out of a series of projects for the Milan Central Station. The various circulation elements and the careful relationship of the parts to the whole are hallmarks of Sant'Elia's studies on the existential problems of industrial society. Sant'Elia converted traditionally prosaic features such as elevators and stairs into prominent components that capture the energy of the modern world and establish movement as a cardinal value. As an allegorical depiction of the metropolis, the station is a symbolic dam that keeps the pressures of the city in check while providing power to its occupants.

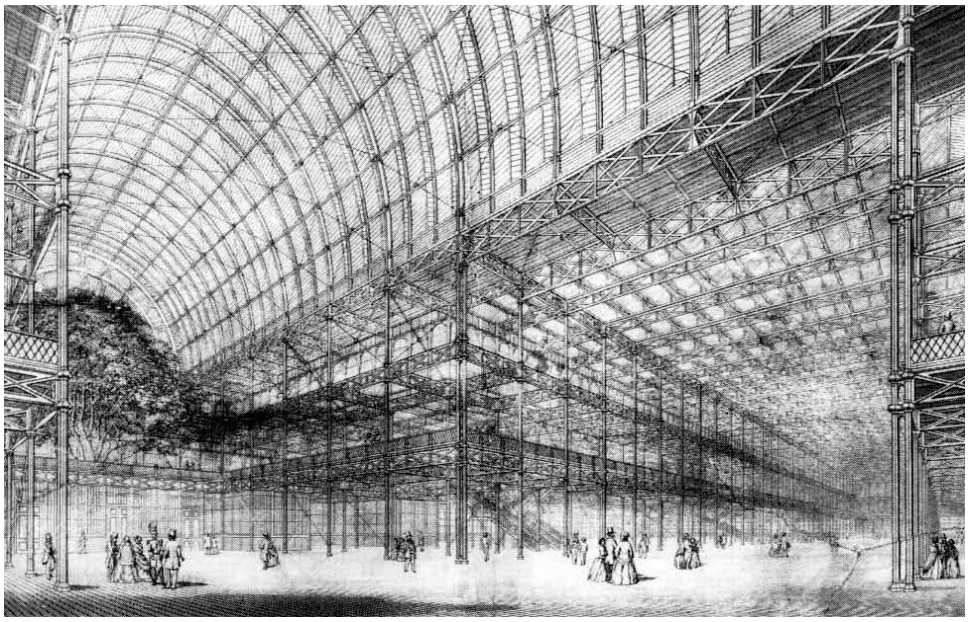
The multiplicities of time evident in Sant'Elia's works are their most progressive quality. Several modes of passage exist in this image alone, including ramps, catwalks, elevators, stairs, and cable cars. The airplane landing strip is itself a radical break with convention that symbolizes the Futurists' faith in the machine alongside new advances in speed. We must remember that the first European flight occurred only eight years earlier, and the Wright Brothers' just three years before that. Sanford Kwinter summarized *La Città Nuova* as a system "with no inside or outside, no center and no periphery, but with merely one virtual circulating substance—force—and its variety of actualized modes—linear, rotating, ascending, combining, transecting."[6]

reinforced concrete, iron, glass, and textiles.[7] For Sant'Elia, modern architecture was a question of science and technology that had nothing to do with formalistic and stylistic differences between the past and the present; the power station was the pinnacle of Futurist architecture, and "The City of Tomorrow", its central theme.

Sant'Elia's oeuvre exists in two distinct phases: the single architectonic structures found in his *Edifici* and *Dinamismi Architectonici*, and the more developed urban designs of *La Città Nuova*. The *Edifici* and *Dinamismi Architectonici* are studies in the kinetics of form that use a combination of bold geometries and a propensity for atomization to create the appearance of an architecture in motion reduced to a series of varied intensities in force, but it was in *La Città Nuova* that Futurist dynamism reached its most sophisticated architectural interpretation. His design for an airport and railroad station personifies Robert Venturi's belief that modern architecture tends to separate and specialize its materials, structure, program, and space (figure 6.2). In *Complexity and Contradiction in Architecture*, Venturi described Sant'Elia's projects as "multifunctioning" buildings that combine "complex and contradictory hierarchies of scale and movement, structure, and space within a whole."[8] The station correlates the vast modern city and its network of transport services with a multitude of speeds and forces. The many vertical layers integrate traffic and free the ground plane in the spirit of the metropolis that rises out of a "tumultuous abyss". According to Kwinter, Sant'Elia used these qualities to exaggerate the station's nature as a commutation point that embraces "the city block into which it has been literally submerged, continuing the city's existing lines of flow (streets, tram routes, passages) through its own, pausing only to effect additional convergences by means of ramps, catwalks and steps."[9]

Kwinter concluded that Sant'Elia's work is "*an architecture of conjunction* (. . .) that does not posit forms primordially, but rather [through] stratifying *systems* whose expansivity and acenteredness preclude classical individuated expression."[10] While this is true to a certain extent, his attempts to reconcile dynamic time with aesthetics are almost Mesopotamian in their solidity. Sant'Elia praised the grand hotels, railway stations, giant roads, colossal harbours, covered markets, and glittering arcades of the early twentieth century as paradigms of the future, yet these types all involve an essential contradiction: in their specificity they can only presuppose a fixed future state. Although his designs address many of the attributes critical to modern monumentality, the primacy of the machine and the total exclusion of humans as willful and active participants ultimately mark the demise of the Futurist vision, and as Colin Rowe stated, "for all its action-directed posture, inherently, it is almost unbelievably passive; that rather than protest, it largely involves endorsement of what is supposed to be endemic; that, rather than being conscious of morals, it is apt to be success-oriented."[11]

When Sant'Elia died in the First World War the architectural ambitions of the Futurists perished with him. His drawings were almost prophetic, yet they could not escape the weight of the past and failed to fully contend with the complexities of an advanced technological society. The fact that they were destined to languish on paper means that to a certain extent Sant'Elia's designs will always represent a lost ideal. The



6.3 *Interior of the Crystal Palace*, 1851. Joseph Paxton. Drawing.
Joseph Paxton's Crystal Palace and its soaring and completely transparent confines was a seminal moment in the passage to modernity that broke new ground through its use of prefabricated and lightweight modular cast iron parts. This method of construction brought flexibility and standardization to the realm of architecture in a stark contrast to the monoliths of the past. After The Great Exhibition closed workers dismantled the building in a matter of weeks and rebuilt it at another location.

The Crystal Palace was the first building to use a metal frame that could span in two directions. In combination with an equally innovative glass facade, this structural system radically altered the accepted boundaries of interior and exterior space. The building even assimilated full-grown Elm trees located on the exhibition grounds of Hyde Park, and in fact, Paxton added the transept shown here in order to accommodate some particularly large specimens and provide lateral support for the structure. While it is often remembered for its technical ingenuity, this symbiosis between the living and the man-made is central to the continued significance of the Crystal Palace as an early modern monument.

Futurists revered the dynamic nature of the modern world, but it was this very quality that subverted their works. Although the way Futurism celebrated technology and speed with an almost religious fervour was certainly novel, its dramatic tone tends to overshadow influential early modern buildings such as Joseph Paxton's Crystal Palace, a vast exhibition hall that also paid tribute to technology, but did so in a much subtler way (figure 6.3). The Crystal Palace marks the origins of the Futurist architectural ethos, however, it is through its role as a bridge between the unconscious and the deliberate that it reveals its greatest meaning. Designed by a gardener-cum-architect, the Crystal Palace is more the particular coalescence of a number of almost incidental forces and ideas rather than the single will of an overarching creator. It is as if the building was cast into being from the spirit of its times with Paxton set as a mere actor. Like Jeremy Bentham's Panopticon, the Crystal Palace is both a culmination of the period that came before it and a symbol of its epoch; it is a function of the human energy and warmth of the nineteenth century as well as a guiding inspiration for the future.

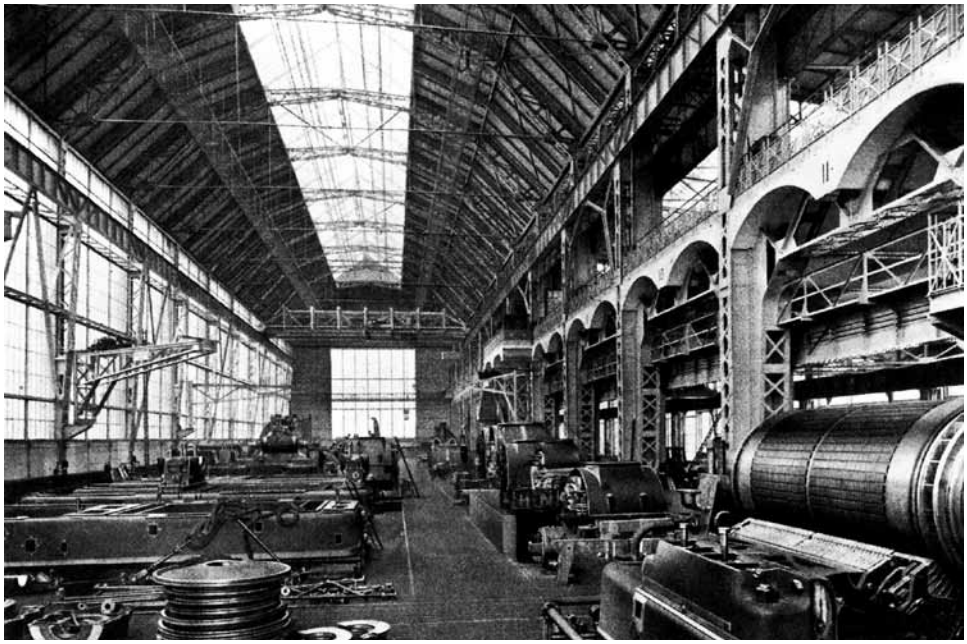
The Crystal Palace was a rational extension of the typological greenhouse and could not have existed without the advances in engineering that occurred around the time. Unfortunately, this focus on its material properties tends to overshadow its programmatic significance. While much has been made of the network of cast iron parts, it is through its purpose as an enormous container for modern life—not dissimilar to the Parisian royal squares two centuries before—that we may find its most monumental reading. The Crystal Palace offered its paying visitors a panoply of displays that ranged from caskets of rare jewels and gems to pneumatic railway cars, a steam brewery, household items, power looms, self-acting mills, steam presses, centrifugal pumps, boilers, and carriages, all in full operation. This combination of curiosity and spectacle led to immense and varied crowds of as many as one hundred thousand people, a figure unrivalled since classical times and practically unheard of in an enclosed space. In his cultural study of the industrial revolution the political émigré Lothar Bucher reflected on its prodigious interior:

> We see a delicate network of lines without any clue by means of which we might judge their distance from the eye or the real size. The side walls are too far apart to be embraced in a single glance. Instead of moving from the wall at one end to that at the other, the eye sweeps along an unending perspective which fades into the horizon. We cannot tell if this structure towers a hundred or a thousand feet above us, or whether the roof is a flat platform or is built up from a succession of ridges, for there is no play of shadows to enable our optic nerves to gauge the measurements. If we let our gaze travel downward it encounters the blue-painted lattice-girders. At first these occur only at wide intervals; then they range closer and closer together until they are interrupted by a dazzling band of light—the transept—which dissolved into a distant background where all materiality is blended into the atmosphere.[12]

It is clear from this account that the architectonics of the Crystal Palace rivalled its status as a bold social experiment, and as Leonardo Benevolo noted, the Crystal Palace established a "new relationship between technical means and the desire for prestige and the expressive aims of the building."[13] The writer Fyodor Dostoevsky realized the boundless and often futile nature of these pursuits when he questioned the need to expend such vast resources at a time when many people lived in poverty, however, he could not have foreseen the rapid evolution into buildings like the Galleria Vittorio Emanuele in Milan, the forebear of the modern shopping mall.[14] It is hard to believe that the Crystal Palace predates works like the Palace of Soviets, as its accumulation of many small parts and their interrelationship to the whole severely undermined the relevance of classical standards.

The Crystal Palace was not the apocalyptic "ultimate truth" that Dostoevsky predicted, but rather the first in a series of many gradual shifts from solid classical traditions to fluid contemporary values. By the early twentieth century artists and architects from around the world dedicated themselves to the role of design in industrial society. The *Deutscher Werkbund* or "German Work Federation" emerged as a leading group of architects and companies focused on the new possibilities of mass production. The architectural theorist Reyner Banham explained how unlike the

Rendered perspective



View of the main hall

6.4 *AEG Turbine Factory*, 1908–09. Peter Behrens.
Social historians celebrate the AEG Turbine Factory for its advancement of workplace standards, while architectural critics remember it as a pioneer of Modernism in a realm where architecture was traditionally limited to the facade. The massive concrete piers that buttress its corners and flank the inclined windows create a hybrid of classical influence and modern machine aesthetic. In contrast, the spacious, functional, and well lit interior is more akin to the delicate steel skeleton of a Zeppelin. Through this synthesis of the symbolic and the pragmatic Behrens translated the monumental forms of the past into a physical manifestation of liquidity that captured both the spirit and rhythm of modern times.

Futurists, who "intended to conjure an aesthetic out of machinery and engineering, the Germans hoped to conjure some aesthetics into them."[15] The architect Peter Behrens and the industrial conglomerate *Allgemeine Elektricitäts-Gesellschaft* (AEG) formed one of the closest and most fruitful of these associations. Behrens reluctantly identified the engineer as the archetypal man of modern civilization, but as the architectural historian Stanford Anderson stated, Behrens believed that "the artist's role (. . .) was to exercise his will-to-form in shaping this new nature—the modern condition—into a true culture."[16]

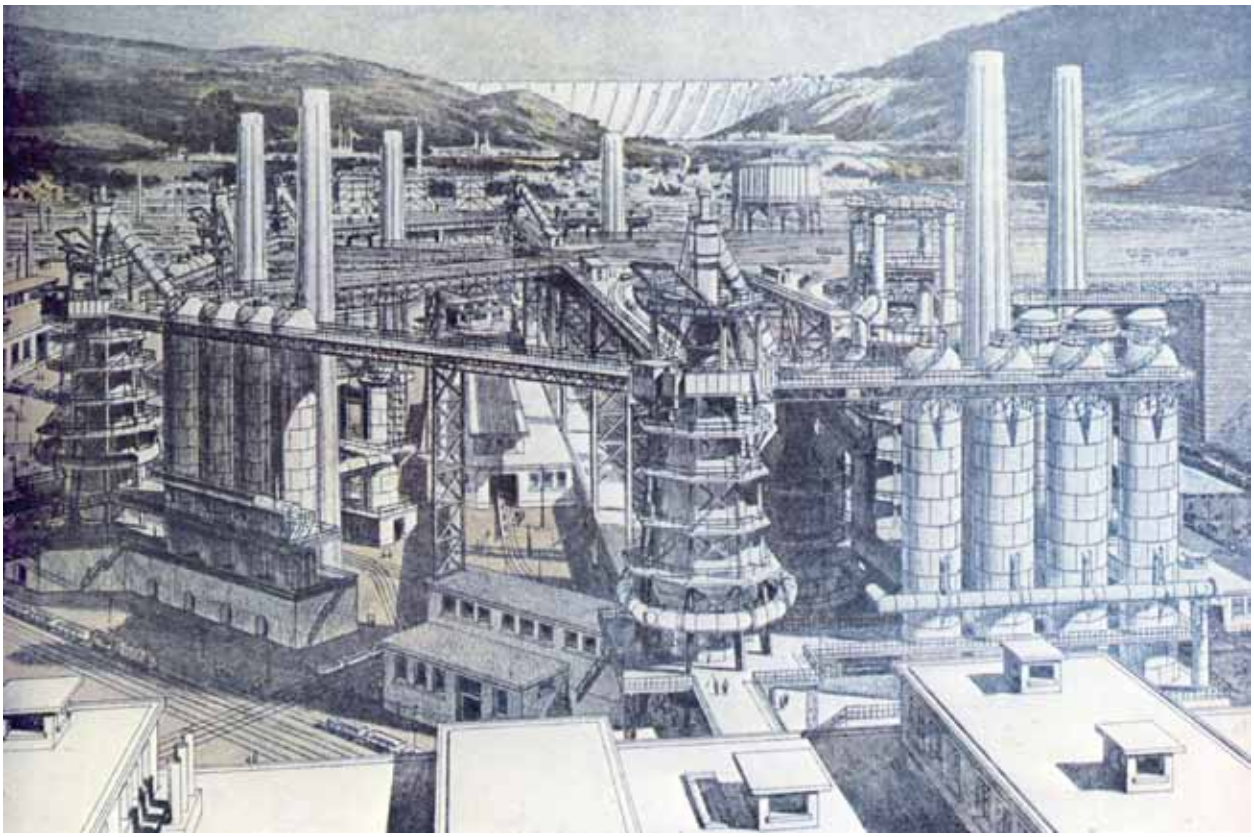
The AEG Turbine Factory was Behrens' first and most important major commission (figure 6.4). Its resemblance to a classical temple is unmistakable, yet its emphasis on space and its careful consideration of materiality and form is quite unlike the gratuitous ornamentation and naive engineering functionalism prevalent in the industrial buildings of the time. The success of the Turbine Factory is twofold: it acknowledges the turbine as a primary source of power, and it is conscious of the fact that utility alone cannot express the essence of the modern industrial world and its contemporary institutions. Anderson described its relation to other factories as an abbey to its priories, a fitting analogy for what was at the time the public face of AEG. Although some architects denounced its facade as pretense, the blend of classical influence and modern tectonics offered an alternative to the overt historical references of pseudo-monumentality.

Behrens perceived the iron truss frame and expansive glass surfaces as a light envelope drawn over a vast bulk of productive space, a condition he offset with a sense of corporeality evident in features such as the heavy gabled roof and rusticated concrete corners. Behrens also tilted the windows along the side elevation, a move that accentuated the structural function of its iron members and allowed for a strong cornice line that heightens the ambiguity of the decorative concrete pylons and is consistent with what Anderson characterized as "Behrens' will to mark his resigned endorsement of industrial civilization."[17] While Behrens had his reservations on the fate of architecture in the industrial world, his design proudly commemorates the turbine as a critical moment in liquidity. Its inversion of classical form and its rigorous moderation and simplicity superimposed these magnificent machines against a dignified backdrop. The Turbine Factory does not mask what it is, yet in doing so it has not lowered itself to the level of the common shed, and as Anderson concluded, "the Turbine Factory was the expression of an ideal vision of a technological civilization (. . .) Behrens sought to render his factories as monuments to an evolving social condition—monuments which were imbued with Spenglerian overtones of both engagement and ominous foreboding."[18]

The AEG Turbine Factory stands as an incontrovertible link between two very different epochs. It is an attempt to elucidate the industrial world at a time when classicism was the de facto architectural language. Behrens invested everyday life with a higher order and purpose that established a new appreciation for architecture within the collective consciousness of modern society. Although the Turbine Factory bears little resemblance to Sant'Elia's Futurist visions, it similarly struggled to

articulate a cogent relationship between humans and technology. Behrens designed a palace of work in which the significance of its occupants paled in comparison to the significance of its contents. As a staunch socialist, the concept of a technological utopia where humans could harmoniously coexist alongside machines fascinated the architect Tony Garnier. His *Une Cité Industrielle* returned to the ideal city in order to gauge the problems modernity posed for architecture—the inverse of Behrens' approach (figure 6.5).

Garnier created the earliest version of his industrial city while he studied at the Académie de France in Rome. This enraged the jury, though individuals like Banham later praised the fact that Garnier considered an industrial town a worthy architectural subject, let alone in such a historically significant city.[19] Garnier's scheme is clearly indebted to Ledoux's saltworks, but unlike Ledoux, who glorified production, Garnier



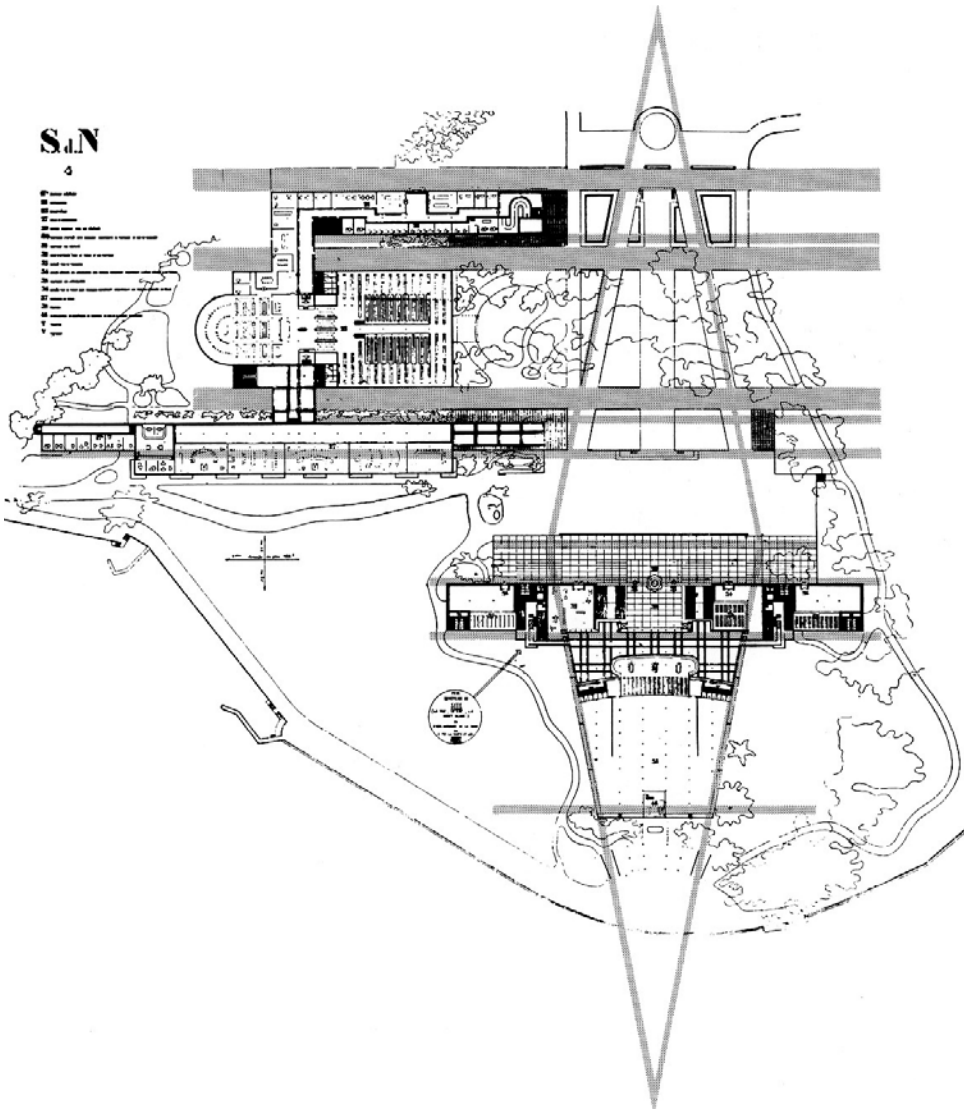
6.5 *Metallurgical Factory, View of Furnaces* from *Une Cité Industrielle* (pl. 14). Tony Garnier. Drawing. 1901–18. Tony Garnier's *Une Cité Industrielle* is an ideal city for the twentieth century. The sprawling factory complex seen in this image counteracts the classically inspired forms of the residential district. Though many of his contemporaries criticized its conservative appearance, Garnier successfully expanded architecture to the dimensions of the modern age without sacrificing the human scale, an achievement that inspired Le Corbusier when he praised the integration of "dignity and purity, after a long eclipse, in the areas of habitation, work, and civic contact."[20] Garnier's reliance on functional concerns and new programs departed from the traditional role of the architect as the creator of built form, a move that foreshadowed the engineer-architect, a master of information committed to what Garnier described as "the establishment of a city where one realizes that work is the human law, and that there is enough of the ideal in the cult of beauty and order to render life splendid."[21]

placed the general well-being of the population above all else. This focus on quality of life is apparent in even the most rudimentary arrangement of the design. Garnier divided the city into residential, industrial, transportation, recreation, and health districts, an idea emphasized through the fictional valley setting and convenient ridge that separates the residential and industrial zones. The image of the metallurgical factory only reinforces this programmatic distribution of space; its foreground depicts a domestic scale that allows the individual to relate to the significantly larger factory, while the background and its even larger dam acknowledges the power plant as both the fulcrum of urban renewal and the engine of the modern machine city.

The industrial city derives its monumentality from a set of versatile rules that encompass every element of design from the personal residence to the train station and factory. These rules were some of the first to address minimum standards for the modern world and would later inspire the Bauhaus principle of *existenz minimum*. The residential district, which Garnier arranged on a regular grid, incorporated provisions like ample daylight and ventilation for each room, a minimum allocation of half of the total area for use as public gardens open to pedestrians, and setbacks for all buildings. These concepts became cornerstones of the modern movement and its garden city, however, Garnier's theoretical work obscures the fact that he had many opportunities throughout his career to experiment with and implement these ideas.

For Garnier, *Une Cité Industrielle* was simply the beginning of his efforts to bridge theory with practice and liberate architecture from the bonds of convention. Benevolo remarked how Garnier had "the idea that there exists a sort of perennial architecture, to be adapted to the times but based on unchanging formal foundations, and therefore the allusion—tenuous, but always present—to classicism; the idea of a pre-established harmony between this architectural heritage and techniques of building, and therefore the belief that one could, with these means, tackle all the problems posed by modern life and scientific and social progress."[22] Benevolo went on to state that Garnier "never thought of the building as an isolated object, but always bore in mind that the ultimate objective of every action taken was the good of the city itself and that the building was important only as a contribution to the life of the city."[23] Garnier ultimately viewed architecture as a timeless and vital medium, yet he was also cognizant of the fact that modern works must be flexible and socially responsive, two qualities that his city exemplifies.

Of all the avant-garde modern architects, none have a body of work that can rival the oeuvre of Le Corbusier. Though he never formulated a specific view towards monumentality, his projects stand as a testament to the importance of architectural meaning and significance in the contemporary world. Le Corbusier reconstituted the latent ideals of Behrens and Garnier into an evocative architecture that reflected the hope and optimism of the post-war years. Anderson defined Behrens' AEG factories as "cool monuments to the accommodation of giant magnitude", a description he contrasted with the technological determinism of Le Corbusier, who eluded "the learned detachment and aesthetic distance of Behrens" through "his idea of the *esprit nouveau* as something to be lived."[25] Le Corbusier used his entry for the Palace for the



6.6 ***Palais pour la Société des Nations (Palace for the League of Nations)*****, 1927–28. Le Corbusier and Pierre Jeanneret. Diagram by Colin Rowe and Robert Slutzky.**
Modernists like Sigfried Giedion heralded Le Corbusier's Palace for the League of Nations as the sign of a new age of monumental architecture. Its carefully ordered axes and striated blocks create an experiential narrative that reveals various functional elements, programmatic relationships, architectural features, and vistas of the lake front site and adjacent gardens. The architectural theorists Colin Rowe and Robert Slutzky realized that the Palace for the League of Nations lends itself to another interpretation. In their formative study on transparency they distinguished between two distinct states: *literal* transparency, the "clear" optical property of a material, and *phenomenal* transparency, a much more elusive organizational quality found in Le Corbusier's scheme.

Rowe and Slutzky viewed phenomenal transparency as a highly desirable characteristic evident in some of the best works of modern architecture and art. They described the layered planes as "knives for the apportionate slicing of space", and went on to state that "If we could attribute to space the qualities of water, then his building is like a dam by means of which space is contained, embanked, tunneled, sluiced, and finally spilled into the informal gardens alongside the lake."[24] This fluid understanding of the complex spatial stratification highlights Le Corbusier's appreciation for monumentality and demonstrates what it must aspire to in the contemporary world.

League of Nations—the second major architectural competition to receive modern designs after the 1922 *Chicago Tribune* tower—as a platform to express his theories on democratic and enlightened architecture (figure 6.6). Le Corbusier conceived the design around its four primary uses and their respective frequency: the general secretariat and library, a daily activity; the intermittently occupied committee rooms; the quarterly Council of Nations; and the annual General Assembly. He articulated this programmatic study through a series of offset pavilions that instill a clear and logical order and integrate the building with the lake front site while maximizing views from each room.

In his investigation of the Palace for the League of Nations Benevolo explained how Le Corbusier's plan "showed the general public that the method of functional analysis could be successfully applied to an important work of prestige, that working space became more convenient, circulation easier and costs lower, that the infinite difficulties with the cramped setting—obstacles that would be insuperable with traditional compositional criteria—could be overcome with the much more pliable criteria of the new architecture, indeed they could become opportunities for formal enrichment."[26] The jury readily accepted the advantages of Le Corbusier's scheme, but rejected the architectural language it entailed and instead commissioned several of his competitors to design a building that shrouded many of the practical and distributive elements under a neoclassical guise. Although the Palace for the League of Nations was more receptive to the possibilities of modern architecture than previous competitions, it ultimately foreshadowed the outcome of the Palace of Soviets and emphasized the many aesthetic prejudices that hampered the development of modern monumentality.

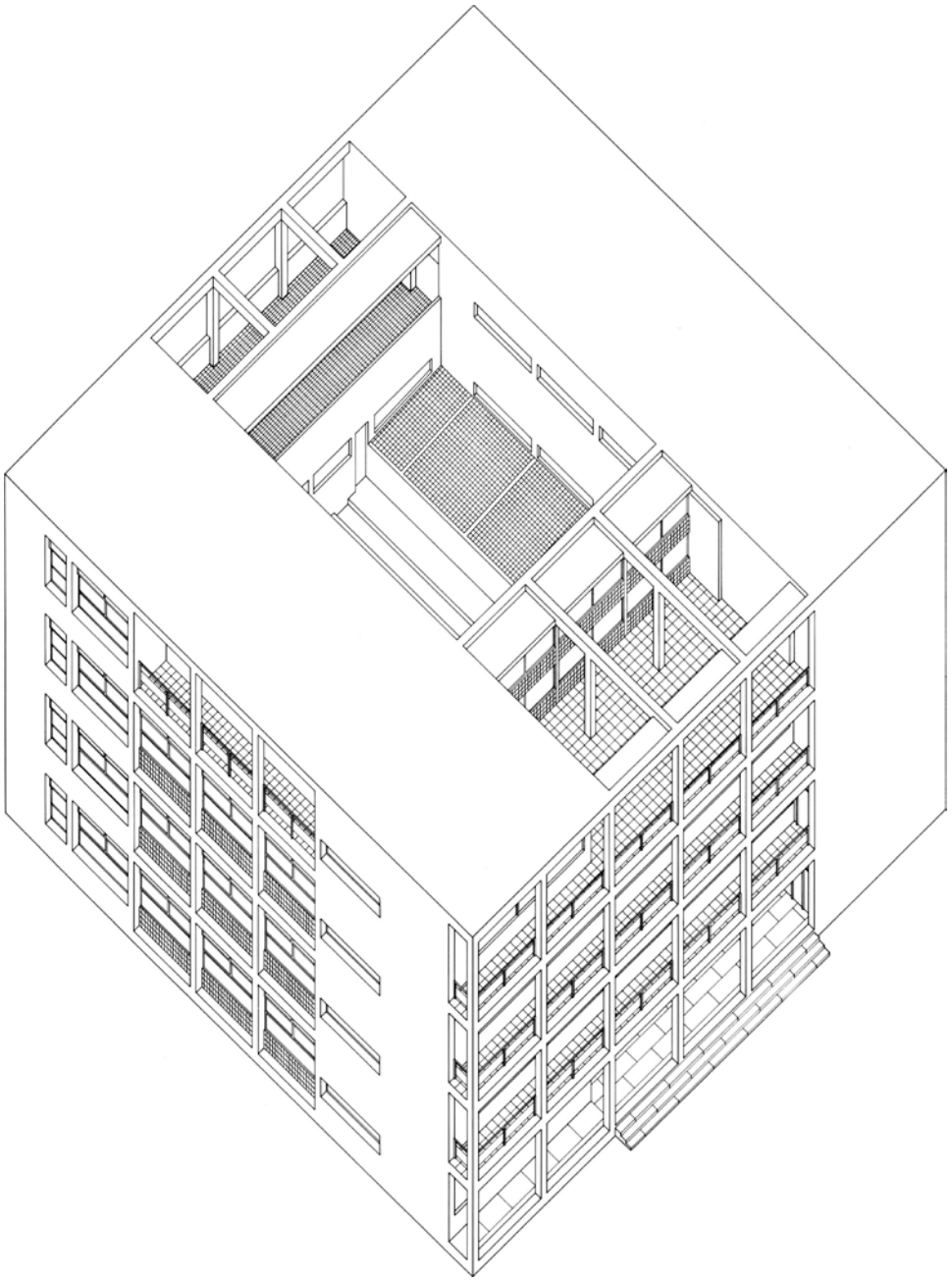
Le Corbusier's functional analysis facilitated a level of formal complexity that captures the symbolic nature of the project as a bastion of democracy. Rowe and Slutzky credited this formal complexity to Le Corbusier's mastery of "phenomenal" transparency, an organizational quality that originated in the compressed pictorial space of Cubist painting and which the artist and theorist Georgy Kepes expanded on with his definition of transparency as "a simultaneous perception of different spatial locations."[27] However, as architecture exists in the third dimension transparency must assume a physical condition and thus this interpretation is difficult to achieve. Rowe and Slutzky proposed that the Palace for the League of Nations derives its transparency from Le Corbusier's architectonic manipulations of planes and space. The shifting focal points and constant opposition of deep and shallow space create a contradictory sense of scale that is apparent in both the transverse bands that qualify and assert the various elements of the scheme and the recessed and angled volume of the general assembly building projected along the approach roads. As Rowe and Slutzky noted, "the intimations of depth inherent in this form are consistently retracted. A cut, a displacement, and a sliding sideways occur along the line of its major axis; and as a space, it is repeatedly scored through and broken down into a series of lateral references—by trees, by circulations, by the momentum of the buildings themselves—so that finally, through a series of positive and negative implications, the whole scheme

becomes a sort of monumental debate, an argument between a real and ideal space."[28] The idea of a binary discourse embedded in the underlying formal arrangement is synonymous with Venturi's admiration for complexity and contradiction in architecture. This appreciation for meaning and significance allowed Le Corbusier to leverage phenomenal transparency as a tool that could elevate his design above the traditional bounds of politicized architecture.

While Le Corbusier's vision held great promise for democratic modern monumentality, ironically, it was an architect operating in Fascist Italy who delivered on this promise, and as such we should consider ourselves fortunate that Giuseppe Terragni had an opportunity to build at a time when the Fascist Party exerted only sporadic pressure on architecture. His Casa del Fascio in Como, part of an ambitious national building program, provided a fictitious link between the fascist state and the Italian communes alongside a nominal administration capacity (figure 6.7). Terragni drew inspiration from Mussolini's precept of fascism as a house of glass into which all may look, a social ideal that he then rooted in a vernacular language of buildings that translate authority such as the town hall and the Renaissance palazzo. At the same time he freed himself from the historical parameters of these precedents and instead focused on their intrinsic qualities, like prominent corners, an articulated frontispiece, asymmetrical staircases, and the layering of space.

According to Peter Eisenman, Terragni's Casa del Fascio is a critical architectural text that challenges the idea of a stable beginning; its plans, elevations, and sections are "displacements from an architecture of origin, hierarchy, unity, sequence, progression, and continuity to one of fragmentation, disjunction, contingency, alternation, slippage, and oscillation."[29] Eisenman described it as both a solid mass hewn from a block and an additive system of planes, two very different means of creating space that induce a deliberate ambiguity and tension that denotes the conceptual opposition of the internal and external requirements. This dichotomy exists in many historical settings, however, the way Terragni subsumed the adjacent town hall and mediating cathedral within the fabric of the building redefined the very center of modern Como and resurrected the Albertian metaphor of the house as a microcosm of the city.

The centroidal courtyard of the Casa del Fascio is the most palpable example of this integration. It terminates the axis generated by the cathedral, provides a staging point for public events, and its asymmetrical location inscribes an indeterminate relationship between the building and its context and defines the southwest facade as a datum. The carefully proportioned transitional layers in this facade offer a syntactical resolution of a single entry into a biaxially symmetrical volume. In the outer layer a "mass-surface" dialectic that may be read as a solid plane partially cut away to expose the structure or as an additive matrix of columns strengthens the conceptual ambiguity of the design, while the "H-form" of the next layer reconciles the axial pressure of the ground and third floors with the centroidal nature of the hollowed out block found in the first and second floors. This layer also facilitates a series of vertical corner slots that extend the symmetry of the primary facade along the northwest elevation and engender a transformational process in which each facade records a residual trace of



6.7 *Casa del Fascio, Como*, 1932–36. Giuseppe Terragni. Drawing.
The Casa del Fascio is a three-dimensional tapestry that reconciles the linear alignment of its site with a centroidal configuration. Giuseppe Terragni transformed its plans, sections, and elevations into a series of interconnected spatial and structural systems that reflect the evolution of the design and address the plurality of the contemporary age. What appears to be a purely geometric arrangement is in fact an intricate latticework of fugue-like facades that question the formal language of modern architecture. The uninterrupted section of the primary elevation controverts the adjoining grid and establishes a proportional relationship between the four faces of the building that underscore its origins in the typological Italian palazzo and town hall. While the Casa del Fascio is ultimately an expression of the energy of the Italian Fascist movement and the immutability of the state as a source of power, Terragni used this challenging political climate to convey a level of conceptual refinement rarely achieved in monumental civic constructions.

a formal motif from the preceding one and introduces a new motif as a secondary element. The continuous symmetry and asymmetry of the facades suggest an idea of rotation contrasted with moments of stasis and result in a scheme that alternates between a conceptually equal-sided cube with no dominant face and a system of planar layering with various readings from facade to facade.[30]

The Casa del Fascio was a pivotal moment in modern architecture that expanded the capacity of the facade to display the organization of a building, an aspect traditionally limited to the plan and section. Its dynamic surfaces grapple with the fluid nature of the modern world and suggest an evolution in the ontology of architecture, and as Eisenman explained, "The idea (. . .) of a facade masking the interior structure of a building, of the facade and interior space not being interdependently identified, is a major break with the functionalist and cubist traditions that were widely seen in architecture between 1920 and 1940. At that time, with respect to the relationship of outside to inside, the functionalist tradition was concerned on a quasi-moral level with the union of form and function, while the cubist tradition was concerned with the spatial implications of tipping the plan upright (. . .) into an elevational view."[31] In this sense the Casa del Fascio marks a return to the premodern concept of the facade as a repository of metaphoric reference. Terragni took familiar signs such as columns, walls, and windows and then reinterpreted them as inscriptions that displace historical, aesthetic, and functional conventions. His use of a strong architectural model and his subtle juxtaposition of solid and void created a modern monument *to* the city where town and building reveal themselves through their mutual interpenetration.

The mass-surface dialectic that permeates the Casa del Fascio is not without precedent; Le Corbusier explored this contradiction in the Villa Stein at Garches and continued to refine its expression throughout his career. We may view the Casa del Fascio as an academic response to Le Corbusier's process, but as Eisenman noted, "whereas Le Corbusier initially states the grid and then plays surface or mass as a foil to it, Terragni often fuses the two to achieve the desired ambiguity."[32] This difference is nowhere more evident than in the entrance sequence of Le Corbusier's Millowners Association Building at Chandigarh (figure 6.8). The ramp and counter-thrust of the cantilevered stairs provoke a rupture in the dominant surface that blends the foreground into the flattened perspective of the midground and frames an orthogonal aperture or oculus. Slutzky characterized this oculus as an "eye" that invests the "facade with a human countenance—a physiognomy reflecting and gazing upon its surroundings, inviting entry, and maintaining a formal dialogue with its observer."[33] This anthropomorphism is visible in many of Le Corbusier's designs and manifests itself through features like the *pilotis*, the "feet"; the central floors, the "body" and "head"; and the roof garden, the "brain".

The architecturally expressive brise-soleil and violent punctum of the entrance sequence is an example of Venturi's "contradiction juxtaposed", a conceptual and perceptual condition found in many of the best works of the past that is absent in the sleek facades common to modern architecture. The porous and sponge-like residual space of the poché provides an intermediary state that celebrates the tension between

6.8 (opposite) ***Millowners Association Building*****, 1951–65. Le Corbusier and Pierre Jeanneret.**
The master plan and architectural design for the administrative district of Chandigarh gave Le Corbusier an opportunity to realize the definitive public work, something he could never achieve in the densely populated cities of Europe. The scheme constantly contrasts between the scale of the region and the scale of the individuals who live and work there. This is apparent in the highly articulated structures as well as the most abstract elements like the tartan grid of roads that segregate the various traffic flows and delineate the building sites. In *Aqueous Humor* Robert Slutzky proposed that Chandigarh is the ultimate exegesis of Le Corbusier's architecture, "absorbing all the intrinsic and extrinsic, aqueous and animistic energies found in the Cubist canvas. It is there, paradoxically, that the thickened wall becomes truly transparent."[34] Since Le Corbusier conceived of the buildings as singular forms that rediscover an ancient sense of mass, this reading of transparency through the agglomeration of a variety of solid elements is a remarkable achievement.

interior and exterior through a succession of readings that range from opaque through to translucent and transparent.[35] In the Millowners Association Building the wall, the confluence of these two environments, assumes the role of an architectural event that projects Le Corbusier's vision of utopia on the neighbouring landscape. This localized and specific architectonic solution mitigates the vast scope of Chandigarh and exhibits a clear development from the Palace for the League of Nations. The Millowners Association Building parallels the intentions of the Casa del Fascio, but while Terragni chose to interrogate the traditional bonds of the plan, section, and elevation, Le Corbusier instead deconstructed the wall and then charged its residual components with plastic forces that encourage a dialogue between form and content—the apotheosis of both Cubist architecture and modern monumentality.

INSTRUMENTALITY VERSUS MONUMENTALITY

As much as architects like Peter Behrens and Le Corbusier laboured to find an aesthetic expression worthy of the modern spirit, in many ways the Futurists were right: the twentieth century was an era of infrastructure. Its highways, parking lots, airports, high speed rail lines, power stations, electrical grids, radio towers, and satellite installations have come to define both our everyday lives and the way we experience the world. Conversely, the Futurists made a gross miscalculation. In most cases these constantly evolving tools are simply a means to an end, mere instruments that facilitate our advanced industrial society; a belief that seems to run counter to their faith in a new form of monumentality derived from the technological accretion of our modern way of life. The utilitarian nature of infrastructure usually condemns it to a single purpose and meaning, a result of what Hannah Arendt described as "the generalization of the fabrication experience in which usefulness and utility are established as the ultimate standards for life and the world of men."[1]

The artistic origins of instrumentality reside in the German *Neue Sachlichkeit* or "New Objectivity" movement, a group popularized in architectural circles by individuals like Bruno Taut and Erich Mendelsohn that eschewed emotion in favour of functional works concerned solely with what is necessary and sufficient. The artist and architectural critic Karel Teige elaborated on this view in his polemic against Le Corbusier's Mundaneum when he wrote "The only aim and scope of modern architecture is the scientific solution of exact tasks of rational construction."[2] While there were those who maintained that instrumentality is nothing more than a frugal mask that conceals a conceptual void, as the architect and theorist George Baird explained in *The Space of Appearance*, even leading architectural figures of the time like Henry-Russell Hitchcock and Philip Johnson argued that "The application of aesthetic principles of order" and "the formal simplification of complexity (. . .) will raise a good work of building to a fine monument of architecture."[3] Hitchcock and Johnson's claim underscores the generally antagonistic relationship that exists between instrumentality and monumentality, a contradiction emphasized in Andreas Gursky's *Sao Paulo, Sé*, a photograph of a densely layered multistory metro station that offers a microcosmic

7.1 (opposite) ***Sao Paulo, Sé*****. Andreas Gursky. 2002.**
Andrea Gursky's large format prints contrast the one and the many through everyday occurrences and singular events that reveal contemporary trends of anonymity and individualism. This image of a train station captures the vitality of urban life in what is ultimately a space of necessity that serves a single purpose. Although the people shown here are no more than a collection of strangers and the station does not foster a public realm in the classical sense of the word, there is something utopian in its stark forms and the steady stream of passing occupants. The anthropologist Marc Augé categorized the railway station alongside other modern creations like the airport, leisure park, and large retail outlet as "non-places"—spaces that cannot be defined as relational, historical, or concerned with identity.[4] While instrumentality dictates that these places are inherently functional, this interpretation fails to address the undeniable monumentality that exists in their confluence of different scales, speeds, and times.

Monument with Pontoons: The Pumping Derrick

The Great Pipes Monument

The Fountain Monument: Bird's-Eye View

The Fountain Monument: Side View

7.2 *The Monuments of Passaic*. Robert Smithson. 1967. Compared by Robert Smithson.
Robert Smithson's study of industrial infrastructure elevated utilitarian forms to the level of art and brought attention to the largely overlooked aspect of what Zygmunt Bauman termed "heavy modernity", a world of extreme rootedness in which bigger always meant better and more efficient.[5] Smithson borrowed from the Situationist *dérive* in his account of a day spent in this working class city in New Jersey. The story details moments like when he crossed a bridge and remained long enough to witness it rotate in order to allow the passage of an "inert rectangular shape". From this "Monument of Dislocated Directions" he continued along the river and discovered more "monuments", like these "fountains" that flood the water with "liquid smoke" and bear witness to a "prehistoric machine age". Smithson classified Passaic as "ruins in reverse", where buildings do not fall into ruin, but rather rise as ruins as they are built. These symbols of the twentieth century led him to question whether Passaic had eclipsed Rome as the Eternal City, yet the fact that most of the places he visited were just fleeting moments in time that no longer exist is a testament to both the limitations of this comparison and the meaning of eternal today.

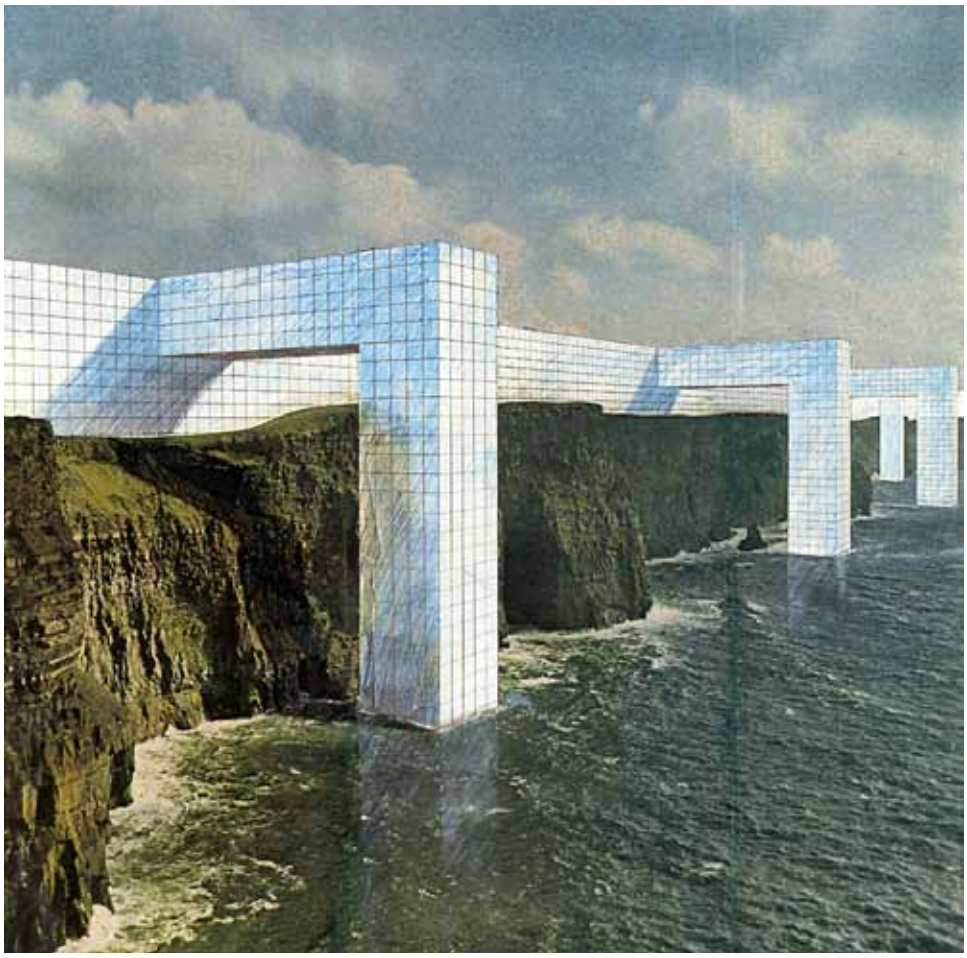
portrait of the Brazilian metropolis (figure 7.1). At its essence the train station is a common example of instrumentality, yet it is also a gateway to the city beyond and a primary symbol of our faith in mobility; qualities that its architecture must reflect. Unfortunately, the quick pace of obsolescence and the associated expendability of architecture means that it is often merely a matter of time before new developments supersede these temples to modern society. This perpetual cycle of renewal, which affected even masterpieces like McKim, Mead & White's Pennsylvania Station and Eero Saarinen's TWA Terminal, successively strips away monumental attributes only to replace them with values predicated purely on instrumentality.

While we may find ourselves spending a great deal of time in non-places, nothing epitomizes our mass-produced world as much as industrial architecture. The precedence of industrial and economic principles has spawned entire cities dedicated to consumption governed only by utility. Following an apparent change of heart from his earlier declaration, Hitchcock noted that "absolute or relative doctrines of functionalism, emphasizing the fulfillment of material needs by modern architecture, and even more, many contemporary methods of construction, emphasizing demountability and presuming rapid obsolescence, tend equally to discourage the abstract qualities of design which are characteristic of monumentality."[6] On the other hand, the architect Mies van der Rohe celebrated technology when he posited "where it is left to itself, as in gigantic structures of engineering, there technology reveals its true nature. There it is evident that it is not only a useful means but that it is something that has a meaning and a powerful form (. . .) Where technology reaches its real fulfillment it transcends into architecture."[7]

For the artist Robert Smithson these "gigantic structures of engineering" were "readymades" waiting to be discovered by designers who could integrate them with an artistic and social purpose.[8] In his photo essay *The Monuments of Passaic*, Smithson presented the industrial type as a successor to the Eternal City of Rome (figure 7.2). This territorially scaled work of art characterizes beauty as something that is unconscious, an almost accidental byproduct generated by the absence or negation of conventional aesthetic models, a view Smithson corroborated when he stated "Passaic seems full of 'holes' (. . .), and those holes in a sense are the monumental vacancies that define, without trying, the memory-traces of an abandoned set of futures."[9] Smithson's interpretation of Passaic is another example of unintentional monumentality in which, as Alois Riegl argued, it is not the "original purpose and significance that turn these works into monuments, but rather our modern perception of them."[10] The prevalence of unintentional monuments and their cross-contamination of familiar monumental features such as permanence and cosmic significance make the application of intentional monumentality to our own creations increasingly difficult. In this world, much like in Claude-Nicolas Ledoux's saltworks or Tony Garnier's industrial city, the enduring influence of instrumentality erodes traditional monumental forms. At the same time this incidental monumentality lends these works their most liquid reading, a fact that Smithson surely realized when he designated Passaic as the modern heir to Rome.

The monumentality of the train station and the factory is an indirect result of our industrially obsessed world. Neither was designed as a monument, and ironically, it this condition that makes them monumental. Yet if we apply the same virtues of efficiency and rational design in an intentional manner the outcome is very different. The architectural collective Superstudio exploited this contradiction when they designed *The Continuous Monument*, an image of the world rendered uniform through the violent merger of modern technical requirements and architecture (figure 7.3). *The Continuous Monument* is a single strategy that transcends the diverse motives of architecture and prompts man to reflect and contemplate on the essence of life, a response to what they viewed as the thoughtless proliferation of production and consumption. Superstudio's vision of utopia populated the world with an abstract Cartesian grid, a metaphor for a flexible and adaptable nomadic life as well as a solution to what the architectural theorist Mark Wigley described as the dilemma of "how to negotiate between the dream of permanence and ever-changing technologies."[11] Wigley realized that our transitory world of expendable technology is the inadvertent new location of the age-old search for the eternal and the timeless. This reversal is analogous to the rise of the dystopia or counter-utopia, an essential feature of the twentieth century utopia that the philosopher Gianni Vattimo traced back to "the discovery that the rationalization of the world turns against reason and its ends of perfection and emancipation, and does so not by error, accident, or a chance distortion, but precisely to the extent that it is more and more perfectly accomplished."[12]

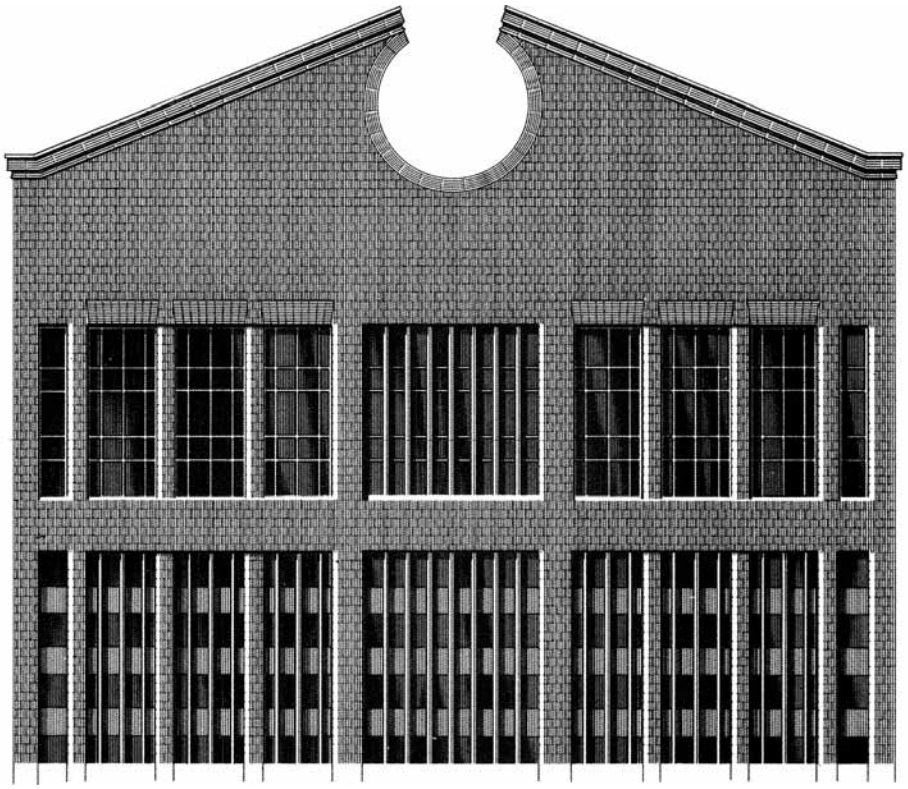
The rationalization and perfection that Vattimo alluded to manifested itself architecturally in the form of globally identical environments. Superstudio praised the spontaneous potential of these spaces, but it became increasingly clear to architects and theorists alike that architecture was irrepressibly subject to the flow of advanced capitalism and its instrumentality had effectively abolished architecture. As the architect and theorist Rem Koolhaas explained, the scale and complexity of our economic, political, and social forces place architecture beyond the control of design.[13] This involuntary and unbridled existence is a significant departure from what the historian Frances Yates depicted as the "theatre of memory", where architecture functions as a mnemonic device that aids in the recollection of thought.[14] While in the past architecture recorded the organization and evolution of the city over time, the high turnover rate in Koolhaas' "generic city" results in an unintelligible mass that compensates for this flux by way of feeble attempts at historical grounding—the definition of Postmodern architecture. The most pronounced example of this is Philip Johnson and John Burgee's AT&T Building, a humorous blend of instrumentality and monumentality (figure 7.4). The AT&T Building marks the unmistakable return of architectural allegory, although in this case it is simply a historical satire for corporate America. What is seemingly the inverse of Superstudio's memory-less architecture is in fact just a method for the production of icons more akin to Disney World, where as Colin Rowe noted, life is free of unpleasantness, tragedy, time, and blemish.[15]



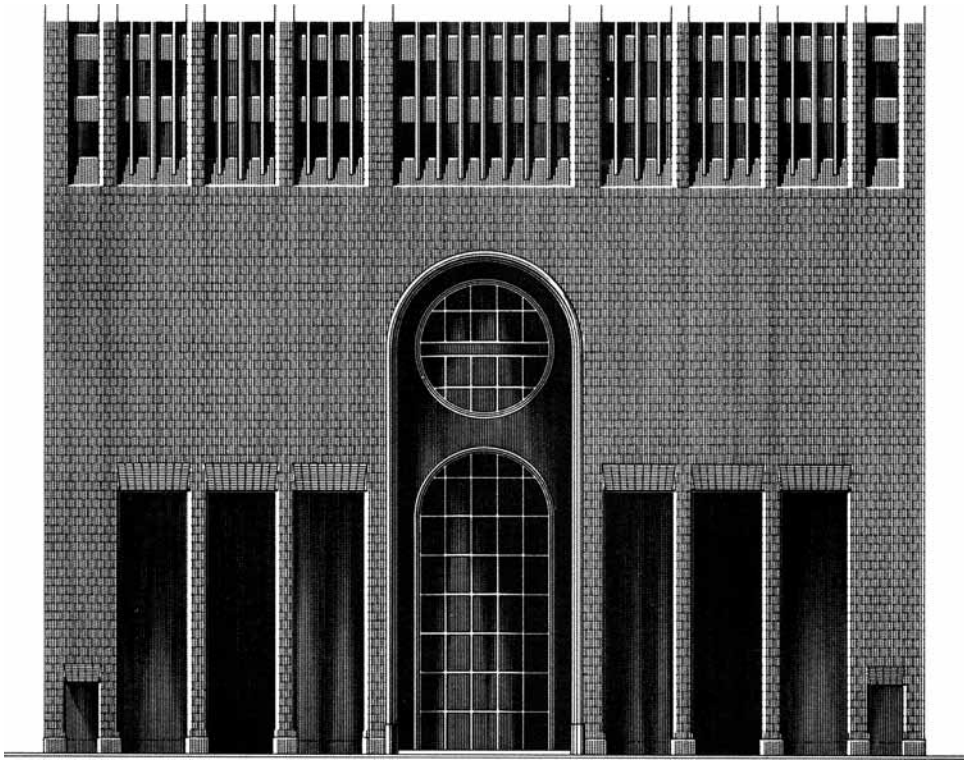
7.3 *The Continuous Monument: An Architectural Model for Total Urbanization*. Superstudio. Photomontage with drawing. 1969.
Superstudio believed that if architecture continued along its present course this universally homogeneous and highly predictable world was an inevitable conclusion. They developed *The Continuous Monument* as a critique of the stagnant energy of Modernism, and as Colin Rowe stated, "Modern architecture had certainly arrived but (. . .) slowly it began to appear that something had gone wrong. Modern architecture had not, *ipso facto*, resulted in a better world."[16]

The Continuous Monument is an impenetrable mass whose mirrored surfaces pass directly through urban settlements and natural elements such as lakes and mountain ranges. Although these dystopian visions are a reaction to the machine aesthetic of their time, they are also a metaphysical veil intended to provoke the viewer and inspire change through their warnings of the orthodoxy destroying historic cities and ways of life around the world.

The AT&T Building is a twist of fate; that Philip Johnson, one of the chief supporters of the International Style largely responsible for its diffusion and mass appeal would find even greater success in such a divergent language is remarkable, but perhaps Johnson's portrayal of the high-rise office building—the quintessential American architectural innovation—owes less to his invention than his timely anticipation of liquidity. The use of a classical pediment would have been unimaginable a few years earlier, yet in the AT&T Building it implied a crisis in both the idea of progress and the fundamental meaning of history. For Vattimo, postmodernity was a consequence



Detail of Tower Pediment



Detail of Tower Base and Entrance

7.4 (opposite) ***AT&T Building, East Elevation*****, 1979–84. Philip Johnson and John Burgee.**
The AT&T Building was a reaction to the failure of modernist ideals that ushered in a new era of architecture almost overnight. Philip Johnson argued that classical forms were just as appropriate as the rigid geometries of purely functional modern architecture. This discontinuity was meant to stimulate the now-complacent International Style—the same style that Johnson introduced to America in 1932 with his influential exhibition at the Museum of Modern Art in New York, "Modern Architecture: International Exhibition".

The body of the AT&T Building follows the tenets of Modernism, however, Johnson embellished its "head" with an ornamental classical pediment and modelled its base on the large central arch and columned arcade of McKim, Mead & White's Manhattan Municipal Building. In mining the past in such a blatant manner the AT&T Building resembles the Neoclassical and Beaux-Arts styles that modern architecture replaced; the only difference is that Johnson repeated the past in a liquid world that suddenly valued history as a cultural and commercial guise.

of our sudden inability to view history as a unilinear continuum. Without a supreme or comprehensive narrative there were only images of the past seen from various perspectives, a fragmented perception of history that discredited the belief in a telos or end conceived upon a certain ideal.[17] Johnson decontextualized history in order to understand and assign meaning to the present. In its overt historicization the AT&T Building reads like a resurgent yet benign work of pseudo-monumentality, though as the architectural critic Carter Wiseman declared, this fusion of aesthetics and corporate commerce "was less architecture than it was logo, less work of art than hood ornament."[18]

THE MASS ORNAMENT

It could be said that to a certain extent Modernism absolved architecture from the burden of ornament. Architects were so cautious to elude the pitfalls of pseudo-monumentality that they did little to attempt a new monumental expression and ornament became an unnecessary encumbrance to be avoided at all costs. In *Ornament and Crime* the architect Adolf Loos celebrated form as a virtue in itself when he equated a lack of decoration with intellectual vigour. Loos explained how in the past ornament was implicitly connected to culture, but then went on to depict the Machine Age as the era of the engineer: a noble savage who builds without recourse to either architecture or style. In this world form and ornament were products of the subconscious derived from the harmonious use of materials where no element was lacking or in too great a supply, a belief that led Loos to proclaim "*the evolution of culture is synonymous with the removal of ornamentation from objects of everyday use*."[1]

Loos questioned the economy of an industry that depended on craftsmen who often earned significantly less than unskilled factory workers and concluded that we are incapable of creating new forms of ornament, which can only emerge as an expression of intangible forces beyond the control of architects and designers. This crisis of value—a cultural depreciation linked to industrial processes and inferior materials—resulted in what Mark Wigley characterized as "the radical collapse between reproduction and monumentality."[2] In *The Four Elements of Architecture* the architect, critic, and historian Gottfried Semper traced the genesis of this decline back to primitive shelters that used woven screens as walls. Over time these screens evolved into decorative treatments like carpets that masked firmer methods of construction, a process that transformed the building envelope into a purely spatial function and culminated in the modern curtain wall.

While these developments are an unavoidable consequence of modernist rationalization and abstraction, we rarely ask ourselves what we lost in the transition to a world where ornament is akin to crime. The architect, theorist, and philosopher Ignasi de Solà-Morales challenged our resigned and tacit acceptance when he defined

8.1 (opposite) *Ricola Factory Building*, 1993. Jacques Herzog and Pierre de Meuron.
Many of Jacques Herzog and Pierre de Meuron's buildings are exercises in material expression that incorporate a subtle appreciation for ornament. In the Ricola Factory Building they explored the repetition of a simple figure—the basis of ornament—and treated the external facade as a playful surface that supplies ample light and reflects the function of the building. The polycarbonate panels feature a silkscreened image taken from the oeuvre of Karl Blossfeldt, whose sublime photographs operated on the aesthetic power and drama of nature seen from an entirely new point of view. Blossfeldt's techniques of magnification and repetition imbued the natural world with a symbolic character, a revelation that transformed the everyday into the monumental and encapsulated the fragile and fluid spirit of nature in a permanent form. Through their understated yet elegant facade Herzog and de Meuron elevated the common factory building to the level of a monumental edifice that recasts modern perceptions of materiality in a homage to the power of the icon.

the decorative as "something that enhances and embellishes reality, making it more tolerable, without presuming to impose itself, to be central, to claim for itself that deference demanded by totality."[3] Much like Ernst Bloch and his fondness for the Pompeian wall painting, de Solà-Morales valued the utopian capacity of ornament and its ability to counterbalance the overt physicality of architecture, however, this assessment alone fails to address Loos' concern that we cannot create new forms of ornament with any sort of meaning.

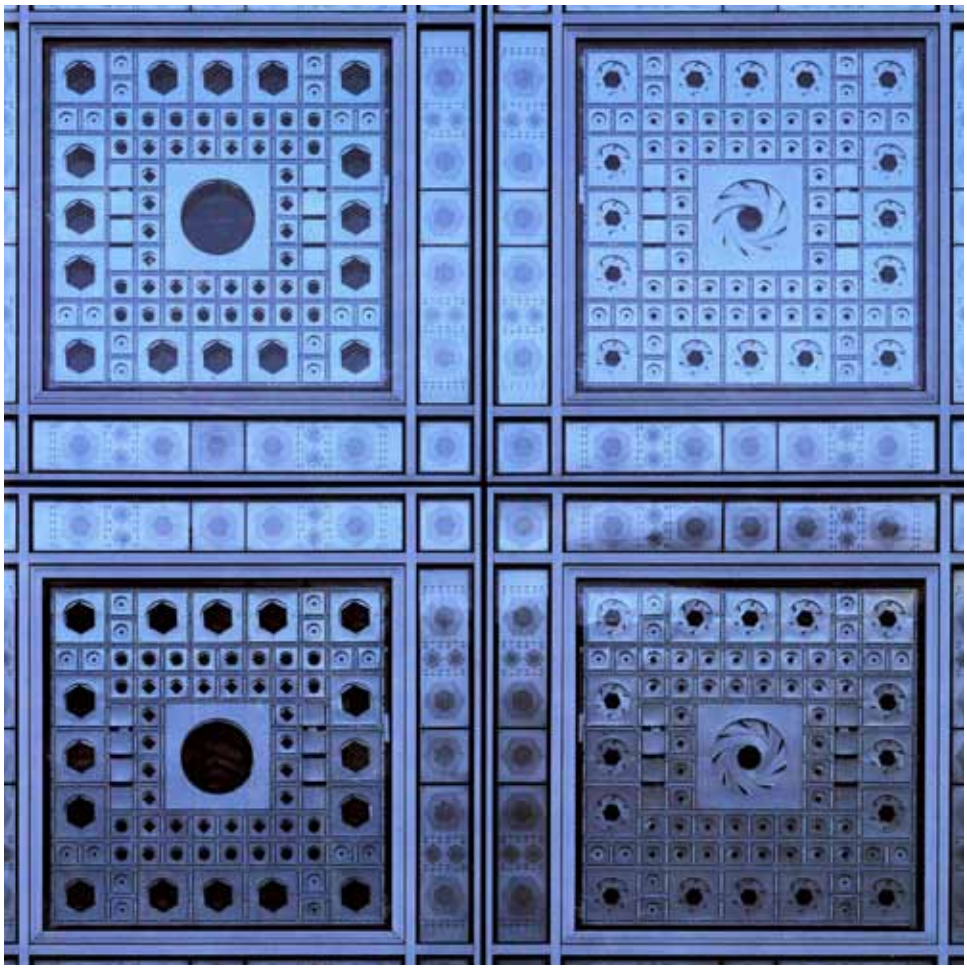
For the architect-cum-writer Siegfried Kracauer, ornament was a product of the aesthetic insignificance of our quotidian artifacts. As symbols of modernity that reveal and respond to our contemporary situation, these artifacts represent our basic lack of spiritual substance. In *The Mass Ornament* Kracauer interpreted the built environment as a "medium of consciousness" that relies on ephemeral and superficial values and proceeded to explain how "surface-level expressions (. . .), by virtue of their unconscious nature, provide unmediated access to the fundamental substance of the state of things."[4] The mass ornament was a new type of collective work that anticipated our society of popular culture—a phenomenon that the theorist and philosopher Guy Debord referred to as "the society of the spectacle".[5]

Unfortunately, this mechanism of seduction and spectacle was also susceptible to misappropriation. In *Triumph of the Will* Leni Riefenstahl fabricated mass ornaments in a work of propaganda that masqueraded as a documentary. Moving faces, uniforms, and arms mesmerize the viewer through their overwhelming ornamental strategy and provide what the architectural historian and theorist Joan Ockman described as "an efficacious instrument for channeling bodies and deep-rooted desires 'into a monumental system of dams.'"[6] On the other hand we can compare this portrayal to the pop art of Andy Warhol, which reduces iconic images to a state of nothingness that exposes their illusion and insignificance. Although other artists attempted to emulate this technique, they only re-aestheticized the technique and in doing so neutralized its artistic merit.

Pop art could be called the art of negation: it monumentalized the ephemeral and translated the spectacle of Kracauer's mass ornament into a tangible form. In recent years architects have also formulated strategies that capture this ethereality and demonstrate that a building is not simply composed of elevations that mimic functional requirements and document the technology of their time. In the Ricola Factory Building the architects Jacques Herzog and Pierre de Meuron transfigured a simple glass box through the surface-object tension manifested in the photographs of

8.2 (opposite) ***Swiss Museum of Transport*****, 1999–2009. Annette Gigon and Mike Guyer.** The Hall of Road Vehicles at the Swiss Museum of Transport is an evolution of the typological black box exhibition space that recalls the spirit of Robert Venturi's decorated shed. Each elevation consists of a series of similar traffic signs such as destination and orientation or instruction and prohibition boards, a strategy that reinvents this ordinary component of modern life through its exaggeration and the contrast between its repetition and individuality. The signs refer back to the program of the building as well as the different cities from where its visitors originate, yet they also represent a prominent layer of postmodern space that has fundamentally altered our experience of architecture.


Beton
Durchfahrt
Toutes directions
Ausfahrt
ZONA
Rüti
Maur
Tierklinik
St. Anna
Kies
Links
Rechts
Knonau
Steinhausen
Twann
Spiez
Quartier
de la
Susette
MFK-Exp.
Altstätten
Baffles-Ost
Kriessern



8.3 *Institut du Monde Arabe*, 1981–87. Jean Nouvel.
When ornamental patterns correlate to modern ideals their importance stands to increase exponentially, a fact that Jean Nouvel illustrated in this functional and attractive screen. The oculi in the facade of the Institut du Monde Arabe adjust according to external conditions and also reflect the programmatic roots of the building. This combination of practical performance and contemporary values of change and complexity emancipated the ornamental from the realm of art, a sentiment that Ockman echoed when she declared that "Nouvel invites the urban eye/I to pass through the mass ornament into the realm of a heterotopic architectural poetics."[7]

Karl Blossfeldt (figure 8.1). Blossfeldt used the operative potential of the camera to magnify nature to the scale of architecture. Plants appear as soaring towers and intricate tapestries, a dramatic effect that prefigured both Kracauer's ornament as mass and the proliferation of photography as a primary apparatus of the capitalist rationalization of order. As images of nature alienated from meaning, Blossfeldt's photographs illustrate Wigley's premise that in a mass media culture transitory sensations and experiences can interrupt the flow of time and assume a monumental status.[8] The symbolic and iconic facade of the Ricola Factory Building celebrates this paradox, and as Ockman stated, integrates "the rigor of the architectural monument with the phantasmagoric multiplicity of the mass ornament, giving glass the quality of stone and architecture the *faux* naturalism of landscape."[9]

The splicing and appliqué that Herzog and de Meuron explored in the Ricola Factory Building was but merely a first. In the Swiss Museum of Transport the architects Annette Gigon and Mike Guyer extrapolated this reading into a comprehensive strategy that reacts to the commodification and use-order of our world (figure 8.2). Everything from the smallest of consumer devices to the largest of public spaces now come with instructions and accepted protocols for use. What is at first a restriction and guide—the road sign—becomes its inverse—a detached aesthetic surface. Through this clever play on the program Gigon and Guyer call our attention to the unconscious aesthetic that exists in something as banal as a traffic sign, which when removed from its original context and meaning becomes a paradigm of Kracauer's belief that modern ornaments must necessarily derive from our quotidian artifacts. While for Loos ornament meant wasted material, labour, and capital, it is clear that the contemporary ornament is as much a foundation of society as it is an ironic and unintentional result. The aesthetics of symbolism displace architecture and arrive at what Ockman termed a "third nature, that of the material-immaterial surface, the integral spectacle, the ornament-monument."[10]

There is a certain limit in the ability of a static facade to reflect the contemporary liquid world. Although Kracauer's concepts are still valid, they too will one day cease to carry meaning in a progressively dynamic world where the mass media and its symbols change from user to user and from instant to instant. The architect Jean Nouvel anticipated this limitation in the Institut du Monde Arabe, a research and cultural center comprised of eighteen Arab member states that transcends the traditional constraints of ornament through its merger with a functional and constantly shifting facade that modulates and controls daylight (figure 8.3). This responsive facade embodies an active appreciation for time that recasts the relationship between inside and outside. As Ockman explained, its network of adaptive lenses adjust to environmental conditions and introduce an interface between the public and private realms and technology, culture, and nature. This improvisational and experiential arrangement resists "the would-be totalizing and objectifying logic of architecture", an impediment to contemporary monumentality that led her to conclude that ornament serves as an "uncontainable exuberance" that "constitutes a reassertion of time—of impermanence—within the territorializing and monumentalizing domain of space."[11]

ARCHITECTURE AND TIME

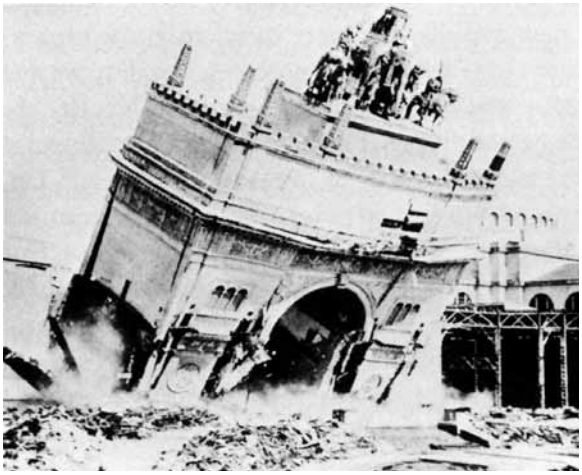
The reassertion and impermanence of time captured in works like Jean Nouvel's Institut du Monde Arabe is not strictly limited to the concept of the mass ornament. Urban environments are in a constant state of reinvention and renewal, a quality absent from many of the static monuments of past civilizations. Despite the fact that a large number of the best examples embodied their own unique view towards change, as the historian and philosopher Lewis Mumford stated, monumentality was often a process of mummification that resisted the flow of active time out of a "fear of life".[1] Time was ultimately an illusion that stood in contrast to the immutability of the corporeal realm, though as we have already established, in our present world time is something "real". Sanford Kwinter expanded on this concept of time with his theory of the event, which individuates between the complex and dynamic forces that constitute our contemporary existence.[2] While this may appear to be a contradiction in terms, architecture has become increasingly receptive to the event.

There are many different forms that the union of architecture and active time may take. For example, the 1893 Columbian Exposition in Chicago was a kind of condensed genetic print of the aforementioned process of reinvention and renewal, and what sometimes could take centuries to unfold occurred here in a matter of months (figure 9.1). Much like the Crystal Palace, the Columbian Exposition was short-lived, however, it never had a final function or purpose and was simply an ephemeral monument created in the spirit of a new era of culture. This idea of ephemeral monumentality admittedly seems out of place next to deep-rooted connotations such as permanence and endurance, but as the architect Alex Krieger explained, "in a society that regarded the land itself as its most monumental commodity, the man-made monument could not escape transience."[3]

The Columbian Exposition symbolized a fundamental shift from material means to the intellect and idealism. In a nation still finding itself, many believed that they could express their progress through assimilated traditions. The philosopher Jean-Paul Sartre touched on this search for origins when he compared the European city—a city of the past—to America, where "the city is everything it has not yet become and everything it can be."[4] The fact that the Columbian Exposition occupied but a brief moment in time seems only to reinforce the need for a stable collective urban form. This distinction between the temporal activities of humans and the immortality of nature is particularly evident when we juxtapose the Columbian Exposition with Thomas Cole's *The Course of Empire*, a series of five paintings that trace the rise and fall of a fictional empire and offer an allegory of the pastoral state and the potential consequences of its loss. Accordingly, Krieger noted how "In America, nature became, to a far greater degree than in Europe, the repository of wisdom, spiritual truth, moral virtue, and beauty."[5] When viewed alongside this unchanging backdrop it is clear that all architecture is but a function of time. We must work with change, much like the philosopher and sociologist Edgar Morin realized when he posited:

The Cour d'Honneur, 1893

The Consummation of Empire, 1836



Demolition of the Court of the Universe, 1914

Destruction, 1836

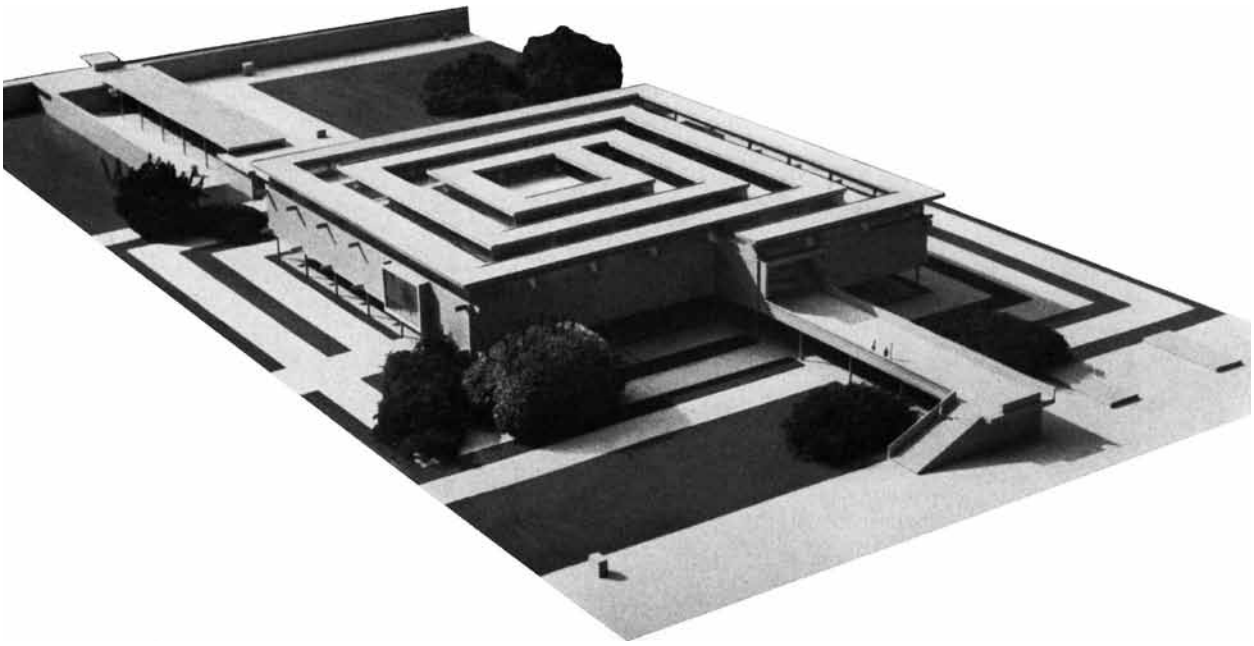
9.1 *Columbian Exposition*, 1893; *Panama Pacific Exposition*, 1914; and *The Course of Empire*, 1836. Various; Thomas Cole. Compared by Alex Krieger.

We rarely associate the great expositions of the *fin de siècle* with the fleeting and the transitory, yet almost all of them, save for perhaps only the 1889 Paris World's Fair and its Eiffel Tower, were impermanent works constructed largely from delicate assemblies like plaster over wire lath that merely gave the impression of durability. The Columbian Exposition was the largest of its kind and marked a transition in the programmatic ambitions of the universal exposition as well as a shift in its architectural methods and material form. The exposition effectively transformed the common perception of America away from a country rooted in the land and gripped by nineteenth century romanticism towards one centered on urban life and defined by its aspiration for culture and technological progress. Its designers, the architect and urban planner Daniel Burnham and the landscape architect Frederick Law Olmsted, used Beaux-Arts architectural principles to project an image of an ideal city that reflected their belief in the superiority of American civilization and offered proof that art could unify and direct the outlook of a diverse society.

When we compare the idea of the world exposition with Thomas Cole's paintings many parallels arise. Both are a reminder of the value of nature as a stable point of reference, and both highlight the tenuous character of human existence. In a sense the Columbian Exposition, erected over the course of a few months only to burn down shortly after its close, was a rupture in the continuity of history with a predetermined fate, however, it also provided a lasting view towards the synthesis of permanence and change, of solidity and fluidity, and ultimately, of monumentality and liquidity, and for Alex Krieger, "the combination of its monumental form, its lasting impact on the imagination, and its brief existence [raised] the possibility of an ephemeral monumentality."[6]

> no organized being can escape degradation, disorganization, dispersion. No living thing can escape death. Perfumes evaporate, wines sour, mountains flatten, flowers wither, living things and suns return to dust (. . .) All creation, all generation, all development, and even all information must be paid for in entropy.[7]

The Columbian Exposition and its search for culture foreshadowed one of the most enduring trends of the twentieth century: our fascination with the museum. The contemporary museum represents an idiosyncratic attitude towards time and memory in which contradictory tendencies of what the cultural theorist Andreas Huyssen referred to as "temporal anchoring" and "mass amnesia" exist alongside each other.[8] Using Morin's quote as a point of departure, we may think of the museum as an inverted form of entropy whose final outcome remains a perpetual unknown. This indeterminacy, while difficult to conceptualize and achieve in a tangible construction, allows the museum to negotiate Huyssen's "tenuous fissure between past and present (. . .), making it powerfully alive and distinct from the archive or any other mere system of storage and retrieval."[9] Where it was once assumed that to be modern we must turn our back on the past, the museum provided a strategy that resists the progressive dematerialization of the world, and as Mark Wigley stated, reconstructs the past "as swiftly as we move forward into a more materially 'ephemeral' present and future."[10]



9.2 *Museum of Unlimited Extension*, 1939. Le Corbusier. Physical model.
Le Corbusier's infinitely expandable museum is a tangible expression of the changing world that operates on the assumption that our contemporary institutions require a constant increase in space to adequately display their growing collections, a premise that foreshadowed the "cult" of accumulation so prevalent today. The spiralling form is based on the golden ratio and is reminiscent of Frank Lloyd Wright's Guggenheim, yet in the latter the centripetal sequence of movement begins at the periphery and terminates at the center, while in Le Corbusier's design the visitor experiences a centrifugal succession of space that unifies a cosmic reading of the world with a perpetually mutable architecture.

Today's museum is a mass medium that serves as a foil to consumer society, or as Huyssen preferred to call it, "a site of spectacular mise-en-scène and operatic exuberance."[11] These former bastions of enlightened thought attempt to inject a sense of memory and time within the emptiness of the everyday present, yet their inability to comprehend and personify the divide that separates our culture of rapid obsolescence that, paradoxically, fetishizes permanence renders them architecturally irrelevant. On the other hand, as a building that enables continuous growth and also marks the passage of time, Le Corbusier's Museum of Unlimited Extension anticipated the role of the contemporary museum as an all-encompassing cabinet of curiosities (figure 9.2). For Peter Eisenman the conceptual strength of the Museum of Unlimited Extension is a result of its rational and coherent circulation. As a volumetrically articulated system that acknowledges its centroidal nature, the scheme is both a spiral and a pinwheel, a duality that exposes the building as a continuous expression of motion.[12] Through this dynamic configuration Le Corbusier devised an active component of society that reconciles the tension between memory and time and reaches far beyond the normative scope of the museum.

The static monument is inherently limited, a fact that the scholar James E. Young was aware of when he remarked how "a fixed image created in one time and carried over into a new time suddenly appears archaic, strange, or irrelevant altogether (. . .) Time mocks the rigidity of monuments, the presumptuous claim that in its materiality, a monument can be regarded as eternally true, a fixed star in the constellation of collective memory."[13] Similarly, when the writer Robert Musil declared that there is nothing as invisible as a monument, he noted how "Anything that endures over time sacrifices its ability to make an impression."[14] Musil denounced what he felt was an attempt to control the consciousness of future generations, an increasingly pertinent issue in light of Huyssen's apprehension over the "contemporary context of a voracious and ever-expanding memorial culture."[15] All of this raises an unavoidable question: what is the appropriate way to remember? When we deliberately invoke memory it tends to adopt a form of redemption through forgetting, and furthermore, it seems almost impossible that a state or other figure of authority could commemorate its misdeeds with any sort of efficacy.

In the Harburg Monument Against Fascism the artists Esther and Jochen Gerz developed a new concept of monumentality that addressed many of the shortcomings that relegated past works to a state of insignificance (figure 9.3). Their "counter-monument" is a self-conscious manifestation that challenges its very reason for being and makes no assumptions other than in its duty to remember, a difficult task given the deluge of existing precedents that rely almost exclusively on manipulation and control. At first glance the Harburg Monument Against Fascism is simply an extruded volume covered in unintelligible markings, but on closer inspection it materializes as a carefully calibrated medium designed to foster the input of its visitors and provide a response. The obelisk slowly vanished into the base of the monument as it accumulated more and more notes and signatures; the quicker people participated, the quicker it disappeared.

9.3 ***Harburg Monument Against Fascism, Viewed from its Base*****, 1986–93. Esther and Jochen Gerz. Photographed 1989.**
For Esther and Jochen Gerz true remembrance could only occur within a dialogue between people. Their Harburg Monument Against Fascism, located in a working class suburb of Hamburg, pioneered the concept of the "counter-monument" through its ability to react to and incorporate external forces. Its soft lead surface prompted visitors to inscribe their presence, an alliance that transforms the monument into an active archive of human memories. As each section filled up with notes and markings the city incrementally lowered the column into the earth, a procedure that permanently sealed its memories for future generations and returned the responsibility for remembrance back onto the world. The final ceremonial lowering was held on November 10th, 1993—the fifty-fifth anniversary of Kristallnacht.

Today the site is empty save for a small window that looks onto the sunken column and only the memories of those people who inscribed messages remain. This element of participation and feedback reversed the typical subject-object correlation that applies to most monuments and their viewers. The viewer is now the subject, an exchange that brings the monument to life and frees it from its dependence on the public. The Harburg Monument Against Fascism is a monument against itself as well as a social mirror that through its reflection brings us closer to the truth. Once it vanished the burden of memory shifted back to its visitors, a process that directly confronted the implied permanence of monumentality, and as Young explained, "its aim is not to console but to provoke; not to remain fixed but to change; not to be everlasting but to disappear; not to be ignored by its passerby but to demand interaction; not to remain pristine but to invite its own violation and desecration; not to accept graciously the burden of memory but to throw it back at the town's feet."[16]

The contemporary monument must encourage and initiate dialogue, a task that artists appear well positioned to undertake. As artists operate outside of the many requirements and regulations that restrict architects, they are free to employ a practically limitless number of times, scales, mediums, and ultimately, realities. The artists Christo and Jeanne-Claude are particularly adept at stimulating global reactions and almost all of their works investigate the fragile bonds that link memory and time. While many of these projects are overtly architectural, the insubstantiality of their fabric installations reveal latent qualities in their respective sites and serve as a metaphor for the continual process of obsolescence and renewal that defines our world. In the *Wrapped Reichstag* the pair shrouded a steadfast witness to some of the most significant events of the twentieth century in a light metallic polypropylene fabric, an act that recast this bellwether of the recent past into an emblem of the reunified German state (figure 9.4). According to Huyssen, Christo and Jeanne-Claude placed "monumental memory" in close proximity to "monumental forgetting", a gesture that unlocked a space for reflection and contemplation and uncovered what was hidden, yet always there.[17]

The *Wrapped Reichstag* is a monument to modern democratic culture. By making the actual building invisible through the reduction and abstraction of its individual details, Christo and Jeanne-Claude revealed its overall character and essence and resurrected its dormant persona. With their installation the Reichstag—a traditional representation of the power of the state and its institutions—became an icon of the rebirth of Germany that symbolized all of its hopes, dreams, and aspirations. As both a social mirror and a modern event that demonstrates the plurality of a world in which no single truth exists, the *Wrapped Reichstag* has a great deal in common with the Harburg Monument Against Fascism. Its monumentality generated a new layer of public memory that promoted the transitory, the ephemeral, and the provisional, but as an artwork largely disseminated and memorialized by the media, it also begs the question of whether monumental architecture is even feasible today, let alone desirable. The *Wrapped Reichstag* was simultaneously monumental and anti-monumental, and

9.4 *Wrapped Reichstag.* Christo (Vladimirov Javacheff) and Jeanne-Claude (Denat de Guillebon). 1995.
The *Wrapped Reichstag* marks the emergence of a new type of monumentality that achieves its fullest expression through the event. Christo and Jeanne-Claude shrouded the Reichstag—a building virtually unused since the Weimar Republic, damaged extensively during World War II, and with little purpose following the division of Germany—in a shimmering metallic fabric that captured varying light conditions and allowed it to reemerge from the chrysalis of its troubled past. In the *Wrapped Reichstag* the monumental work of architecture is marked by its absence, and as Andreas Huyssen proposed, it is "a monumentality that can do without permanence and without destruction, one that is fundamentally informed by the modernist spirit of a fleeting and transitory epiphany, but that is no less memorable or monumental for it."[18]

9.5 (opposite) *Bianimale Nomadic Museum (New York City), 2*005. Shigeru Ban.
This travelling museum houses the prints of the photographer Gregory Colbert, who spent thirteen years roaming the world in an attempt to redefine the relationship between man and the natural realm. Its architecture is a reflection of his oeuvre as well as the ambitious program of a museum with no fixed location and a truly global reach. The nomadic museum consists of two primary elements: paper, and metal shipping containers, materials that further reinforce the ephemerality of both the building and Colbert's subject matter. The entire museum is demountable and fits into six standard containers with the rest readily available at subsequent locations. Ban's use of the event and his ennoblement of commonplace and aesthetically insignificant materials like the paper tube and the cargo container resulted in a remarkably fluid expression of contemporary monumental architecture.

as Huyssen speculated, "Perhaps the wrapping of the Reichstag (. . .) is symptomatic of the fate of the monumental in our postmodern times: it has migrated from the real into the image, from the material into the immaterial, and ultimately into the digitized computer bank."[19]

Although it is hard to disagree with Huyssen's conclusion, it is possible to interpret his ostensibly negative sense of fate in an optimistic light as well. Ignasi de Solà-Morales formulated his concept of "weak architecture" as a response to his reading of the "crisis of the modern project", which he described as "the disappearance of any kind of absolute reference that might in some way coordinate, or 'close,' the system of our knowledge and our values at the point at which we articulate these in a global vision of reality."[20] Out of this nebulous cloud of existence de Solà-Morales drew strength from the tangential, the peripheral, and the marginal, qualities that led him to declare that monumentality can only achieve a fraction of the complexity that it attempts to address, "a window on a more intense reality" that "is bound up with the lingering resonance of poetry after it has been heard, with the recollection of architecture after it has been seen."[21]

While in the past elements such as obelisks and statues hierarchically ordered space, as de Solà-Morales explained, contemporary architecture is faced with the vestiges of this closed system, and consequently, with the need to build in a void.[22] In the midst of our everyday tedium art offers the last refuge for reality, yet art can only provide the prospect of a weak and heterogeneous worldview. Weak architecture reflects the aesthetic experience of art as event, a condition that de Solà-Morales characterized as a "fragmented reality of overlapping virtual and 'real' times."[23] In architectonic terms this suggests that "The signified is not constructed by means of an order but by means of pieces that may ultimately touch; that approach one another, at times without touching; that draw nearer to one another yet never make contact; that overlap, that offer themselves in a discontinuity in time whose reading as juxtaposition is the closest approximation to reality at our disposal."[24]

De Solà-Morales' appreciation for discontinuity and juxtaposition is readily apparent in the Bianimale Nomadic Museum, a temporary building designed by the architect Shigeru Ban to house a travelling collection of photographs (figure 9.5). Its templelike interior elicits a peculiar sensation, for we seldom associate the virtues of a temple with the economy and efficiency of a shipping container and the impermanence of paper. This collision between what we expect and what we see reintroduces classical ideals in a distinctly modern identity, an attribute that the museum then usurps through its ability to effortlessly pack up and redeploy anywhere in the world; a feat that answers Wigley's call for "An expendable architecture (. . .) that throws off the heavy burden of historical memory to engage fully in the flow of contemporary events."[25]

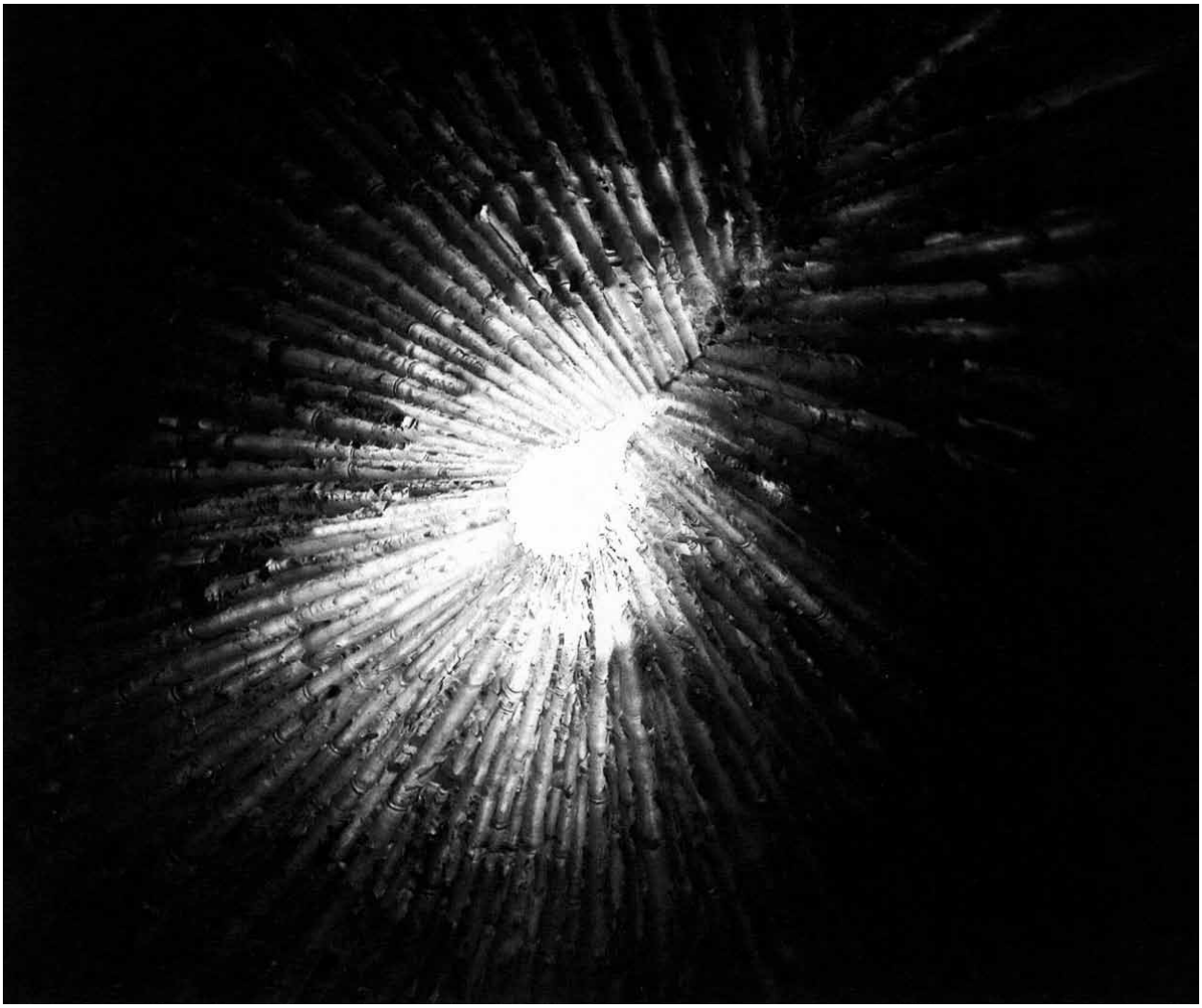
THE POST-MONUMENTAL

It is increasingly obvious that monumentality can no longer thrive in a purely tangible form. While the monoliths of past generations may be fundamentally ineffective in our liquid world, the monumental essence that inspired works like the Pompeian wall paintings and the Bible is more valid now than ever. The contemporary monument must rely on discovery and experience, a reality that places an emphasis on process and interaction rather than final material outcome. As the sea of information envelops us, techniques that can make sense of its complexity yield great promise for future monumental strategies, or what I refer to here as the post-monumental. Sanford Kwinter likened complexity to "the study of phenomena no longer in analytic isolation but as embedded within a rich and unstable milieu of multiple communicating forces and influences."[1] In architectural terms this idea of complexity closely mirrors the concept of synergy proposed by the engineer and inventor Buckminster Fuller, where systems operate together in harmony and are not predicated on the behaviour of their individual parts.[2]

The engineer, scientist, and architect Vladimir Shukhov's Shabolovka Radio Tower is perhaps the first truly synergistic architectural composition (figure 10.1). Shukhov—a pioneer of modern structural engineering and the designer of several novel building systems such as hyperboloid, grid shell, lattice shell, and tensile structures—used the superior properties of high strength steel to create an expressive spire that reveals its compressive and tensile forces. In the Shabolovka Radio Tower efficiency is a principal condition of beauty, a union of function and form facilitated by the rise of the engineer. Shukhov's mathematical analysis of innovative geometries liberated architecture from its dependence on traditional shapes and configurations. Before this point the underlying structure of a building typically existed as an aesthetically inconsequential layer and every effort was made to conceal it. The integration of structure and aesthetic provided architects with the ability to implement their ideas in technical terms, a possibility that significantly influenced future formal experiments.

Although the pragmatic nature of the Shabolovka Radio Tower constitutes a large part of its monumentality, this only tells half of the story. As the first major project to be built after the Soviet Revolution, it was crucial that the radio tower conveyed a strong statement on the value of progress and the Bolsheviks' visionary direction of life, a purpose that stands in marked contrast to the unadulterated utility of Modernism. As Leonardo Benevolo noted, "there was an insoluble antagonism between technical matters and ideology. The work of architecture should respond fully to material utility and at the same time should express the new political ideas in emotional terms."[3] Through the synthesis of these two seemingly distinct meanings Shukhov demonstrated that architecture could be practical and modern at once, and that the modern spirit need not sacrifice a sense of the monumental for the sake of its continued relevance.

10.1 (opposite) ***Shabolovka Radio Tower*****, 1919–22. Vladimir Shukhov.**
The Shabolovka Radio Tower captures the spirit of change that succeeded the Soviet Revolution of 1917. Its stacked hyperboloids enabled new architectural forms as well as an exponential increase in the efficiency of steel. The lightweight lattice shell experiences an almost negligible wing load, a primary concern of the high-rise building. While Vladimir Shukhov originally developed this unique structural system for water towers, military engineers valued its resilience and quickly applied it to turrets on battleships, and it was only after this that designers considered its architectural applications. The column-free space removes one of the greatest limitations of the typological tower and disrupts the traditional hierarchy of columns, girders, and beams, but perhaps most importantly, it required three times less material than the Eiffel Tower to support a similar height. The complexity, performance, and daring vision of the Shabolovka Radio Tower is a testament to both the ideal of progress and the potential for solutions to emerge from unexpected sources of inspiration.



10.2 ***Bruder Klaus Chapel*****, 2003–07. Peter Zumthor. Physical model.**
Peter Zumthor's architecture is heavily rooted in the craft of making. His explorations in materiality allow his designs to perform in novel and unexpected ways, with harmonious architectural forms where no element feels unnecessary or in short supply. Each building appears to emerge out of the very ground it stands on, an effect that achieves an authenticity of place that offers a critical response to buildings like the Guggenheim's of today. Although some may decry this as a return to the solidity of the past, the emotive power embodied in Zumthor's carefully considered spaces ensures the impossibility of such a reading. In the Bruder Klaus Chapel the fluted walls and skillfully positioned aperture accentuate the flowing lines of force and appear to capture matter itself. This approach to creation through material responsibility celebrates the virtues of modesty and restraint, formidable prospects for a new type of architecture that is sympathetic to the modern liquid world.

The sensibility towards material expression found in the Shabolovka Radio Tower is indicative of the prominent role of materiality in contemporary architecture. On the other hand, our need for industrially manufactured goods greatly diminished the economic viability of the craftsman, a fate that has triggered a rift in the way we approach and experience the tactile realm—a traditional point of grounding and rootedness in an otherwise transient world. It would be foolish to think that we could ever return to the artisanal practices of the past, where heavy materials such as stone served as immovable and immutable archives that defied the flow of time, however, we must also ask if it is possible to temper the cold sterility of our ruthlessly efficient mass produced world with the humanistic warmth of the hand wrought artifact.

The architect Carlo Scarpa posed just this question when he reinterpreted classical stereotomic and tectonic processes using modern methods and materials.[4] Scarpa's corporeal designs paralleled the work of architects like Louis Kahn and Mies van der Rohe, who as the architect and historian Kenneth Frampton remarked, embodied "the spirit in the banality of the real; the spiritualization of technique through tectonic form."[5] For Kahn, concrete was a fluid and infinitely adaptable medium, while van der Rohe's portrayal of the steel column is a conspicuous example of his homage to the art of building.[6] In many of his projects the column is an aesthetic icon as well as a primary structural member, a double meaning that emphasizes its modernity and plays with our sense of gravity. Although this abstract merger of structure, materiality, and space is certainly rare, in recent years architects have returned to their mutual intersection and interpenetration in an effort to reignite Modernism. The architect Peter Zumthor is undoubtedly the most ambitious in this regard. Each of his creations explores the relationship between craft and architecture in a unique way, and each acknowledges the importance of the craftsman, an individual who does not separate the work of the mind from the work of the hand. This procedure is particularly apparent in Zumthor's use of materials, and as he explained:

> Material is endless. Take a stone: you can saw it, grind it, drill into it, split it, or polish it—it will become a different thing each time. Then take tiny amounts of the same stone, or huge amounts, and it will turn into something else again. Then hold it up to the light—different again. There are a thousand different possibilities in one material alone.[7]

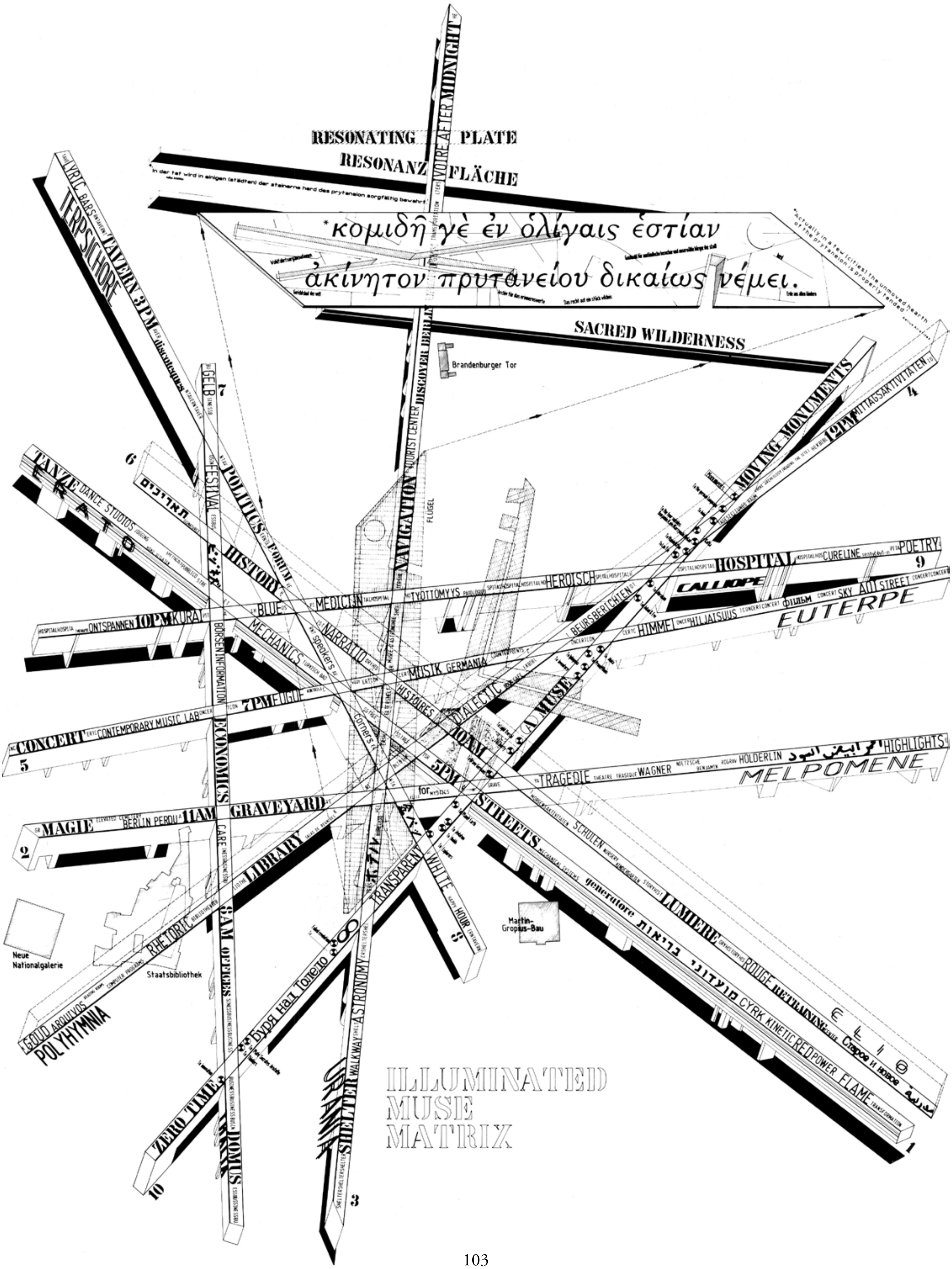
10.3 (opposite) ***Cartier Foundation*****, 1994. Jean Nouvel.**
The Cartier Foundation is a gallery and office block for the renowned jeweller located in an unassuming residential neighbourhood of Paris. Its layered facades subvert the typical sleek glass modernist design and achieve a kaleidoscopic effect between the verdant site and its broader urban context that melds reality and simulation within a unified plane of illusion. Jean Baudrillard celebrated Jean Nouvel's dematerialization of architecture when he proposed that the Cartier Foundation establishes a virtual space that tricks the senses and creates a destabilized region in the city[8]. For Baudrillard, this "controlled disappearance" was a highly desirable quality that allowed the building to surpass the level of mere functionality and economy and gain a new meaning that resonates with our contemporary age and contends with traditional notions of architecture.

In the Bruder Klaus Chapel Zumthor took his affinity for materiality to a new level (figure 10.2). As both a positive mass and a negative void, the chapel displays a juxtaposition of tectonic value and what Frampton termed the "autonomous drive towards dematerialization."[9] This contrast of the material and the immaterial reaches its zenith in the scorched concrete walls, a remnant of the individual timbers that served as both formwork and ceremonial pyre. Zumthor's focus on the "how" of technique rather than the "what" of type and form resists the degradation of the fabrication process and rekindles an appreciation for the carefully crafted object in a distinctly modern context, and like Shukhov and Scarpa before him, his ability to extract latent and unforeseen solutions permeates every aspect of his designs and invests them with a level of significance that is seemingly at odds with the obsolescence and perishability of our world.

As impressive as the Bruder Klaus Chapel may be, our digital world and its disconnect between the mind and body controverts a truly liquid reading and simultaneously challenges the continued survival of the corporeal realm. In this sense successful architecture must exist outside of its own reality and directly confront the fact that most buildings serve a purely functional purpose. At the same time it must also contend with our surfeit of data, something Jean Nouvel explored in many of his projects through various strategies of absence and negation. In the Cartier Foundation Nouvel manipulates our perception of what is real and what is imaginary, an operation that contests the banality of purely functional architecture and responds to the overwhelming visual stimuli that surround us (figure 10.3). The philosopher Jean Baudrillard alluded to this phenomenon when he stated, "When you stand in front of [Nouvel's] buildings, you see them, but they're invisible to the extent that they effectively counteract the hegemonic visibility, the visibility that dominates us, the visibility of the system, where everything must be immediately visible and immediately interpretable."[10] The stratified planes of glass blur the boundaries of reflection and transparency and situate the building as part of an expanded horizon, a new understanding of the monumental surface that undermines the everyday built world through the denial of Robert Venturi's decorated shed.

10.4 (opposite) ***Illuminated Muse Matrix*** **from** ***Out of Line*****, 1991. Daniel Libeskind. Drawing.**

This memory matrix was the conceptual foundation of Daniel Libeskind's proposal for a reunited Berlin developed around Potsdamerplatz. Like Rome, Berlin is a shifting and layered landscape in which excavation plays the role generally reserved for construction. Libeskind's design projected events and places from the past, present, and future within the physical construct of the city, a kind of post-archaeology that unifies and mediates the latent temporal and spatial dimensions of the city. These intangible traces engender architectural forms that reclaim Berlin's collective memory from its troubled past and offer a new topology that calls for the radical transformation of the modern city as an entity founded on both the solidity of history and the liquidity of future unknowns, however, in what was perhaps a telling sign of both the fragile state of reunified Germany and the lack of desire for true reconciliation, the winning entry merely restored the conservative layout of the eighteenth and nineteenth century city.



RESONATING PLATE
RESONANZ FLÄCHE
in der tat wird in einigen (städten) der steinerne herd des prytaneion sorgfältig bewahrt
*κομιδῆ γὲ ἐν ὀλίγαις ἑστίαν
ἀκίνητον πρυτανείου δικαίως νέμει.
*actually in a few (cities) the unmoved hearth of the prytaneion is properly tended
SACRED WILDERNESS
Brandenburger Tor
VOIRE AFTER MIDNIGHT
DISCOVER BERLIN
TOURIST CENTER
NAVIGATION
FLÜGEL
LYRIC BARS
TAVERN 3PM
TERPSICHORE
GELB
FESTIVAL
POLITICS
HISTORY
FORUM
TANZE
DANCE STUDIOS
ERATO
MOVING MONUMENTS
12PM
MITTAGSAKTIVITATEN
4
6
7
HOSPITAL
CURELINE
POETRY
9
CALLIOPE
SKY
ART STREET
EUTERPE
HEROISCH
MEDICIJN
TYÖTTÖMYYS
BLUE
ONTSPANNEN
10PM
KURA
MECHANICS
NARRATIO
speakers
BEURSBERICHTEN
HIMMEL
HILJAISUUS
MUSIK
GERMANIA
BÖRSEN INFORMATION
7PM
FUGUE
CONCERT
CONTEMPORARY MUSIC LAB
5
HISTOIRES
DIALECTIC
MUSE
10AM
HIGHLIGHTS
MELPOMENE
TRAGEDIE
WAGNER
HOLDERLIN
5PM
ECONOMICS
MAGIE
BERLIN PERDU
11AM
GRAVEYARD
2
STREETS
SCHULEN
LIBRARY
CARE
TRANSPARENT
WHITE
HOUR
8
generatore
LUMIERE
Martin-Gropius-Bau
Neue Nationalgalerie
Staatsbibliothek
RHETORIC
8AM
OFFICES
ASTRONOMY
буря над толедо
ROUGE
CYRK KINETIC
RED POWER FLAME
старое и новое
1
GOUD ARCHIVOS
POLYHYMNIA
COMPUTER PROGRAMS
ZERO TIME
WORK
DOMUS
10
SHELTER
WALKWAY
URANIA
3
ILLUMINATED
MUSE
MATRIX

Buildings like the Cartier Foundation inevitably question the role of architecture in an infinitely indeterminate world. When space can be anything and mean anything it is very difficult to ascribe it with a fixed state, a requisite for architectural creation. Yet it is also clear that architecture is still a powerful means of communication, and in fact there are many positive attributes embedded in the substantiality and collective stability of architecture that only stand to gain in importance through this contemporary appreciation of space. One of the most recent examples of this merger appears in the architect Daniel Libeskind's plans for the recovery and reinvention of Berlin following the collapse of the German Democratic Republic and the demolition of the Berlin Wall. His *Illuminated Muse Matrix* envisioned a new center for Berlin that contends with and articulates the conflicting interpretations of history while celebrating the city as an indispensable spiritual achievement (figure 10.4). As he described, the design "navigates between the Scylla and Charybdis of nostalgic historicism and the *tabula rasa* of totalitarianism" by virtue of an "open and ever-changeable matrix which reinforces the processes of transformation and sees the dynamic of change in a diverse and pluralistic architecture."[11]

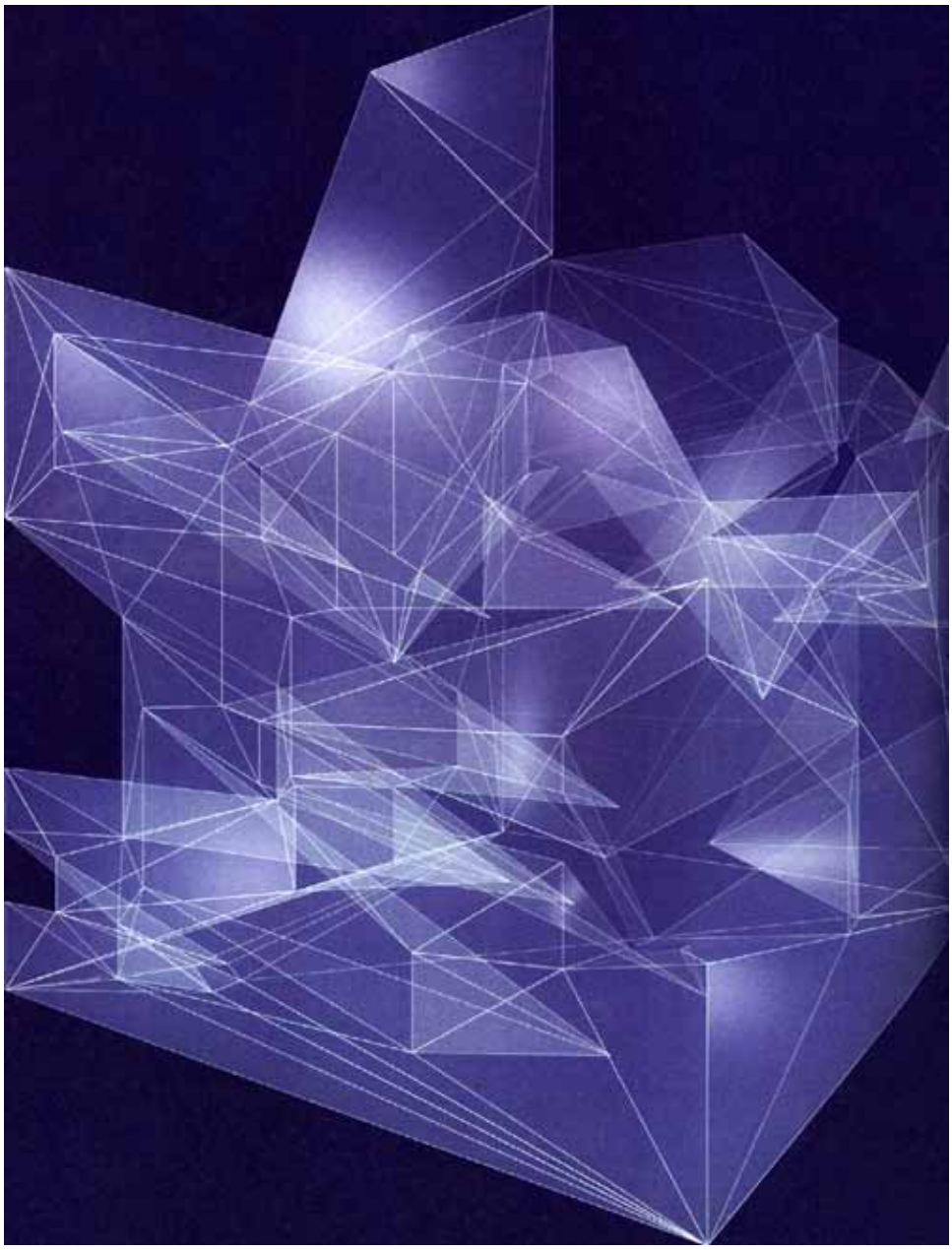
Libeskind's matrix is a dense mosaic of various urban events and programs, a reference to the abundance of experiences and opinions found in our evolving and unpredictable world. The points of intersection become loci that correspond to specific times and locations, or what Marc Augé defined as an "anthropological place".[12] For Augé, these "concrete and symbolic constructions" of identity, relations, and history contain specific rules and arrangements that tie each individual to a larger network of spatial and social possibilities. Anthropological places resist the abstraction of the past and raise their occupants above temporal contingencies through their continuity, a result that Libeskind then amplified through the overlapping times and realities of the scheme. The *Illuminated Muse Matrix* also illustrates Luis Fernández-Galiano's belief that architecture is a reservoir of energy accumulated in the form of useful information. According to Fernández-Galiano, architecture "must be understood both as a product of memory and as a physical support for it."[13] The energy of the past informs and channels future changes, a connection that Libeskind exploited here in order to build links that reach out to the city and distinguish between different kinds of memory, from the very personal manifested in individual memory, to the collective memory that allows us to recall shared events. The *Illuminated Muse Matrix* is ultimately a floating plane over a sacred *prytaneum* that represents our unity and vitality and acknowledges Sanford Kwinter's belief that the world is "composed of systems so extensive, so dense, and so complex that it is no longer a question of representing them in their totality (. . .) but rather of engaging these systems at certain specific and local points along their lines of deployment or unfolding."[14]

CONCLUSION

The idea of change is not limited to our liquid world. The pre-Socratic philosopher Heraclitus realized this when he explained how although we may perceive things as being static or permanent, in reality our lives are a continuous stream of fleeting moments.[1] Today change is instilled in a perpetual cycle of obsolescence and renewal. Nothing is made to last, and as Zygmunt Bauman remarked, "it is the mind-boggling speed of circulation, of recycling, ageing, dumping and replacement which brings profit—not the durability and lasting reliability of the product."[2] Commodities have supplanted the eternal, a transformation that most contemporary architecture fails to address. While the modern architect had to free architecture from its conventions by beginning anew, we must respond once again to the need for buildings that fulfill more than just functional requirements. We cannot replicate the permanences of the past and their fundamentally different beliefs, and must instead learn from their greatness and recognize that in a sense all architecture is monumental; a witness to the passage of time and an attempt at a tangible expression of duration.

The monument evokes our memory through its contrast with the present, a characteristic that Mark Wigley elaborated on when he stated "Not only is the flow of the present (. . .) experienced against the synchronizing reference point of the monument, but each period redefined the present by redefining the monument."[3] This public function is ultimately the most important aspect of monumentality, and it is only through a renewed vision of the self-regulating organic society that we can avoid the danger of monumental ossification. We must reclaim the idea of the public as a forum for collective issues that fosters a sustained dialogue among people united by common interests. Buildings like the Greek *gymnasion* and *agora*; the Roman *thermae* or *fora*; and the mediaeval guilds, market places, and cathedrals developed around the intimate connection between architecture and the social structures of their time. These symbols of public life derived their economic value from their civic value and gave meaning to the city in their recollection of the past. Monumental architecture is an attempt at establishing a constant location and time in what is a transitory and unstable world, and as Andreas Huyssen noted, "the search and desire for the monumental (. . .) is always the search and desire for origins."[4]

The decline of monumentality is synonymous with what Huyssen described as "the privatization of memory, the recording of privates lives, [and] the virtualization and multiplication of public spaces."[5] In *Notre-Dame de Paris* the poet and novelist Victor Hugo lamented the impending "death" of architecture when he declared "This will kill that", a reference to the printed book and the cathedral. Our shift to more manageable forms of memory means that it is no longer necessary to document the past in Hugo's "books of stone", yet what if the monumental disappeared only to reemerge as an idea? We live in a digital age where data can hold more information than even the largest building, a condition that led Wigley to propose that "Collective memory is diffused across an invisible electronic landscape rather than concentrated



11.1 ***3D City_Cube*** **from** ***KM3*****. MVRDV. Digital Image. 2005.**
As populations increase and resources diminish we must consider novel forms of architecture and urbanism. According to MVRDV, questions of economy, statistics, and optimization will characterize these visions of the future. KM3, their design for a city of one million inhabitants in a one cubic kilometre volume, examines how we might accommodate a large number of people in a self-sufficient enclosure through incisive programs like housing, services, agriculture, industry, shopping, leisure, waste, energy, water, air, and forest. In this massing diagram MVRDV arranged these components in order to maximize light and air penetration and accommodate the relationships found within and between the various sectors and their associated buffer zones, an architectural strategy that suggests a project like KM3 could not exist without the pressures of the liquid world and its demands for a certain quality of life. While this objective and rational view of the world implies a monumental method for operating in the contemporary age, it also casts doubt on whether there is room for architecture in a future predicated purely on the art of necessity.

in singular monumental objects."[6] In KM3, a design for a sustainable megalopolis, the architectural practice MVRDV jettisoned the last vestiges of architecture as we know it, with the architect positioned as a master of information who must negotiate our constantly evolving world (figure 11.1). If nothing else KM3 is proof that there will always be architecture, though it remains to be seen what form it will take.

Perhaps liquid monumentality is a matter of redefining our relationship to the data that surrounds us? For Bauman the fact that power is now exterritorial and resides almost exclusively in electronic networks directly encourages the production of public spaces that are increasingly devoid of public issues. In this world freedom of movement is the principal tool of domination, and time a mere attribute of human control and invention. Our unstoppable drive towards what Bauman referred to as a "forever incomplete modernization" and an "unquenchable thirst for creative destruction" has resulted in a world obsessed with the present where the flow of time reigns supreme.[7] From an architectural standpoint the appearance and representation of liquidity closely resembles a screen or vessel able to assume any shape or form on a moment's notice, and in this regard a building like Jean Nouvel's Cartier Foundation is the perfect embodiment of liquid monumentality. We need flexible containers for modern life, however, they must reflect this purpose in their architecture, a difficult task given that it is no longer a question of knowing the means required to reach certain ends, but of not knowing the ends to choose given their unlikely persistence.

As much as we can argue in favour of a new monumentality, the concepts of individuals like Bauman and Wigley and the prescient nature of works like KM3 demonstrate that most architecture today is simply a homogeneous geological layer of a world in which true monumentality may be impossible. In *Mechanization Takes Command* Sigfried Giedion posited that we have lost touch with the oldest dreams of architecture and the desire for contact with the invisible and the eternal is incompatible with our modern technological world. Bauman echoed these sentiments when he declared that "The devaluation of immortality cannot but augur a cultural upheaval, arguably the most decisive turning point in human cultural history", and went on to explain how "the memory of the past and trust in the future have been thus far the two pillars on which the cultural and moral bridges between transience and durability, human mortality and the immortality of human accomplishments, as well as taking responsibility and living by the moment, all rested."[8] Maybe it is our desire to forget the past and our disbelief in the future, where a building endures, that makes monumentality so challenging? Whatever the case, we need buildings that mediate between the real and the ideal and delineate beginnings from ends. Even when everything has become liquid we must have the occasional rock in the sea, indicated on a map and marked by a lighthouse, that reminds us of our own mortality and allows us to constitute ourselves.

Thus, I tell you, you will build because the deep forest is good for men; good, too, the Milky Way and the blue plain seen from the mountain-top. And yet—what are those vastnesses of sea and plain and Milky Way, compared with the pregnant darkness of the stones of the temple when the architect has found a way of filling them with silence? You, the architects, will be the greater for having looked beyond the daily needs of life and raised your eyes towards the one task truly worthy of your achievement. It will absorb the best of you, since, no longer serving your self-interest, it will force you to serve itself. And it will lift you up above yourselves. For how should great architects arise, if the work to be done lack greatness?[9]

Antoine de Saint-Exupéry

NOTES

PREFACE

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2 Manfredo Tafuri, *Architecture and Utopia: Design and Capitalist Development*, trans. Barbara Luigia La Penta (Cambridge, Mass.: MIT Press, 1979), p. 16.

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2 Jan Morris, *Conundrum* (London: Faber & Faber, 1974), p. 22.

THE BEGINNINGS OF MONUMENTALITY

1 Sigfried Giedion, *The Eternal Present: The Beginnings of Architecture* (New York: Bollingen Foundation, 1964), p. 213.

2 Sigfried Giedion, "The Need for a New Monumentality", in *New Architecture and City Planning: A Symposium* (New York: Philosophical Library, 1944), pp. 552-3.

3 The idea of utopia is a central theme throughout much of Bloch's work. He investigated its architectural implications in the second volume of *The Principle of Hope*, and in particular, the sub-chapter "Buildings Which Depict a Better World, Architectural Utopias".

4 Ernst Bloch, *The Principle of Hope*, vol. two, trans. Neville Plaice, Stephen Plaice, and Paul Knight (Cambridge, Mass.: MIT Press, 1986), p. 723.

5 The connection between the different districts of ancient Athens and its architectural types is a key element of Robert Jan van Pelt's study of the Greek city state in *Architectural Principles in the Age of Historicism*. The concept of the *stoa* as a vessel of thought and a reserve of the city is taken from here.

6 Arendt analyzed the nature of public and private life from the perspective of ancient Athens in the second chapter of *The Human Condition*, "The Public and the Private Realm".

7 Johann Gottfried Herder, *Outlines of a Philosophy of the History of Man*, trans. T. Churchill (New York: Bergman Publishers, 1966), p. 230.

8 Robert Jan van Pelt and Carroll William Westfall, *Architectural Principles in the Age of Historicism* (New Haven: Yale University Press, 1991), p. 169.

9 For an expanded reading of Riegl's theories on our perception of the passage of time, please refer to the chapter "Pseudo-Monumentality and the Enlightenment Trap".

10 Kwinter explored the monastic division of time in the first chapter of *Architectures of Time*, "The Complex and the Singular".

11 Sanford Kwinter, *Architectures of Time* (Cambridge, Mass.: MIT Press, 2001), p. 22.

12 This comparison is drawn from *The Principle of Hope;* see note 3.

IN THE PURSUIT OF AN IDEAL

1 William Roger Paton, trans., *The Greek Anthology*, vol. III (London; New York: William Heinemann; G. P. Putnam's Sons, 1917), p. 31.

2 Luis Fernández-Galiano, *Fire and Memory: On Architecture and Energy*, trans. Gina Cariño (Cambridge, Mass.: MIT Press, 2000), p. 88.

3 Val K. Warke, "The Song of the Sirens: A Rhetoric of Urban Monumentality", in *Harvard Architecture Review* vol. 4 (Spring, 1984), p. 133.

4 Aldo Rossi and Peter Eisenman, *The Architecture of the City*, trans. Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), pp. 55–6.

5 Kurt W. Forster, "Monuments to the City", in *Harvard Architecture Review* vol. 4 (Spring, 1984), p. 107.

6 Dalibor Vesely, *Architecture in the Age of Divided Representation: The Question of Creativity in the Shadow of Production* (Cambridge, Mass.: MIT Press, 2004), p. 192.

7 Michael Dennis, *Court & Garden* (Cambridge, Mass.: MIT Press, 1986), p. 29.

8 In *Collage City*, and specifically, in the chapter "Crisis of the Object: Predicament of Texture", Rowe contrasted rational modern urban design practices with historical examples such as this reading of the Parisian royal squares.

9 Dennis, op. cit., p. 47.

10 Habraken examined the composition of the Parisian royal squares in "Change and the Distribution of Design", found in *Time-Based Architecture.*

11 Dennis, op. cit., p. 87.

PSEUDO-MONUMENTALITY AND THE ENLIGHTENMENT TRAP

1 Colin Rowe and Fred Koetter, *Collage City* (Cambridge, Mass.: MIT Press, 1978), p. 19.

2 This anecdote is taken from *The York Building Dragons,* a short story written under anonymity by "a club of ingenious gentlemen" in 1725. It can be found in Humphrey Jennings' *Pandaemonium*, an anthology of literature that documents the advent of the machine age.

3 Rowe proposed this idea in the chapter "Utopia: Decline and Fall?", found in *Collage City*.

4 Leonardo Benevolo, *History of Modern Architecture*, vol. one, trans. H. J. Landry (Cambridge, Mass.: MIT Press, 1971), p. 29.

5 Rowe and Koetter, op. cit., p. 15.

6 Leandro Madrazo, "Durand and the Science of Architecture", in *Journal of Architectural Education* vol. 48.1 (September, 1994), p. 21.

7 Benevolo, *History of Modern Architecture*, vol. one, op. cit., p. 31.

8 Benevolo discussed these ideas in the final sub-chapter of "Changes in building technique during the industrial revolution", located in the first volume of his *History of Modern Architecture*.

9 Peter Eisenman, *The Formal Basis of Modern Architecture* (Baden: Lars Müller Publishers, 2006), p. 93.

10 Riegl explored the concept of age-value and its implications for future monumentality at the beginning of "The Relationship of Commemorative Values to the Cult of the Monument".

11 Riegl's belief in the Renaissance recovery of a true identity and the associated birth of cultural history appears near the end of "The Meaning of Monuments and Their Historical Development".

12 Brian Lukacher, *Joseph Gandy: An Architectural Visionary in Georgian England* (New York: Thames & Hudson, 2006), p. 161.

13 Sigfried Giedion, "The Need for a New Monumentality", in *New Architecture and City Planning: A Symposium*, ed. Paul Zucker (New York: Philosophical Library, 1944), p. 550.

14 The art historian Brian Lukacher explored the importance and meaning of Soane and Gandy's overlapping temporal structures in his monograph on Gandy, and specifically, in the chapter "Soane and Gandy at the Fall of Architecture".

15 Alois Riegl, "The Modern Cult of Monuments: Its Character and Its Origins", trans. Kurt W. Forster and Diane Ghirardo, in *Oppositions* vol. 25 (Fall, 1982), p. 32.

16 Lukacher, op. cit., p. 88.

17 Benevolo, *History of Modern Architecture*, vol. two, op. cit., p. 555.

18 Ibid., p. 555.

19 Van Pelt and Westfall, op. cit., p. 321.

20 Ibid., p. 323.

21 Ibid., p. 333.

22 The author Elias Canetti, who explored crowds and their power in his seminal work of the same title, presented this idea in *The Conscience of Words*.

23 Van Pelt and Westfall, op. cit., p. 335.

24 Ibid., p. 337.

25 Benevolo, *History of Modern Architecture*, vol. two, op. cit., p. 555.

26 Ibid., p. 576.

A MODERN MONUMENT

1 In the second chapter of *Architecture and Time*, "Modernist Space and the Fragment", Kwinter examined the nature of modernity through his concept of modernist space, which he defined as an abstract plane of underlying relations or "conditions of possibility".

2 Kwinter, op. cit., p. 23.

3 Ibid., p. 60.

4 Ibid., p. 67.

5 Maria Drudi Gambillo and Teresa Fiori, eds., *Archivi del Futurismo*, vol. one (Rome: De Luca, 1958), p. 143, quoted in Ibid., p. 62. A slightly different English translation is available in *Futurist Manifestos*, ed. Umbro Appolonio (London: Thames & Hudson, 1973), p. 89.

6 Kwinter, op. cit., p. 96.

7 This is the first of Sant'Elia's "Proclamations" found in the *Manifesto of Futurist Architecture*.

8 Robert Venturi, *Complexity and Contradiction in Architecture*, 2nd ed. (New York: The Museum of Modern Art, 1977), p. 34.

9 Kwinter, op. cit., pp. 85–6.

10 Ibid., p. 82.

11 Rowe and Koetter, op. cit., p. 38.

12 Lothar Bucher, *Kulturhistorische Skizzen aus der Industrie-Ausstellung aller Völker* (Frankfurt: Lizius Verlag, 1851), p. 174, quoted in Sigfried Giedion, *Space, Time and Architecture*, 5th ed. (Cambridge, Mass.: Harvard University Press, 1969), pp. 243–4.

13 Benevolo, *History of Modern Architecture*, vol. one, op. cit., p. 102.

14 Dostoevsky documented his experiences in London in *Winter Notes on Summer Impressions*. His thoughts on the Crystal Palace can be found in the fifth chapter, "Baal".

15 Reyner Banham, *Theory and Design in the First Machine Age* (London: Architectural Press, 1960), p. 68.

16 Stanford Anderson, "Modern Architecture and Industry: Peter Behrens and the AEG Factories", in *Oppositions Reader: Selected Readings from A Journal for Ideas and Criticism in Architecture 1973–1984*, ed. K. Michael Hays (New York: Princeton Architectural Press, 1998), p. 521.

17 Ibid., p. 533.

18 Ibid., p. 545; Anderson's "Spenglerian overtones" is a reference to the historian and philosopher Oswald Spengler, who investigated the cyclical rise and fall of civilizations and the origins and future of Western culture in *The Decline of the West*.

19 Banham discussed the importance of Garnier's industrial city in the third chapter of *Theory and Design in the First Machine Age*, "The Academic Succession: Garnier and Perret".

20 Tony Garnier, *Une Cité Industrielle: Étude Pour la Construction des Villes*, trans. Marguerite E. McGoldrick (New York: Princeton Architectural Press, 1989), p. 6.

21 Ibid., p. 17.

22 Benevolo, *History of Modern Architecture*, vol. one, op. cit., p. 340.

23 Ibid., p. 341.

24 Colin Rowe and Robert Slutzky, *Transparency* (Basel: Birkhäuser, 1997), p. 53.

25 Anderson, op. cit., p. 545.

26 Benevolo, *History of Modern Architecture*, vol. two, op. cit., p. 476.

27 Georgy Kepes, *The Language of Vision* (Chicago: Paul Theobald, 1944), p. 77, quoted in Rowe and Slutzky, op. cit., p. 23.

28 Rowe and Slutzky, op. cit., pp. 49–50.

29 Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques* (New York: The Monacelli Press, 2003), p. 298; Eisenman expanded on his idea of the critical architectural "text" in the introduction to *Giuseppe Terragni: Transformations, Decompositions, Critiques* and the chapter "Terragni and the Idea of a Critical Text".

30 In *Giuseppe Terragni: Transformations, Decompositions, Critiques* Eisenman analyzed the facades at length from both an individual and interconnected point of view. Eisenman presented this interpretation of a transformational process informed by continuous symmetry and asymmetry in the chapter "Transformations: The Facades".

31 Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, op. cit., p. 297.

32 Eisenman, *The Formal Basis of Modern Architecture*, op. cit., p. 291.

33 Robert Slutzky, "Aqueous Humor", in *Oppositions* vol. 19/20 (Winter/Spring, 1980), p. 34.

34 Ibid., p. 48.

35 Venturi studied the latent potential of the building envelope throughout *Complexity and Contradiction in Architecture*. This idea of juxtaposition and the merits of residual space may be found in the chapters "Contradiction Juxtaposed" and "The Inside and the Outside".

INSTRUMENTALITY VERSUS MONUMENTALITY

1 Hannah Arendt, *The Human Condition*, 2nd ed. (Chicago: University of Chicago Press, 1958), p. 157.

2 Karel Teige, "Mundaneum", trans. Ladislav and Elizabeth Holovsky and Lubamir Dolezel, in *Oppositions Reader: Selected Readings from A Journal for Ideas and Criticism in Architecture 1973–1984*, ed. K. Michael Hays (New York: Princeton Architectural Press, 1998), p. 595.

3 Henry-Russell Hitchcock and Philip Johnson, *The International Style* (New York: W.W. Norton & Company, 1966), p. 105, quoted in George Baird, *The Space of Appearance* (Cambridge, Mass.: MIT Press, 1995), p. 135.

4 The non-place is a central concept of Augé's *Non-Places: Introduction to an Anthropology of Supermodernity* and is explored at length in the chapter "From Places to Non-Places".

5 The shift from heavy to light processes is a primary theme of Bauman's *Liquid Modernity*. In the heavy or solid capitalism of the past labour and capital were fixed in place, while in the present phase of light capitalism power is extraterritorial and no longer tied to space.

6 Quoted in Gregor Paulsson et al., "In Search of a New Monumentality: A Symposium", in *Architectural Review* vol. 104.621 (September, 1948), p. 124.

7 Philip Johnson, *Mies van der Rohe* (New York: The Museum of Modern Art, 1947), p. 203, quoted in Kenneth Frampton, *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture* (Cambridge, Mass.: MIT Press, 1995), p. 186.

8 The idea of the readymade comes from the work of the artist Marcel Duchamp, who removed industrially produced items from their original context as a statement on the meaning of modern culture and a challenge against the established notions of art.

9 Robert Smithson, "The Monuments of Passaic", in *Artforum* vol. 6.4 (December, 1967), p. 50.

10 Alois Riegl, op. cit., p. 21.

11 Mark Wigley, "The Architectural Cult of Synchronization", in *October* vol. 94 (Autumn, 2000), p. 47.

12 Gianni Vattimo, *The Transparent Society*, trans. David Webb (Baltimore: The Johns Hopkins University Press, 1992), p. 78.

13 Koolhaas explored these ideas in "The Generic City", an essay published in *S,M,L,XL*, his anthological work on architecture and urbanism.

14 In *The Art of Memory* Yates reinterpreted the Renaissance philosopher Giulio Camillo's *The Idea of the Theatre*, a book of abstract relationships that attempt to provide a universal register of knowledge.

15 Rowe analyzed the development of urban form and its correlation with the concept of utopia throughout *Collage City*. The persistence of "Main Street USA" and its transformation into Disney World is a central theme of the chapter "After the Millennium".

16 Rowe and Koetter, op. cit., p. 33.

17 Vattimo articulated his idea of postmodernity in the chapter "The Postmodern: A Transparent Society", found in *The Transparent Society*.

18 Carter Wiseman, *Shaping A Nation: Twentieth-Century American Architecture and Its Makers* (New York: W.W. Norton & Company, 1998), p. 306.

THE MASS ORNAMENT

1 Adolf Loos, *Ornament and Crime*, trans. Michael Mitchell (Riverside, Calif.: Ariadne Press, 1998), p. 167; italics retained from original source.

2 Wigley, op. cit., p. 50.

3 Ignasi de Solà-Morales, *Differences: Topographies of Contemporary Architecture*, ed. Sarah Whiting, trans. Graham Thompson (Cambridge, Mass.: MIT Press, 1997), p. 70.

4 Siegfried Kracauer, *The Mass Ornament: Weimar Essays*, trans. Thomas Y. Levin (Cambridge, Mass.: Harvard University Press, 1995), p. 75.

5 In *The Society of the Spectacle* Debord examined the prevalence of the "spectacle", which he defined as the confluence of advanced capitalism and mass media, where images supplant authentic social values and genuine human interaction. Debord described two forms of spectacle: the "concentrated", which centers on a condensed dictatorial personality, and the "diffuse", a system that encourages the commodification of contemporary consumer culture.

6 Joan Ockman, "Between Ornament and Monument: Siegfried Kracauer and the Architectural Implications of the Mass Ornament", paper presented at the 9th International Bauhaus Colloquium, Weimar, April 24–7, 2003, p. 86.

7 Ibid., p. 88.

8 In *The Architectural Cult of Synchronization* Wigley posited that as the turnover rate of objects increases their immortal capacity follows suit. The most transitory objects attain cult status through the "aura" of the image and serve as "synchronization devices" for global culture.

9 Ockman, op. cit., p. 88.

10 Ibid., p. 89.

11 Ibid., p. 77.

MONUMENTALITY AND TIME

1 Mumford announced "The Death of the Monument" in *The Culture of Cities*, and specifically, in the chapter "Social Basis of the New Urban Order".

2 Kwinter discussed his theory of the event near the end of the chapter "Modernist Space and the Fragment", found in *Architectures of Time*. For a more detailed reading of Kwinter's work please refer to the chapter "A Modern Monument".

3 Alex Krieger, "Civic Lessons of an Ephemeral Monument", in *Harvard Architecture Review* vol. 4 (Spring, 1984), p. 149.

4 Jean-Paul Sartre, "American Cities", in *Literary and Philosophical Essays* (London: Rider and Company, 1955), p. 112, quoted in Krieger, op. cit., p. 156.

5 Krieger, op. cit., p. 157.

6 Ibid., pp. 149–50.

7 Edgar Morin, *La Méthode: 1. Nature de la Nature* (Paris: Seuil, 1977), p. 73, quoted in Fernández-Galiano, op. cit., p. 92.

8 In the introduction to *Twilight Memories: Marking Time in a Culture of Amnesia* Huyssen argued that the information revolution reconfigured the relationship between past, present, and future and dissolved the spatial and territorial coordinates of the late twentieth century through its increased mobility; realities that we then counteract through these divergent trends in memory.

9 Andreas Huyssen, *Twilight Memories: Marking Time in a Culture of Amnesia* (New York; London: Routledge, 1995), p. 3.

10 Wigley, op. cit., p. 50.

11 Huyssen, *Twilight Memories: Marking Time in a Culture of Amnesia*, op. cit., p. 14.

12 In *The Formal Basis of Modern Architecture*, and specifically, the chapter "Development of Formal Systems", Eisenman proposed that circulation is closely connected to volumetric order and all buildings derive their basic arrangement from either linear or centroidal formal systems.

13 James E. Young, "The Counter-Monument: Memory against Itself in Germany Today", in *Critical Inquiry* vol. 18.2 (Winter, 1992), p. 294.

14 Robert Musil, *Posthumous Papers of a Living Author*, trans. Peter Wortsman (New York: Archipelago Books, 2006), p. 66.

15 Andreas Huyssen, *Present Pasts: Urban Palimpsests and the Politics of Memory* (Stanford: Stanford University Press, 2003), p. 30.

16 James E. Young, op. cit., p. 277.

17 In *Present Pasts: Urban Palimpsests and the Politics of Memory*, and in particular the chapter "Monumental Seduction: Christo in Berlin", Huyssen explored contemporary monumentality and its relation to memory and time through an analysis of the numerous memorials planned in Germany during the late twentieth century.

18 Huyssen, *Present Pasts: Urban Palimpsests and the Politics of Memory*, op. cit., p. 46.

19 Ibid., p. 47.

20 De Solà-Morales, op. cit., p. 58.

21 Ibid., p. 71.

22 This thought and the subsequent idea of art as a refuge from reality are central to De Solà-Morales' explanation of "Weak Architecture" in *Differences: Topographies of Contemporary Architecture*.

23 De Solà-Morales, op. cit., p. 67.

24 Ibid., p. 66.

25 Wigley, op. cit., p. 32.

THE POST-MONUMENTAL

1 Kwinter, op. cit., p. 13.

2 Fuller dedicated an entire book, *Synergetics: Explorations in the Geometry of Thinking*, to the study of systems and their interaction. This basic interpretation can be found in the chapter "Synergy".

3 Benevolo, *History of Modern Architecture*, vol. two, op. cit., p. 556.

4 The "light" tectonics of the frame and the "heavy" stereotomics of the mound are two of the elements that Gottfried Semper described in *The Four Elements of Architecture*.

5 Frampton, op. cit., p. 207.

6 This understanding of Kahn and van der Rohe defines much of their respective careers. For instance, Kahn used concrete to solve technical problems in a holistic and hierarchical manner—evident in the folded concrete plates that span the width of the Salk Institute and incorporate its mechanical systems—whereas van der Rohe constantly reformulated his use of the steel column as an ordering device through works like the Illinois Institute of Technology, the Farnsworth House, and the Seagram Building.

7 Peter Zumthor, *Atmospheres* (Basel: Birkhäuser, 2006), p. 25.

8 In his conversation with Nouvel published in *The Singular Objects of Architecture*, Baudrillard described architecture as a search for limits. The Cartier Foundation was an example of this; a "singular object" that could overcome our liquid world.

9 Frampton, op. cit., p. 205.

10 Jean Baudrillard and Jean Nouvel, *The Singular Objects of Architecture*, trans. Robert Bononno (Minneapolis; London: University of Minnesota Press, 2002), p. 9.

11 Alan Balfour, *World Cities: Berlin* (London: Academy Editions, 1995), p. 75.

12 Augé explained his concept of anthropological place in *Non-Places: Introduction to an Anthropology of Supermodernity.*

13 Fernández-Galiano, op. cit., p. 70.

14 Kwinter, op. cit., p. 12.

CONCLUSION

1 Heraclitus' tenets and maxims exist only in fragments recorded by other individuals. The most notable of these can be found in Plato's *Cratylus* and the ninth book of the classical biographer Diogenes Laërtius' *The Lives and Opinions of Eminent Philosophers*.

2 Zygmunt Bauman, *Liquid Modernity* (Cambridge; Malden, Mass.: Polity Press; Blackwell, 2000), p. 14.

3 Wigley, op. cit., p. 42.

4 Huyssen, *Present Pasts: Urban Palimpsests and the Politics of Memory*, op. cit., p. 40.

5 Huyssen, *Twilight Memories: Marking Time in a Culture of Amnesia*, op. cit., p. 336.

6 Wigley, op. cit., p. 31.

7 Bauman, op. cit., p. 28.

8 Ibid., p. 126/129.

9 Antoine de Saint-Exupéry, *The Wisdom of the Sands*, trans. Stuart Gilbert (New York: Harcourt, Brace, and Company, 1950), p. 80.

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