

## WORKING MEMORY: AN EVALUATION OF THE PAST IN THE DESIGN PROCESS

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### INTRODUCTION

This writing, which has been conceived as a way of introducing new material into a debate that aims to engage historians, theorists, and designers alike, draws the reader's attention to the notion of working memory in architecture; its function is to interpret a collection of data in order to evaluate them, and to select those that seem most interesting for a specific purpose.

We analyze three cases of memory at work, drawn from the vast repository of architecture's history. These are very different cases, and none of them is intended to be seen as an ideal; rather, each case is simply a product of memory with a clear purpose: to be intelligible, even when we do not necessarily agree with it. In each case, the memory process—the very act of recall—lets us see clearly what memory managed to retain and what it relinquished: in other words, how it worked.

This essay is structured into three sections. Each section emphasizes one aspect of the History-Theory-Design triad and describes the effort that the memory of architects has expended, over different circumstances in space and time, to reconnect to the past and to make it work within the present. The first section, titled *The Past of architecture as a Source of Inspiration*, goes back to the time in the history of architecture that falls between Humanism and the Renaissance. During that time, architects and *trattatisti* (writers of treatises) rediscovered *De architectura libri decem* (*The Ten Books of Architecture*) by the Roman architect Marcus Lucius Vitruvius Pollio. Specifically, they tried to rebuild the complement of images that, unlike the text in the book, was lost, and they relied on the text devoid of any images to invent the architecture of their times. The title of the second section is *Chronologies and Genealogies in Architecture*. It references some well-known transformation projects of preexisting monumental forms to outline a general theory of time in architecture, which—when applied to contemporary times—should help us to overcome the cultural barriers that

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separate architects not only from historians of architecture, but also from restorers and conservationists. The third section, titled *Oneiric Archaeology and Urban Architecture*, uses a personal collage to introduce the concept of *archeologia d'invenzione*, a visionary kind of archaeology that can help establish a conceptual relationship, rather than a stylistic one, with the history of architecture, conceived in an evocative sense and not as a device for legitimization or delegitimization.

### THE PAST OF ARCHITECTURE AS A SOURCE OF INSPIRATION

Thanks to the work of historians, we realize today that architects have based their use of the past on some glaring errors of interpretation. Nonetheless, the buildings and the elements of cities that have resulted from that design approach are still regarded as masterpieces. Should we then deduce that the misconstruction of the past is one of the necessary preconditions of invention?

A possible way to answer this question is to revisit a particular moment in the history of architecture, between the fifteenth and the sixteenth century, in which the reinterpretation of the past has been shown not to stand up to the reevaluation process conducted with the benefit of hindsight in the context of historical research, even though—back in the day—it was the bedrock for the definition of a culture, of a mindset, and of an entire era. The specific episode refers to the attempt by Italian humanists and architects to rebuild the form of the ancient *domus*, the city dwelling of the Roman aristocratic class.

Vitruvius's *De architectura*, which was already in circulation as a manuscript during the Middle Ages (though it did not become available in print until 1486 in a version edited by Sulpicio da Veroli) acquired particular significance in the context of the general rediscovery of Antiquity by Humanists in the 1400s, because it was the only source of the period specifically devoted to architecture, even though it was not the only one that carried information about the *domus*. The accidental loss of the illustrations in the Vitruvian treatise spurred Renaissance architects to rebuild the lost set of images. In so doing, they proved that they were stimulated by the need to look at the past to find guidance for the present rather than by a pure disposition for research. To appreciate the gap between reality and imagination, we need to establish a benchmark and to define an archetype of the *domus*, which is far from a simple proposition.

To begin with, it is difficult to tackle the studies that cast doubt on the supposed archetypal quality of the *domus* (Tamm, 1973) and on the correspondence that such an archetype would have had both with the guidance provided by Vitruvius in Book VI of *De architectura*, which is devoted to dwellings, and with the well-known examples found in Pompeii. This skepticism seems justified if we think of type as a pattern; but things change if we think of type as a system of relationships between the various rooms of a house, which tends to repeat itself under different guises and with multiple variants (1). In this sense, it is not wrong to use Pompeian houses to understand, at a minimum, the basic and permanent features of the ancient Roman *domus* (de Vos, 1992). Nevertheless, it is very important to stress that neither the lettered men of the Humanist era nor the architects of the Renaissance would have had first-hand experience of them, since the ruins of Pompei were not unearthed until the mid-eighteenth century.

1. The well-known definition that Antoine Chrysostome Quatremère de Quincy gives of the term "type" in the third volume of *Encyclopédie méthodique. Architecture*, published in 1825, places two terms in contrast with one another: type and model. The former is "more or less vague", as it lends itself to several highly creative transformations by the architect. The latter is "precise and given", it can just be copied. The term "pattern" has nothing to do with "type" because it refers to serial production, where creativity has a place only in the preparation of the prototype.

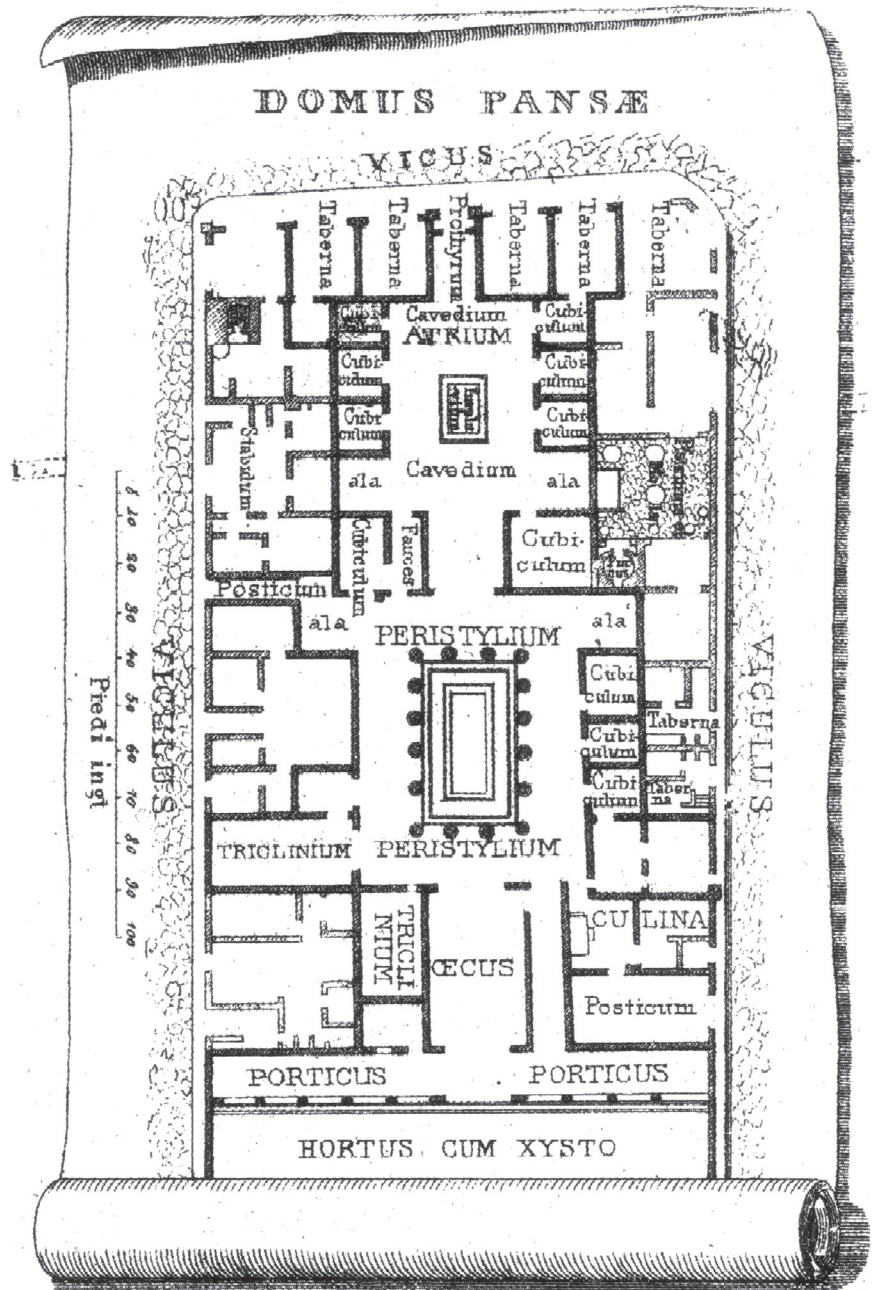


Figure 1. The Domus of Pansa in Pompei, plan

The blueprint of the domus (Figure 1) shows a building that is virtually limited to the ground floor, even though secondary rooms on the upper floor were a possibility (Zanker, 1993). The layout features a perimeter wall that turns the building into a fundamentally inward-looking structure, despite the fact that recent studies (Helg, 2018) have highlighted the importance of the façade, consisting of *tabernae* (mostly artisan workshops, but also shops, stores, offices, etc.), which faced the street. The most significant opening in the perimeter wall was the main gate, which had to be left open during the day to grant access to family members and visitors, thus allowing passersby to peek into the main parts of the house: the hallway, called *vestibulum* or *prothyrum*; the *atrium* or *caum aedium*, the

virtual center of the house, which had walls shielded by an overhanging roof, with an opening in the middle that allowed rainwater to drain into a basin called *impluvium*; the *tablinum*, a room that was used as a reception space and to entertain guests; and the *peristylum*, a yard surrounded by columns and often enriched with statues, arbors, and water features. The sequence of these rooms and environments was common enough that it could be defined as typical, though it did not necessarily follow an established scheme: it could develop along the main entrance pathway of the house, without following a predefined symmetry, or it could take on different configurations, which were determined by the shape and by the size of the plot of land the house was built on, and by the financial resources of the owner.

The first attempts to reinterpret the ancient Roman domus can be traced back to the middle of the fifteenth century, by following two main routes: the literary route and the architectural route. Many educated men have tackled ancient texts that describe Roman dwellings. They often misinterpret their sources and reproduce spaces (albeit in purely literary form) that never existed. Or, more accurately, they never existed in the shape described by the authors. After all, a book such as *De Partibus Aedium* (On the Parts of the House) by the Humanist Francesco Maria Grapaldo, which was published in Latin in Parma in 1494, is not merely a work of erudition, despite its philological approach. A reading of texts about homes by Varro, Vitruvius, and Pliny, shows us that—in contrast—Grapaldo seems more interested in the modern use of ancient architecture than in simple historical research (Pagliara, 1972; Pellecchia 1992; Frommel, 1994).

That is also the approach of those architects whose critical contributions can be divided into two groups: one is the group of those who seek some working suggestions for current times in the lesson of Vitruvius and, more broadly, of Antiquity; the other is the group of those who focus on interpreting *De architectura* in hopes of restoring to the text its lost illustrations. This is obviously a very broad distinction, since historical research and professional concern are often intertwined among the architects of Humanism and of the Renaissance. The first group includes Leon Battista Alberti, Francesco di Giorgio Martini, and several members of the Sangallo family; the second encompasses Fra' Giocondo, Cesare Cesariano, and, finally, Daniele Barbaro, who worked closely with Andrea Palladio.

Alberti does not interpret the Vitruvian treatise; instead, he recaptures some of its contents and uses them as a foundation for a completely new theoretical discussion. In Book V of his *De re aedificatoria* (*On the Art of Building*)—a theoretical work in Latin, which he completed around 1452—Alberti deals with the subject of private residences; and when he describes the houses of the aristocracy in the countryside and those in the city, he mentions some terms that had been used by Vitruvius, although he does it rather to set them aside than to adopt them. As a matter of fact, right after he restates the concept already expressed in Book I that a house is a miniature city and that, conversely, a city is a large house, Alberti maintains: a house—regardless of where it is located—must have a center, much as a city has a city center (2). Just like the city has a *forum*, a home should have a *sinus* (bosom), which—similarly to the *atrium* of ancient Roman domus—must be designed as a courtyard with a colonnade. This conceptual overlap triggers the mechanism of the transfiguration of the domus into a *palatium*, which is intended here as the city palace of

2. *De re aedificatoria*, Book V, Chapter XVII. The original version of Alberti's book was intentionally printed without any image.



3. The Latin word *palatium* can also be used to signify a complex made of several buildings.

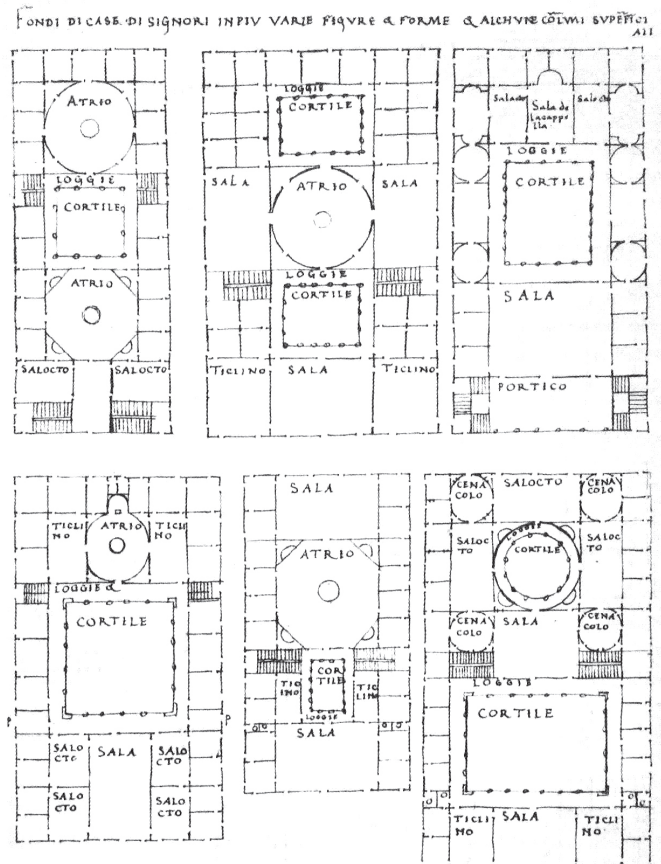
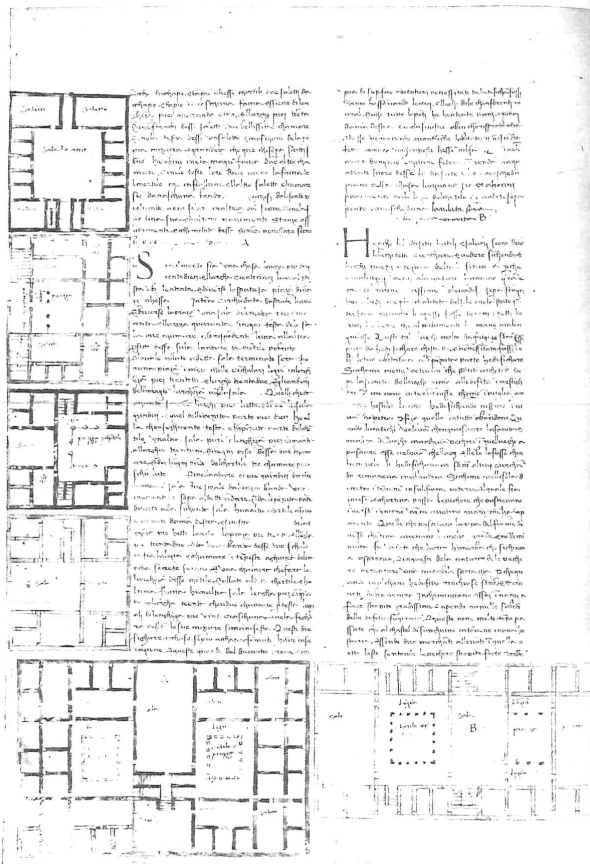
aristocratic families, one of the most significant contributions of the culture of Humanism and of the Renaissance to residential architecture (3). It is, for all intents and purposes, a genuine invention, albeit one that could not have come about without an ancient source of inspiration. In that sense, invention entails a decisive departure from a building type, but without losing its essential characteristics.

Between the fifteenth and the sixteenth century, the conceptual transformation of the domus into an urban palace takes place both as a matter of typology and as a matter of massing. In fact, while the typical Roman domus was a one-story fenced building that encloses the living quarters and patios, the Renaissance palace is a solid, multi-story windowed building block. Moreover, the palace of Humanism and of the Renaissance implies a main view, a façade that becomes a recognizable feature, with a more imposing outline both vertically and horizontally, combining multiple Gothic lots—narrow lots that are generally deep and of limited width. An example is the Rucellai Palace in Florence, which kept Leon Battista Alberti occupied starting in 1450, after the client bought some small homes to turn them into a single piece of property.

Figure 2. Francesco di Giorgio Martini, Houses with courtyards, plans. Codex Saluzziano 148, folio 18v. Courtesy Ministero per i Beni e le Attività Culturali e per il Turismo, Musei Reali-Biblioteca Reale, Torino

Figure 3. Francesco di Giorgio Martini, Houses of noblemen, schematics plans. Codex Magliabechiano III. 141. Courtesy Ministero per i Beni e le Attività Culturali e per il Turismo, Biblioteca Nazionale Centrale, Firenze

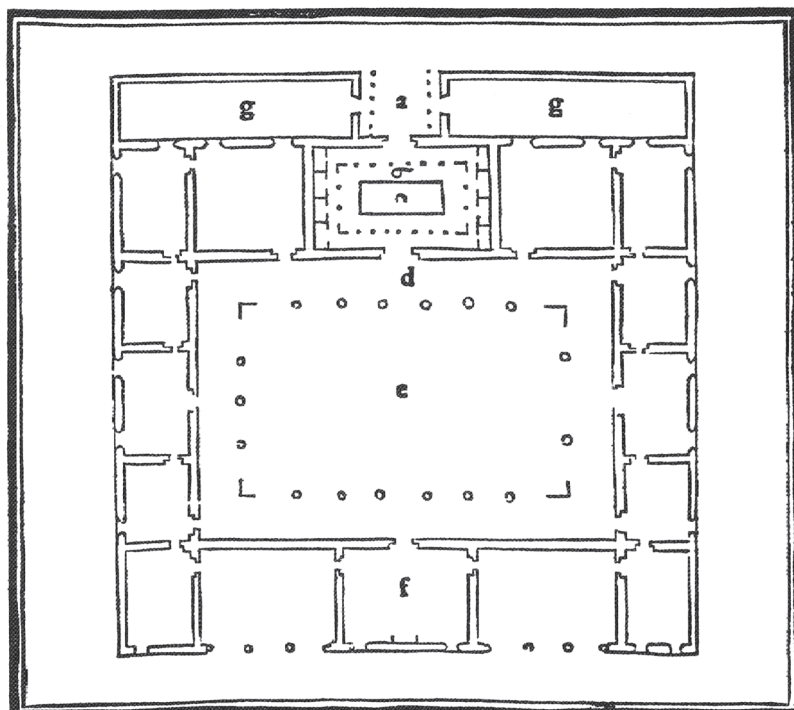
The ancient Roman domus, in its embodiment as a palace, was outlined in several drawings by Francesco di Giorgio Martini; some of them were featured in the *Codex Saluzziano* (Figure 2), others in the *Codex Magliabechiano* (Figure 3). Many of those illustrations portray the plans of buildings whose center acquires particular importance: it could either be the place where the main, skylighted room was located (*atrio*); or it



4. In the palaces of the Renaissance, the noble floor is the floor of the house where the *Signore* (the lord of the house) used to live with his family. As a rule, it was the first floor of the house (the floor directly above the ground level).

could be occupied by an inner courtyard, which was generally square-shaped but could also be round (*cortile*). There is one more aspect of these depictions that needs to be highlighted: most of the plans seem to conform to a very strict mirror symmetry that the Vitruvian treatise does not mention at all but went on to become a regular feature of all subsequent treatises, regardless. Even the duplication of the staircase is justified by the desire to maintain the architectural symmetry, according to the ideal of beauty of Humanism and of the Renaissance, but it also anticipates a new meaning for the term *piano nobile* (the noble level of the house, which is a topic we will need to revisit later on) (4). Francesco di Giorgio Martini seems to have read and studied Vitruvius in search, above all, of working tips. In fact, in most of his drawings we can sense the need to try out all possible combinations related to the concept of domus, which in its verbal expression in *De architectura* does allow several different architectural interpretations.

The *trattatisti*, meaning strictly the men who produced graphical renditions for the *De architectura*, come to the fore in the sixteenth century. The first illustrated but untranslated Vitruvian work is by Friar Giovanni Giocondo, who hailed from the city of Verona, Italy. A man of great erudition, Giocondo curated a version of the treatise, which he published in Venice in 1511 with several annotated illustrations. Later on, he committed another version to print in Florence in 1513, with even more illustrations and annotations. The dual purpose of making the ancient text both readable and understandable is explicitly advertised in the title of the work: *M. Vitruvius per Iocundum solito castigatior factus, cum figuris et tabula, ut iam legi et intelligi possit* (M. Vitruvius amended by Giocondo, with figures and an index, so that it can now be read and understood). The illustrated rendition of the plan of the ancient Roman domus (**Figure 4**), albeit in the outline format used for all other illustrations, shows the gradual rise of



**Figure 4.** Fra' Giovanni Giocondo, The ancient Roman domus reinterpreted, plan  
 Legend:  
 a) vestibulum transformed into a courtyard  
 b) atrium or second courtyard  
 c) impluvium  
 d) peristylum  
 e) cavaedium or third courtyard  
 f) triclinium  
 g) hortus

5. Giocondo also published a larger version of the ancient Roman house and called it *amplissima domus*.

the concept of the palace thanks to the debut of windows in the perimeter wall. The connection between the *vestibulum*, the *atrium*, and the *tablinum* vanishes; instead, it is replaced by two adjacent courtyards: one that opens to the outside and is flanked by porticoes on two sides, and another, featuring an *impluvium*, that is flanked by porticoes on all four sides. There is also a third courtyard, designated as *cavaedium*, which becomes the true center of the house. It features the *peristylum* (a wraparound portico) and is enhanced by the *triclinium* (a dining room) at one end of the house (5).

In 1521, Cesare Cesariano published *Di Lucio Vitruvius Pollio de architectura libri dece traducti de latino in vulgare, affigurati, commentati e con mirando ordine insigniti* (The Ten Books of Architecture by Lucius Vitruvius Pollio, translated into common language, illustrated, annotated, and admirably ordered), in Como, Italy. The quality of the images is rather refined, but it is evidence of the gap that separated the Roman architect from his interpreter in the Renaissance. If we confine our examination to the single illustration of an ancient Roman domus (Figure 5), we can see how it radically alters the usual dimensional ratios of rooms such as the *vestibulum*, the *atrium*, the *tablinum*, and the *peristylum*, while maintaining their order intact.

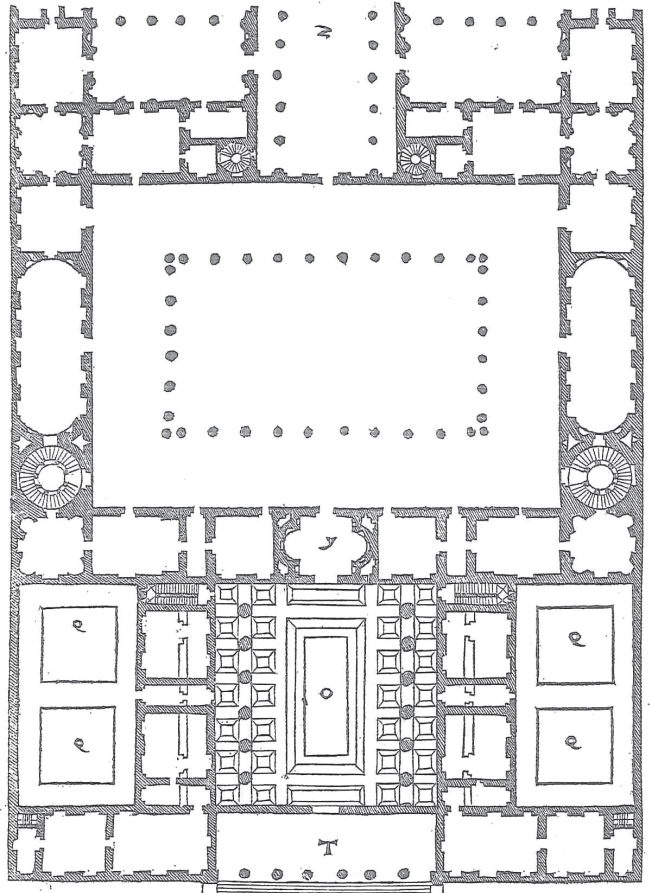
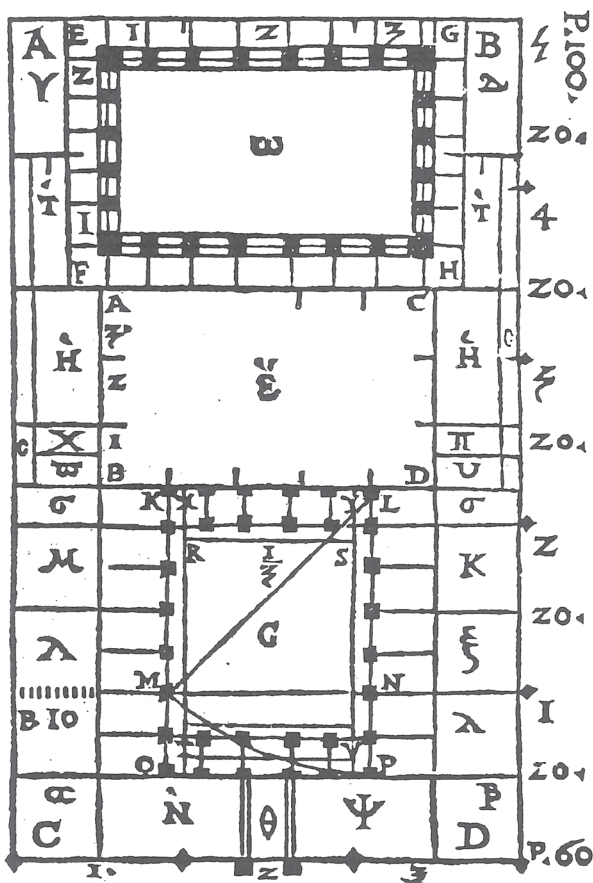
In 1556, and again in 1567, the work *Dieci libri dell'architettura di M. Vitruvio* (Vitruvius' Ten Books of Architecture), translated and commented by Daniele Barbaro, with illustrations by Andrea Palladio, is published in Venice. In this new version of Vitruvius's treatise, the ancient Roman domus (Figure 6) keeps the *tablinum*, in slightly smaller form, in its classic position, between the *atrium* and the *peristylum*; by its back wall there is

Figure 5. Cesare Cesariano, The ancient Roman domus reinterpreted, schematic plan

- Legend:  
θ) vestibulum  
G) atrium  
e) tablinum  
W) peristylum

Figure 6. Daniele Barbaro, The ancient Roman domus reinterpreted, plan

- Legend:  
T) vestibulum transformed into a loggia  
O) atrium  
Y) tablinum connected to the peristylum  
Z) basilica





QUESTA È UNA PARTE DELLA FACCIATA DELLA CASA PRIVATA.



Figure 7. Daniele Barbaro, The ancient Roman domus reinterpreted, façade (detail)

6. On this topic, see also the critical contributions by Manfredo Tafuri and Manuela Morresi, published in 1997 as prefaces of the facsimile edition of Barbaro's treatise.

now a great audience chamber called *basilica*. However, the *vestibulum* is replaced by a loggia that, in the partial drawing marked as *casa privata* (private residence), takes on the shape of a giant order capped with a tympanum (Figure 7). The same order, as shown by the drawing of the longitudinal section (Figure 8), can be found in the *atrium*, whereas the *peristylum* shows superposed orders (6).

In *I quattro libri dell'architettura* (*The Four Books of Architecture*), published in Venice in 1570, Andrea Palladio proposes his interpretation of the ancient Roman domus, with a more complex plan than Barbaro's, even as it maintains the same elements: the sequence *atrium-tablinum-peristylum*; the temple-like façade; and the presence of the *basilica* as the closing element of the planimetric composition (Figure 9). The new design also places more emphasis on the upper level, transforming it into living quarters that greatly enhance the overall aspect of the building.

Although the representation of the ground level in the treatises by Barbaro and Palladio maintains its role as the principal point of comparison with the description that is found in Vitruvius's *De architectura*, the appearance of a noble floor in the sectional drawings constitutes another clear sign of the transformation of the ancient Roman house into the Renaissance palace, in which ennobling elements, such as the architectural orders, are now employed on both floors.

Palladio also evoked the domus in a project that was intended for actual construction: the *Convento della Carità* in Venice (Figure 10), a convent designed in 1560 and partially erected over the next two years, which is now part of the museum gallery complex called Galleria dell'Accademia. For that project, Palladio misinterpreted the building type of the ancient Roman domus, as he had already done when he applied the motifs of the classical temple to his countryside villas, driven by his conviction that temples were nothing but magnified houses (Wittkower, 1962).

The historical reconnaissance operation that we conducted to this point suffices to answer the hanging question that was articulated at the beginning of this section: whether misinterpretation—which we could more accurately call imaginative reinterpretation—is an essential condition for the invention of new architectures. The answer is indeed affirmative in the case of the palace of Humanism and of the Renaissance, but it is a case that does not lead to any significant theoretical awkwardness, since the invention of this architectural type is mostly the result of an evocative process that does not require a direct point of contact with its source

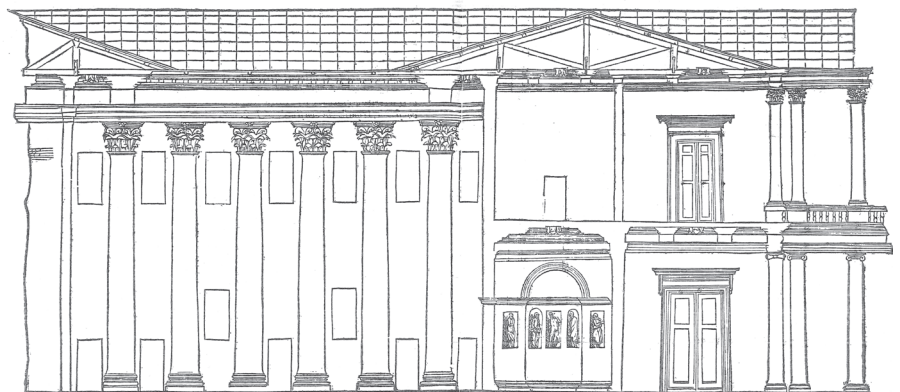


Figure 8. Daniele Barbaro, The ancient Roman domus reinterpreted, longitudinal section (detail)



Figure 9. Andrea Palladio, The ancient Roman domus reinterpreted, plan and longitudinal section

- Legend:  
A) atrium  
B) tablinum  
C) peristylium  
F) basilica

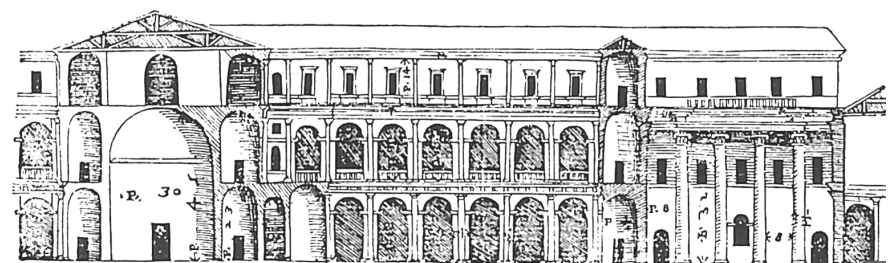
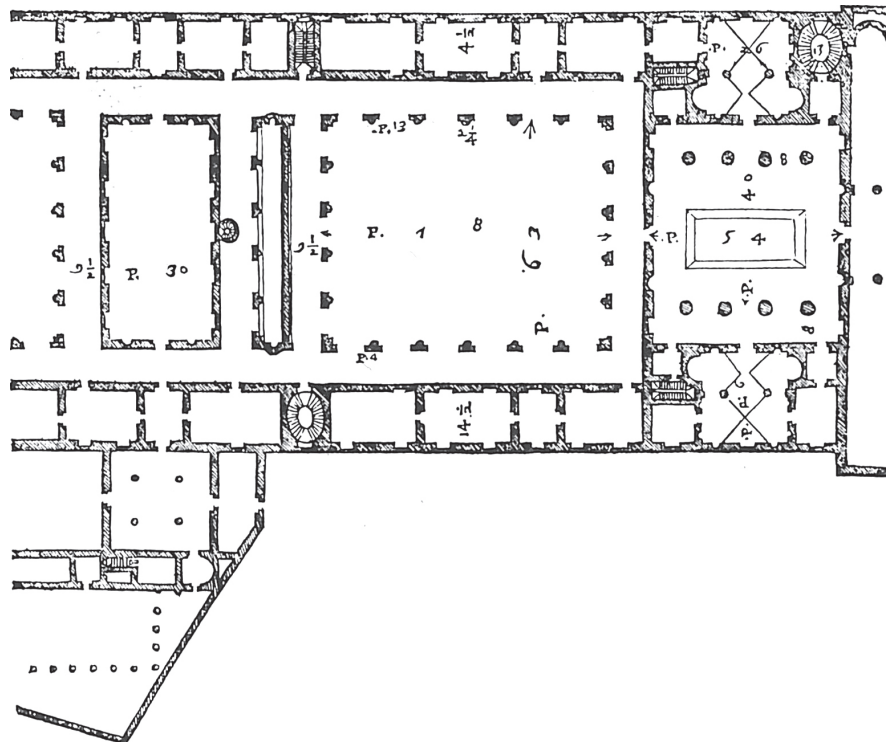
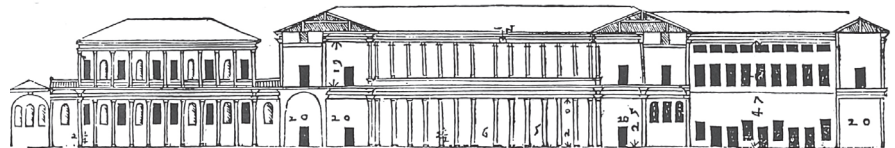
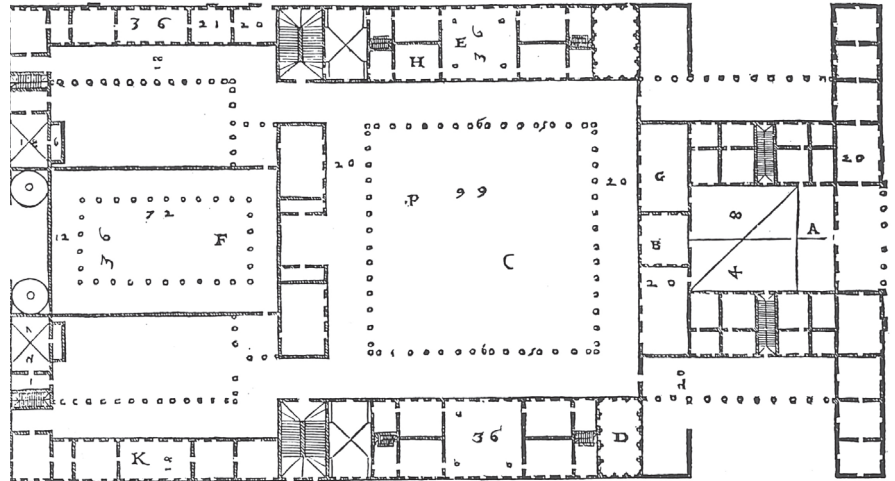


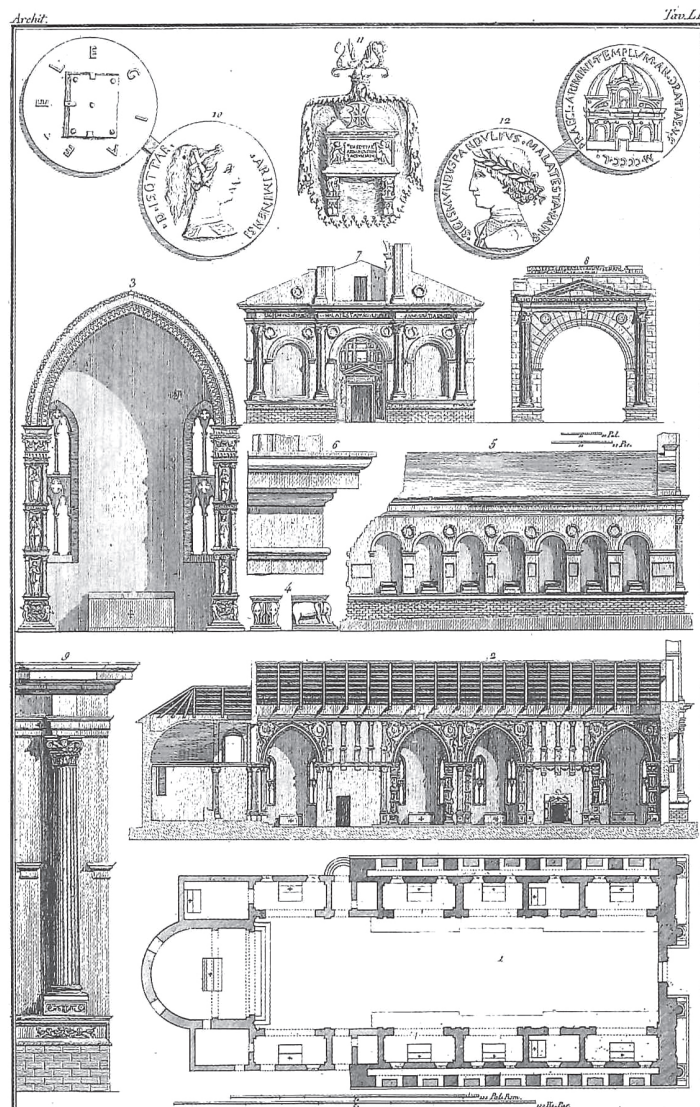
Figure 10. Andrea Palladio, The *Convento della Carità* in Venice, plan and longitudinal section

of inspiration. In fact, the palaces of Humanism and the Renaissance have a place in medieval cities, where they certainly do not rise over the remains of the ancient Roman domus. But what happens when past and contemporary architectures do physically overlap?

In order to answer this question, we need to address some issues that are usually discussed in the field of architectural restoration, conservation, and preservation.

### CHRONOLOGIES AND GENEALOGIES IN ARCHITECTURE

In past centuries, historic buildings or their remains were used as elements of invention in architecture, and they continued to be a part of people's lives over their subsequent transformations. Some notable Italian examples are: the Temple of Athena in Syracuse, Sicily, which was repurposed as a Christian Cathedral; the Church of Saint Francis, in Rimini, which morphed into the Malatesta temple by Leon Battista Alberti (**Figure 11**); and the Baths of Diocletian, which Michelangelo incorporated into the Basilica of St. Mary of the Angels in Rome. Let's also remember another project



**Figure 11.** Leon Battista Alberti, Malatesta Temple in Rimini (engraved by Seroux d'Agincourt)

that, unlike the previous examples, remained on paper: the Coliseum, reimagined by Carlo Fontana as a public square that would have hosted another Christian church (Figure 12).

These are just a few among many possible examples that have already been the subject of historical studies and that seem relevant in the scope of this discussion, because they posit the issue of the relationship between old and new in architecture—between what already exists and what is being designed—as an invention that implies a new thematization. A new thematization does not mean simply to reuse existing buildings or spaces, but to give them new civic and aesthetic meanings; in other words, to give them a new semantics. All the above-mentioned projects, each in its own way, share the same desire to transform a preexisting architectural form, but none of them implies a restoration of the original form. Nevertheless, in each one, the preservation of existing forms does not stem from a pure taste for conservation, but from the fact that such forms are essential to a new idea of design, which would be baffling without the old building. For thousands of years, architects have learned about the past by using it, and they always made it the foundation of their current work; more

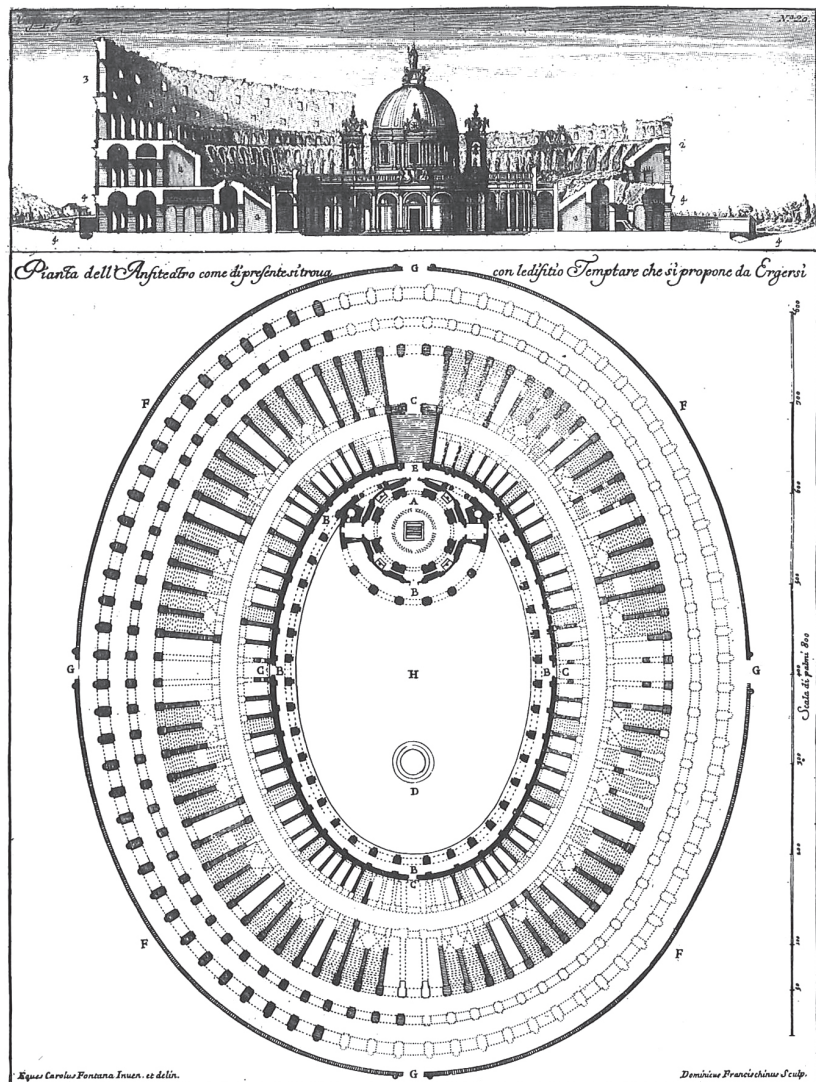


Figure 12. Carlo Fontana, Project for a christian church in the Roman Coliseum



generally, they regarded the history of architecture as living matter. Therefore, it seems legitimate to ask ourselves why what was normal in past centuries can no longer be done. The possible answer, which is far from obvious, needs an introduction.

Attempting to produce a schematic synthesis of the results of the debate over architectural projects on existing artifacts and over the use of historical and architectural heritage, results that are never homogeneous or definitive, would certainly be a foolhardy endeavor, if not an entirely futile one. Still, such a debate includes themes that inexorably recur and that cannot be avoided. One such topic is the relationship between form and time, which has been regarded as one by organizations in charge of the preservation and conservation of architectural heritage, both by academics and by practitioners. The conviction that architectural design dealing with ancient buildings should employ forms that are adequate for the time when they were first erected is a widely held one, even though the word adequate is inherently ambiguous and can engender different ideas of adequacy, even diametrically opposed ones. As a result, this discussion examines the different interpretations that the concept of time can take on in design activities that are focused on architectural or urban elements of the past and, more specifically, on the consequences that such interpretations can have on the outcome of a project.

To simplify for brevity's sake, we can say that—beginning with the nineteenth century—two cultural positions began to compete about design on past architecture. Each of these positions implied a specific definition of the concept of time: one used stylistic mimesis to give the completed building a unitary image (7); the other, focused on the adoption of new architectural forms, targeted the perfect recognizability of any add-ons (8). In the first case, the architect regarded time as an elective element, and chose as a milestone a specific time in the history of the building, the time of its actual or supposed completion. In the latter case, however, the architect considered time as a distinctive element, because he treated the existing building as part of a time past, which needed to be distinguished from anything new. Still, in both cases the architect regarded time as a purely chronological element, tied to the ideas of a before and an after. Both such theoretical approaches, under the proper critical perspective, prompt some observations.

The difficulty of determining the concept of stylistic completeness renders a mimetic approach to the reconstruction of a building (or any of its parts) a proposition that is both superficial and ambiguous. This approach, in fact, forces contemporary architects to use the same historical style found in the building they are working on, even though the style has long ceased to exist. A rationale of where-it-was-as-it-was can find some justification in situations where the elements to be integrated are a minority in comparison to the whole, or in cases where the collective memory of the building is still alive and the form of the latter is well-documented. Such situations, however, are so rare to be almost exceptional.

On the other hand, the position of those who wish to distinguish the architectural forms of the present from those of the past is even more ambiguous, because this option—which right or wrong has often prevailed and has been treated as the correct one—chooses to ignore the fact that the present cannot be said to have one original contemporary architecture. Nowadays we only have a multiplicity of individual answers, which make the conceptual framework used by art historians—indeed a useful one

7. This is the position of Eugène Emmanuel Viollet-le-Duc, which was strenuously opposed by John Ruskin. With regard to architecture, the two presented diametrically opposed concepts: one supported restoration; the other, conservation.

8. It was Camillo Boito who introduced the equation "monument = document", which was the basis for the notion that all work performed on treasured architecture of the past should be identifiable.



for a long time— unusable. According to this framework, the notion of a collective style (Classical, Medieval, Renaissance, Baroque, Neoclassical, Romantic) could be viewed as a category capable of giving voice to the spirit of an age: the so-called *Zeitgeist*. If we suspend our judgement on how desirable, and ultimately practicable, a return to the notion of collective style might be, we must acknowledge its absence from the present time. For this reason, any particular individual style could be viewed nowadays as credible, or not, depending on the notoriety and the prestige of the architect who popularized it and on the media hype that surrounds it and gives it its legitimacy.

Therefore, we are faced with two scenarios that may seem opposite but lead to the same conclusion. On one hand, the process of stylistic mimesis that was incorporated into architectural design for existing buildings can be dismissed as a historical fake from the chronological perspective, as it could spiral into caricature if it were badly executed. On the other hand, the present-day process of stylistic differentiation also implies falsification, if it claims to show a spirit of contemporaneity while it actually shows the penchants and the quirks of one architect or another.

The concept of historical fake that we mentioned above rests on the widespread conviction that ancient or old buildings must primarily, or even exclusively, be charged with a documentary purpose. Indeed, it is the very legitimacy of this premise, which is based on the simplistically chronological view of time, that we intend to challenge. This presumptive documentary objectivity basically ignores not only the fact that a building from the past is endowed with its own aesthetic value, but that it holds a civic significance as well. In other words, a building is not simply a way of conveying information about its own history, or of advertising an idea of beauty, but also and especially a vector for meaning that expresses itself through its intrinsic narrative potential.

What exactly does this mean? Wherever the need arises to work on a building or on an ancient site, every architectural project has the potential to tell different stories through the transformation of what is past, and to produce a new architectural form that will in turn suggest other concepts, other links, and other relationships. This does not mean that the project compromises the documentary value of the preexisting architecture; nor that it fails in its intrinsic evidentiary duty.

The Italian verb *tramandare* (*tradere*, which in Latin means to hand down, to bequeath) also contains the idea of *tradire* (to betray), by bending an historical artifact to new meanings (Centanni, 2005): in other words, to turn it into an entity that works in the present. This is exactly what has transpired in the above-mentioned examples: in Syracuse, a pagan temple became a Christian Cathedral; in Rimini, a church was transformed into a great aristocratic memorial; and in Rome, the Baths became a *basilica*, and the entire Coliseum could have been transformed into an oversized parvis dedicated to celebrating the martyrs that were allegedly killed inside the arena many centuries earlier. In all these cases, the architectural project did not end with the prosaic recycling of one building or another, but it gave birth—time and time again—to a new theme: Antiquity is no longer limited to telling a story that is already over; rather, after being granted new meanings, it manifests a new perspective on the past and its potential as a teachable moment. Therefore, to return to the unanswered question we asked earlier, why shouldn't architects nowadays do as the architects of the past did? The most credible answer might be this one: because the advent

of Modernity in the twentieth century has to be considered a definitive watershed moment, a point of no return that seems to separate the past from the present.

The adjective, modern, is quite problematic. Architects of the Humanist and Renaissance eras were convinced of their own modernity, and there are those who rightfully grant them a sense of historical self-awareness (Choay, 1985). After all, each artistic era—from the Baroque period to the era of Eclecticism—proposed its own version of modernity. Beginning with the industrial age in the nineteenth century, architecture has gradually lost sight of its specific sphere of reference, in which buildings are meant to be viewed as dwelling places and as tectonic artifacts instead of what they have become today: objects or icons to gaze at and, perhaps, to be captured in a photograph.

Until the end of the nineteenth century, existing architecture represented a benchmark for rising architectural styles. But during the twentieth century, other points of reference have supplanted it: the world of machinery, the universe of technology, the realm of sculpture-like buildings and industrial objects. Additionally, the discovery, the manufacture, and the employ of new materials all helped to accelerate and encourage the process of departure of architecture from its peculiar sphere of reference, its own history.

All these things have ultimately become a burden on architectural design that focuses on the balance of old and new, by producing a rift that is not only chronological but conceptual as well. It is a rift that stresses the distinction between an era that is definitively over, in which architecture is a product of a singular sphere of reference, and another one *in itinere* (in progress), in which architecture draws its inspiration from a multitude of references, which often came to pass by contrast with the forms of the past.

To avoid the possibility of any misunderstandings, it is worth noting that the concept of sphere of reference has nothing to do with the concept of style. As a matter of fact, while the most disparate styles did succeed one another from Antiquity to the nineteenth century, the sphere of reference remained the same, because the concept of architecture being about objects versus architecture being about buildings had yet to take hold. Beginning with the rise of the *avant-gardes*, architects stopped being preoccupied with the stylistic facets of the architecture of existing buildings; instead, they began to confront a much more complex issue: they had to decide if, in bringing new forms into a project, they should be confined by the specific sphere of reference of architecture or go beyond it. This is equivalent to architects asking themselves whether the alteration of existing buildings should pursue an idea of architecture for dwelling places and tectonic artifacts, or—in a completely different perspective—as objects to be separately and organically defined in each instance; for example, as a product of technology, as a piece of machinery, as a habitable sculpture, etc. In all these cases, architecture morphs into something different from its own self.

We can conclude that, nowadays, architects who work on redesigning existing buildings must face two opposite temptations: searching for a reassuring continuity with the past in mundanely stylistic terms; or giving in to the illusion of facile artistic expression in the name of emphasizing discontinuity from the past. Both options—the paradigms of stylistic continuity or stylistic discontinuity—are extremely unsatisfactory and raise

9. The French expressions are by Henri Focillon who, as early as the 1930s, had already forestalled the formation mechanism of artistic genealogies, which he saw as having been encouraged by the creation of the great museums of the 19<sup>th</sup> century.

10. The book is part of the collection known as *I Sette libri dell'architettura* (The Seven Books of Architecture), to which we should add the *Extraordinario libro di architettura* (The Extraordinary Book of Architecture).

the issue of an alternative that—in rejecting the identification of a before and an after as the sole standard of truth and propriety for modification—should not be limited by a concept of time as a mere matter of chronology. In fact, time can be viewed as a repository of empirical heritage that has settled for centuries, one in which architects can sense as coeval and contemporaneous works that have been created in different epochs. The goal is not to define an abstract ideal of timeless perfection; rather, it is an attempt to build a cultural context where the past has a decisive role to play, not as an instrument of legitimization or delegitimization, but as an evocative domain where architects can find terms of comparison. Against this backdrop, the history of architecture takes on the meaning of a common ground, where the buildings and ruins of the past become fragments for new architectural narratives in the present day.

From this perspective, time should be viewed in a genealogical sense, where genealogy can be defined as group of architects who are interested in an antecedent from the history of architecture. For them, this antecedent becomes an essential point of reference, to the degree in which it lends itself to formal transformations that can lead to new levels of meaning in the present. In other words, they are architects who share similar interests and passions that, in the aggregate, make up a new “collective memory” (Halbwachs, 1950). As this type of memory goes beyond time and beyond places (*par-delà les temps, par-delà les lieux*), it enables the creation of spiritual families (*familles spirituelles*), of genealogies that have a shared “cultural memory” (Assmann, 1992) (9). These genealogies, however, do not necessarily originate from a building type—for example the domus with its influence that reaches far beyond the Renaissance; they can refer to a broader idea of the past, which a certain notion of archaeology can help us comprehend.

## ONEIRIC ARCHAEOLOGY AND URBAN ARCHITECTURE

The word, archaeology, has long evoked a universe of mysterious and fascinating references, well before it came to indicate a scientific discipline reserved for experts.

During the Renaissance, devoting oneself to Antiquity meant to become engaged in a reality made of dreams instead of actual reality. In that sense archaeology casts itself as an expression of a remote place to be won back, as we previously saw in the case of the revisited Roman domus. Next to that architectural example, we could mention an urban one as well. Let's consider, for example, the figurative interpretation that Sebastiano Serlio gave in Book II, published for the first time in Paris in 1545, of the theater scene designs described by Vitruvius in Book V of *De architectura* (10). Serlio's interpretation was influenced by the categorization of theater genres in Aristotle's *Poetics*. His mischaracterization is obvious and, perhaps, intentional. If the Satirical Scene, which was illustrated with trees, bushes, and rocks, represents the proper background for coarse country folk, and is suited to the basis of theatrical genres—the satirical drama—the other two scenes display openly conflicting views of the city (Onians, 1988). The vulgar medieval city, the existing urban form that every Renaissance architect had to deal with, is on display in the Comical Scene (Figure 13), both chaotic and bourgeois. In it, inns, brothels, and shops are built mainly with timber and make up the backdrop of the comedy, which aims to tell the stories of people from a mercantile or artisan background. The aristocratic city of the Renaissance, the ideal city that the architects of

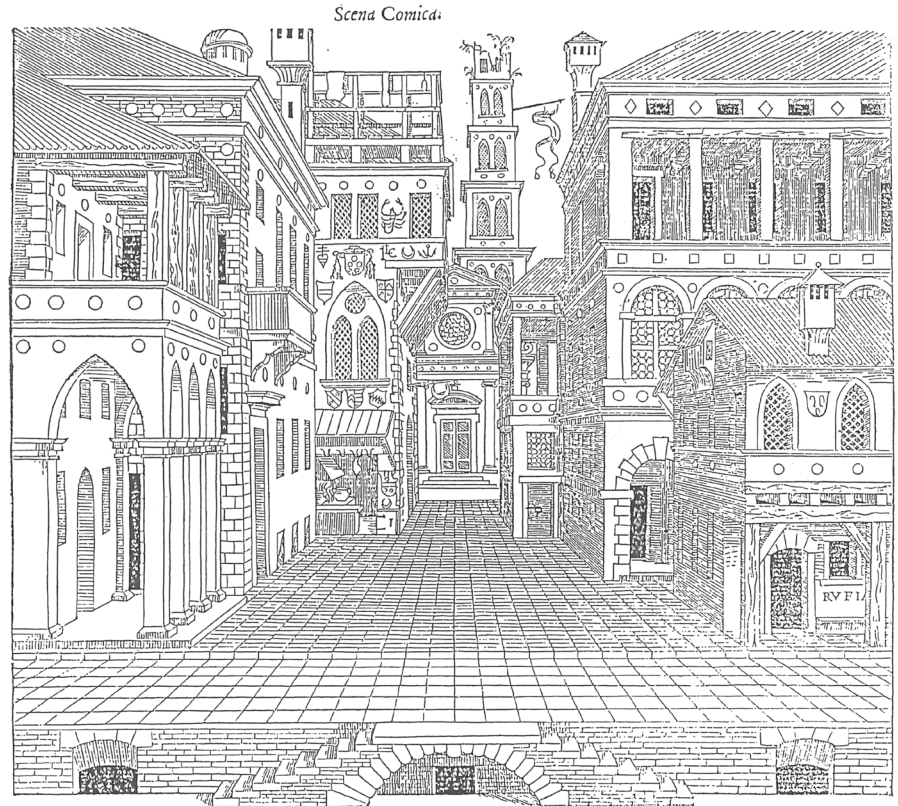


Figure 13. Sebastiano Serlio, Comical scene

the sixteenth century dream of and wish to substitute for the actual one, is depicted in the Tragic Scene (**Figure 14**), which shows instead stone buildings—temples, palaces, urban gates and obelisks—representing an ancient architectural language that forms backdrop for the tragedy focused on the lives of kings and noblemen.

Naturally, our purpose is not to underscore the anachronistic spirit of class divide that underlies the three scenes, but the fact that an idea of the city—from a political, social, and aesthetic standpoint—can be converted into an urban image. Today we should ask ourselves what is the proper way to critique present-day cities using a different idea of the city, one in which archaeology is mostly responsible for bringing the focus of architects back to urban architecture, which has been supplanted by object-like architecture: improbably habitable sculptures, machinery-like homes, iconic buildings conceived like rides in cities that have been designed like amusement parks, and other amenities of industrial design. All these bizarre productions confirm that the rapid consumption of forms is the inescapable fate of contemporary architecture. In reality, a renewed interest in archaeology could be a vehicle of critical resistance to this presumptive inevitability.

Two questions therefore arise: First, what should be the role of archaeology in this kind of resistance? Second, if archaeology truly has a role to play, what kind of archaeology are we talking about?

To answer these questions, we need to start off with a simple observation: archaeology has the power to evoke the ancient city, especially the Greek and Roman city that we usually refer to as classical city, which was the locus of the public sphere by definition. This ancient world combined as





Figure 14. Sebastiano Serlio, Tragic scene

the birthplace of public institutions, public facilities, and public buildings. Despite an architectural style that consisted of few recurring elements—such as columns, walls, trilithons, and vaults—the range of types used in public buildings was rich and well-organized: not only temples, but also meeting halls, porticos with shops, semicircular theaters, complex networks of roads and aqueducts, walls and fortifications, sewerage systems, baths, basilicas, etc. Therefore, we can say that the typological richness of the ancient city was matched by a corresponding abundance of institutions. In conclusion, the answer to the first question, what is the role of archaeology, is this: to reaffirm the importance of public spaces, which are the constant target of greedy private speculators, and should be built (or rebuilt) on the foundation of a renewed covenant between citizens and institutions.

The second question, what kind of archaeology can be of assistance in contemporary architectural design, has an equally specific answer: *archeologia d'invenzione*, which we call oneiric archaeology in this discussion because sleep brings visions that rekindle forgotten entities that are absent when we are awake, often with a different appearance from their original forms. In other words, it is archaeology in which Antiquity becomes the object of evocation and reinvention at the same time. Its paradigm is *Ichnographia Campi Martii* (Plan of Campus Martius) by Giovanni Battista Piranesi, which was published in 1762 and consists of a large map comprising several boards that were designed to depict the historic monuments center of ancient Rome (Figure 15). This work, which blends historical findings and architectural inventions, reminds us that Antiquity is an inexhaustible source of types (Wilton-Ely, 1978) that we can revisit for the architectural designs of the present. This is a case of working memory as opposed to mere cumulative memory.

Long after Piranesi, this distinction finds a definition in psychoanalysis. In the words of Theodor Reik (1936): “The function of memory is to



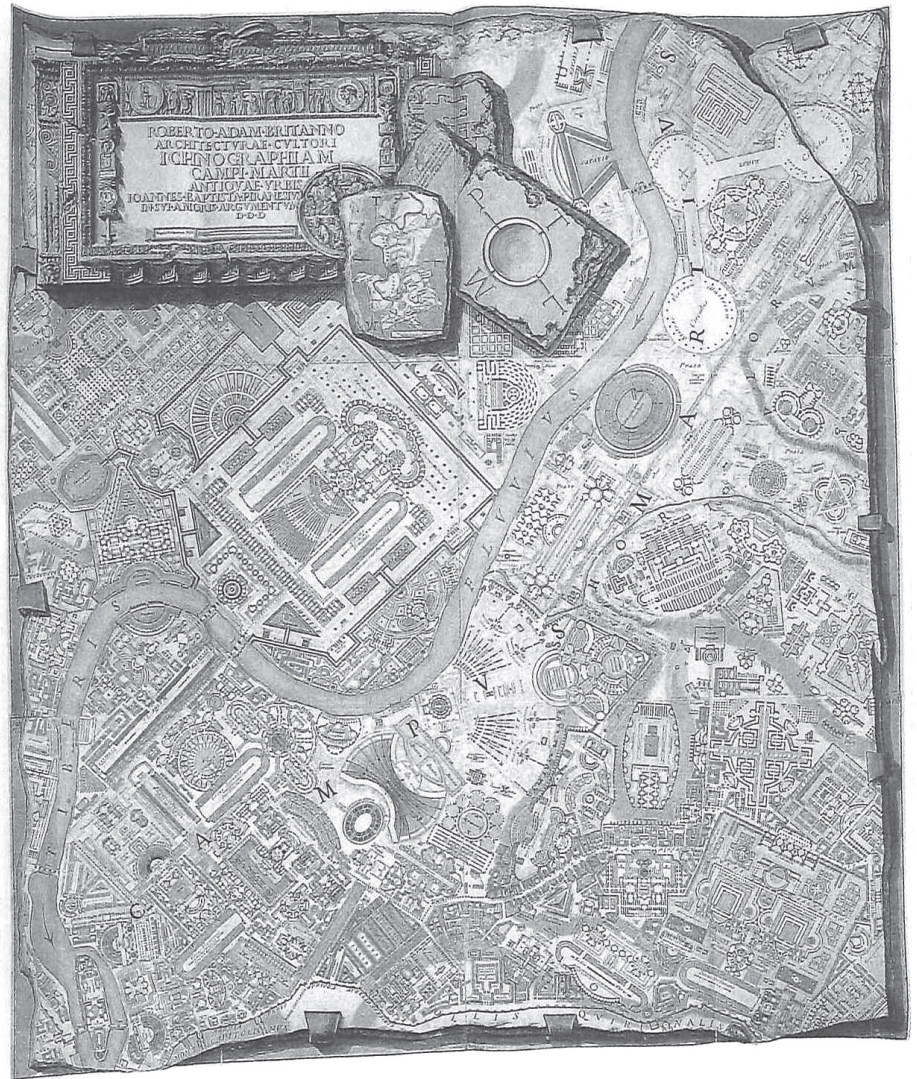


Figure 15. Giovanni Battista Piranesi, Plan of Campus Martius

protect our impressions. Reminiscence aims at their dissolution. Memory is essentially conservative; reminiscence, destructive". The act of remembrance, which in this essay goes by the name "working memory", can be neither neutral nor harmless, because it builds upon what has been destroyed.

Piranesi's *archeologia d'invenzione*, which can hardly be applied to archaeological sites any longer, should still be valued for its visionary ability to transpose the past into the present through a process of formal and conceptual reexamination that can fairly be described as one of evocation.

The collage that I created (Figure 16) (11), shows one of its possible applications. The title is *Oneiros*, a Greek word that redirects us to oneiric experience and portrays an imaginary *forma urbis* (the plan of the city as well as its form). The resulting image is one of a scrapbook that collects fragments of projects created in different situations—such as competitive bids, direct assignments, self-assignments, graduation dissertations, class exercises—that I was in large measure responsible for. Many of these projects actually touch upon archaeological topics and themes, and

11. Architect Barbara Stasi collaborated with me on this collage.



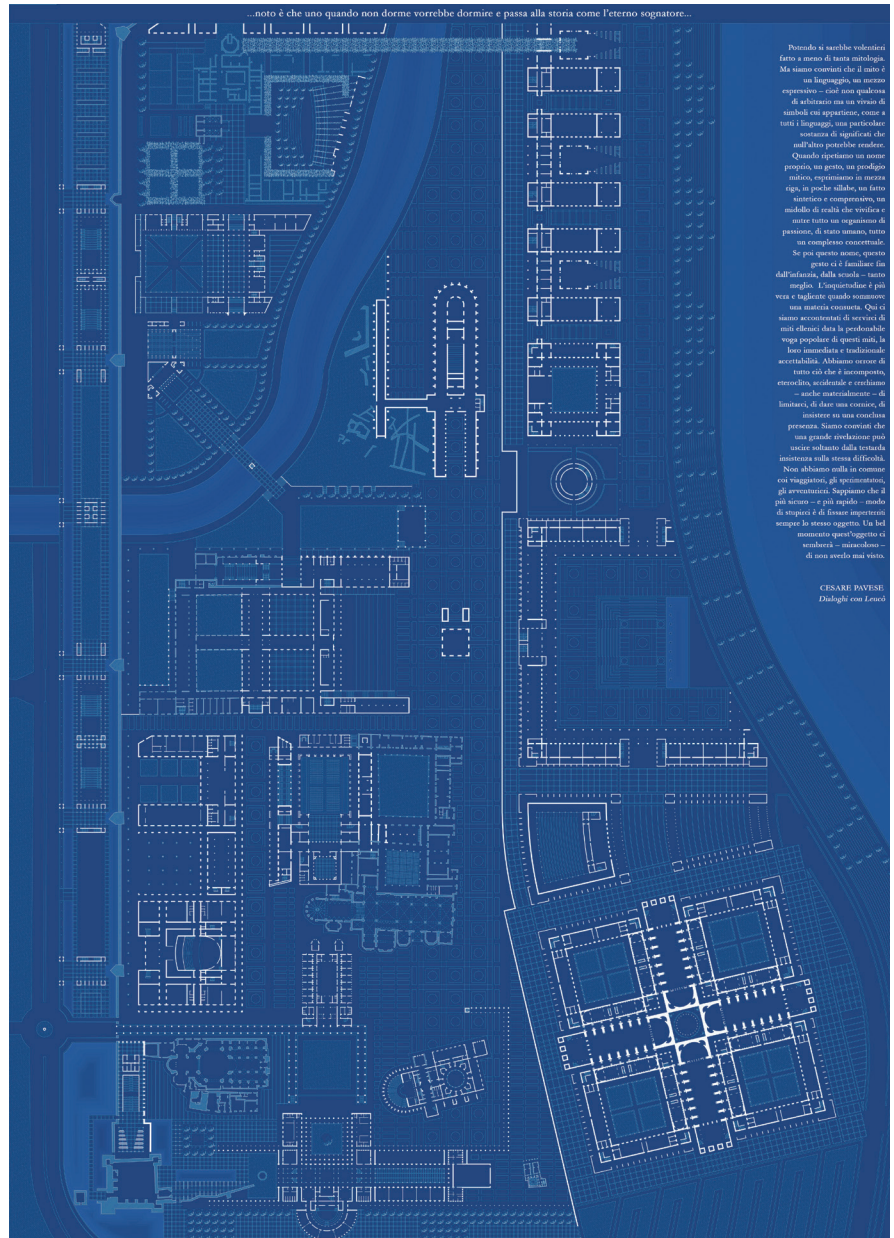


Figure 16. Nicola Delledonne with Barbara Stasi, Óneiros, collage

others relate to contexts that, although not strictly ancient, are historical nonetheless. In each one of them we can easily recognize the typical themes of urban architecture: a great central forum, streets, squares, and courtyards, along with walls, moats, and towers. There are boulevards, parks, vegetable gardens, and natural elements as well, like rivers and seas. If familiar figures that resemble the architectural forms of the ancient city—like the streets and the arcades, the great public halls and the semicircular theaters—are regular features, it is to make the evoked, reinvented reference universe more intelligible.

How does *Óneiros* work, from a conceptual standpoint? The various projects that have been utilized are removed from their original context before being reassembled in a new urban form. In their new context, they take on the meaning of architectural fragments that, thanks to their form, evoke and invent anew the referential universe they belong to. This is

exactly what working memory (Reik's reminiscence) does: it resolves—or rather, it dissolves—all traces of cumulative memory into a new project. And yet, this explanation is only true in part, because the plans of all the buildings that have been added to the board with the goal of depicting an imaginary urban reality are themselves the result of a design effort driven by the goals of evocation and invention. Hence, the various architectural fragments that are employed in designing an urban collage, connoted by an aura of completeness, give life to a new mnemonic track upon which, once again, the mechanism of reminiscence can act. All evidence points to this mechanism having no beginning and no end.

*Óneiros*, then, is a mnemonic device that exposes cumulative memory to the effects of working memory, which is the main tool of evocation in architecture. In turn, evocation is the essential instrument of the kind of design process through which the past can be brought back without an imitative goal. If on one hand evocation implies that continuity with the past is possible only through discontinuity in architectural language and through the introduction of new meanings, on the other hand it states that architecture can never be created from scratch; an antecedent, conceived as a point of reference, as shared memory, is always required. From this perspective, the central role of the past in the design process should be clear, as evidenced by the many previously-provided examples.

## CONCLUSIONS

Over the last fifty years, there have been two critical stances on the use of the past in architecture: some have envisaged an ironic recovery of historic forms that has produced architectural caricatures, while others, by ruling that history should be excluded altogether from the design process, have led to a thoroughly self-referential architecture. Both positions have resulted in the ultimate estrangement of the historian and the designer, leaving the theoretician in the middle with an uncertain academic role.

While a facile (quasi-pop) use of historic forms by postmodern architects has fallen by the wayside, as is usually the case with cultural fads, deconstructivist architects still show an active aversion for historic forms. Inspired by a *tabula rasa* (blank slate) philosophy, the latter seek to eliminate all *a priori* knowledge, which is seen as an obstacle to personal creativity. Some fads endure longer than others.

Although the application of such an approach to architecture is often supported by elaborate justifications, it is usually due to a much more trivial and accidental reason, driven by professional attitudes. Nowadays, architects are much less builders than they are designers. The overwhelming majority of their projects, which get regularly posted on the internet, are conceived less to go into actual construction than to be displayed on a computer screen, like a vain fetish that only in the luckiest of circumstances goes on to become the subject matter of theoretical debate. It is a peculiar fact that this type of digital production should carry a resemblance, albeit only superficially, to the French concept of *architecture de papier* (paper architecture), the phenomenon that in the France of the late 1700s gave rise to important theoretical contributions aimed at shaping emerging public institutions, which did not yet have a distinctive architectural form (12). Today, architects seem animated merely by a desire to be celebrated. Why is it?

12. Broadly speaking, the expression *architecture de papier* refers to projects that are not designed for actual implementation but that complement architectural literature. In this context, however, it refers mainly to the architectural competitions that were organized in France, first by the *Académie d'architecture* in the pre-revolutionary decade, and then by the *Convention nationale* alongside the *Comité de salut public* during the Revolution.



13. This is a reference to Ludwig Mies van der Rohe, who is alleged to be the author of the following quote: "It is impossible to invent a new architecture every Monday morning."

In contemporary society, the number of architects has greatly increased; as a result, they are exposed to ruthless competition. In their daily struggle for professional survival, architects—with few exceptions—have convinced themselves that, in order to remain marketable, they must come up with new and original forms every Monday morning, with a twofold objective: on one hand they must make their work distinguishable from the work of other architects (seen as competitors); on the other hand, they must histrionically show their break with the past, by proposing forms that are unprecedented, or that appear to be so (13). Ironically, as the need to distinguish themselves from other architects and to be novel grows amongst them, architects tend to make buildings that are similar in form. And because of the compulsive rate of production, those forms age very rapidly.

Nowadays, asking ourselves if there is an alternative to this hackneyed approach, to this detachment from the past, is tantamount to asking if the past can actually play an educational role, beyond any impromptu excitement or hasty disparagement. While the answer is far from obvious, this much is certain: as we have seen earlier, the reevaluation of the past in architecture has nothing to do with a revival of styles from history, or with the search for some ideal model to imitate. Today, the potential role of the past implies the reuse of concepts that can only be brought back into the light by working memory, which seeks to revisit the past with the right degree of abstraction.

In other words, the architect is now called upon to evaluate the past with a critical eye and to go back to pondering the link that, in architectures of the past, came to be established between the form of a building and its social or civic meaning: an essential reflection at a time like the present, when the destiny of the architect seems to be one of either amazing or amusing the public in order to survive; just like a regular magician or a clown. Perhaps the vaunted ethical sense that many architects like to preach, but that few of them do practice, does in fact consist of investigating the mechanisms that allow architectural forms to be charged with shared and intelligible meanings. In this quest, then, a critical look at the past may be a useful point of departure and a challenging term of comparison.

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Anahtar Sözcükler: Mimarlık, hafıza, geçmiş, tasarım süreci, hatırlatma

## İŞLEYEN HAFIZA: TASARIM SÜRECİNDE GEÇMİŞİN DEĞERLENDİRİLMESİ

Mimarlık, tarih ve arkeolojik arasındaki ilişkilere odaklanan bu makale; tarihsel deneyimin bazı bölümlerini yeniden kullanılmak üzere seçmede işlevsel bir araç olarak işleyen hafıza nosyonunu ön plana çıkararak geçmişin bugün üzerinde etkisini gösterdiği anlamlı bazı örnekleri incelemektedir. Burada ele alınan tüm tarihsel olgular, mumyalanma yoluyla muhafaza edilmemesi halinde, geçmişin yeniden canlandırılabilceğini göstermektedir. Dolayısıyla, bu noktada önemli bir soru ortaya çıkmaktadır: böylesi bir durum bugün tasarım sürecinde deneyimlenebilir mi? Bu soruya verebileceğimiz yanıt; evet olur, şayet geçmiş, taklide ya da anmaya konu edilmek yerine, yeniden ele alınıp uyandırılırsa ve hepsinden önemlisi yeni ve ortak bazı anlamlar kazandırılabilirse.

### **WORKING MEMORY: AN EVALUATION OF THE PAST IN THE DESIGN PROCESS**

Focused on the relationship between architecture, history and archaeology, this paper examines meaningful cases in which the past has exerted its influence on the present, bringing to the fore the notion of working memory: an operative device aimed at selecting some parts of historical experience to be reused. All of the historical phenomena here considered show that the past, when not mummified, can live again. So, a question arises: can such a condition be experienced nowadays in the design process? The answer is yes, but only if the past, far from being imitated or celebrated, is evoked and revisited; and, above all, given new shared meanings.

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