

The Evolution of Restoration Ideologies: The Emergence, Disappearance, and Revival of the Palatine Gate as an Urban Axis Node

Kai Wang¹

¹ Department of History, Representation and Conservation of Architecture, Piazza Borghese 9, Rome 00186, Italy

Correspondence: Kai Wang, Department of History, Representation and Conservation of Architecture, Piazza Borghese 9, Rome 00186, Italy.

doi:10.56397/SAA.2025.04.01

Abstract

This paper focuses on the Porta Palatina in Turin, Italy, analyzing its emergence, disappearance, and revival as a node of the urban axis. Using this as a central thread, it explores the evolution of restoration ideologies in Italy. Constructed in the 1st century BCE, Porta Palatina served as a crucial gateway to the ancient Roman city of Turin, marking the starting point of Caesar's Gallic Wars and the spread of Roman civilization. Over the course of Turin's urban transformation, the role of Porta Palatina as a city axis shifted through three distinct phases: from being a military and political center in Roman times, to being abandoned during the Baroque period, and finally, to its revival and rediscovery in modern times.

This study delves into the restoration journey of Porta Palatina, spanning from stylistic restoration in the mid-19th century to scientific restoration in the 20th century, and culminating in archaeological park design in the 21st century. It illustrates the transition of Italian restoration ideologies from Romanticism to modern scientific conservation. By examining restoration practices across different eras, this paper uncovers the interactions between restoration theory and culture, history, and technology. It emphasizes that restoration is not only an advancement in architectural techniques but also a respect for and preservation of historical culture. The restoration trajectory of Porta Palatina not only reflects changes in Turin's urban structure but also provides critical theoretical and practical references for global cultural heritage preservation.

Keywords: Porta Palatina, Turin, urban axis, restoration ideologies, cultural heritage preservation, Italian restoration theory

1. The Porta Palatina and the Birth of Turin's North-South Axis

Turin is a city distinct from other Italian cities. While Italian cities are rich in variety—Rome,

the “Eternal City”; Florence, the “Athens on the Arno”; Milan, the “Fashion Capital”; and Venice, the “City of Water”—each with its unique characteristics, Turin stands out as less “Italian” in comparison. Its atmosphere diverges from the

lively and ornate urban spaces typical of Italian cities. As Mark Twain, the American traveler, marveled at the spaciousness of Turin's urban layout, which set it apart from other European cities. (Twain, M., 1880) Italo Calvino, a native writer, described Turin as a city that "encourages rigor and linearity." (Calvino, I., 1948) This is evident in its urban planning. Influenced by the Roman military camp (Castrum) and Baroque planning, Turin's streets are laid out in a grid of wide, straight avenues intersecting at right angles, creating orderly blocks. In the Roman Castrum plan, the main north-south street was named *Cardo Maximus*, while the main east-west street was called *Decumanus Maximus*. In the plain camp type, the intersection of these two roads initially hosted a square and an altar, used for military ceremonies and oaths.

The *Porta Palatina* is an ancient Roman gate located in the city center of Turin, within the present-day *Parco Archeologia Torri Palatine*.

The gate spans approximately 36 meters in width and 20 meters in depth, constructed entirely of early Roman red bricks. Its two towers stand about 25 meters high, with a diameter of around 7.7 meters, and feature a 16-sided plan. This gate is the oldest and best-preserved Roman gate and tower in the world, built during the reign of Julius Caesar in the 1st century BCE, making it over 2,100 years old. The gate was constructed during Caesar's tenure as governor of the Roman province of *Gallia Cisalpina*, serving as the city's northern entrance. From Turin, Caesar assembled his armies and launched the famous Gallic Wars. His Roman legions conquered vast territories across Europe, including present-day France, Luxembourg, Belgium, Germany, the Netherlands, and parts of Switzerland, even crossing the English Channel twice to land in Britain. The wars resulted in the deaths of a million Gallic and Germanic tribespeople.

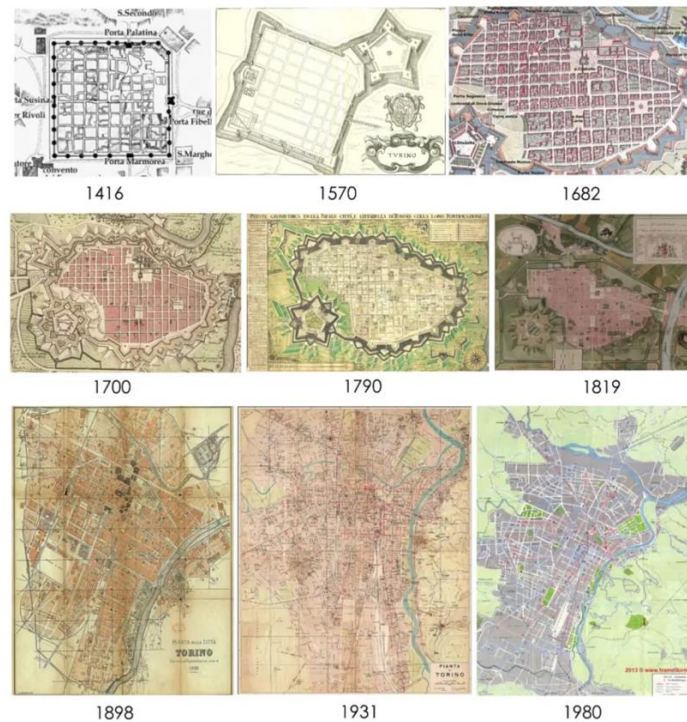


Figure 1. The Evolution of Turin's Urban Form from the 15th to the 20th Century

The victory in the Gallic Wars significantly influenced the course of Roman and Western history. In 1956, British Prime Minister Winston Churchill began his work *A History of the English-Speaking Peoples* with Caesar's invasion of Britain, stating that Caesar's landing marked the beginning of the history of all English-speaking nations. (Churchill, W. S., 1956)

As the strategic rear during Caesar's campaigns, Turin and the *Porta Palatina* became symbols of Caesar's achievements and the starting point for spreading civilization. Caesar's first three expeditions (between 58 and 56 BCE) all set out from the *Porta Palatina*. To the south of the gate stands a bronze statue of Caesar, gifted to Turin by Mussolini in 1935.

From the evolution of Turin's urban space, it can be observed that the Porta Palatina and the city's north-south axis underwent the following three stages: i) **From the 1st century BCE to the Middle Ages:** As a crucial gate for northern expeditions and defense, the Porta Palatina served as a key node on Turin's north-south axis. It marked the city's boundary and was adjacent to the residential areas of the nobility; ii) **During the Baroque period:** With the implementation of new urban planning, the Porta Palatina lost its role as a pivotal node on the city's axis. The "axis of power" shifted to Via Roma, while the "axis of transportation" was replaced by Via Milano. Over time, the area around the gate was gradually filled with residential buildings; iii) **From the late 19th century to the present:** The Porta Palatina underwent extensive archaeological excavations, renovations, and restorations, reflecting different phases in the evolution of Italian restoration philosophies. Over time, its cultural significance and status gained public recognition, transforming it into a new "historical axis."

1.1 From Ancient Rome to the Middle Ages: The Birth of the City Gate as a Node on the Urban Axis

Turin was settled by Celtic tribes (Celtico) around the 3rd century BCE, forming a settlement in the region of Gallia Cisalpina (note: the area south of the Alps and north of the Rubicon River was also known as Gallia Cisalpina). In the 1st century BCE, the Roman Republic occupied Turin and established a

military camp (Castrum) to station troops.

The Roman military camp, or Castrum, was typically rectangular, surrounded by walls and moats, with tents or barracks inside. Over time, these camps evolved from settlements into towns and eventually into cities. Roman military camps had the following characteristics: i) A clear rectangular boundary defined by walls and ditches; ii) Standardized internal rectangular modules and a grid-like street layout, organized according to different military units; iii) Two main roads intersecting in a cross shape; iv) A central location for the forum, altar, and the Praetorian Guard's camp.

Many European cities, including Milan, Paris, and London, developed from Roman military camps. Well-preserved remnants of such camps include Aosta in northern Italy and Pozzuoli near Naples. However, most of these cities abandoned their rectangular layouts during the Middle Ages, becoming narrower and more chaotic. After the decline of ancient Rome, Turin was one of the rare European cities that maintained the standardized Roman grid-like urban planning (Barcelona's Cerdà Plan, for example, was only implemented in the 19th century). This continuity highlights Turin's unique urban morphology: from the Roman military camp, with its perpendicular streets defining rectangular blocks, through the medieval period of population decline and urban contraction, to the Savoy dynasty's extensive construction of geometric squares.

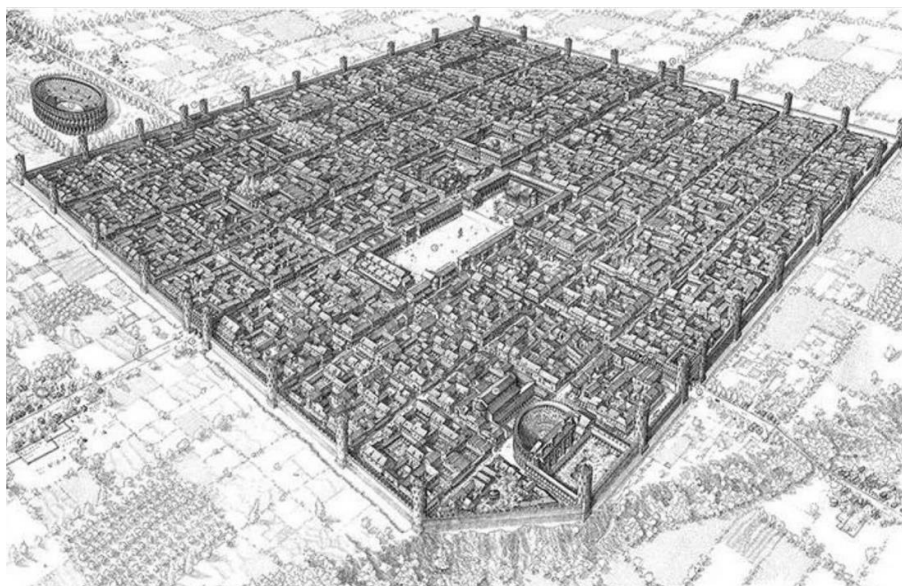


Figure 2. Torino (Augusta Taurinorum), a typical Castrum of the Roman period (Corni, F. (n.d.). Torino (Augusta Taurinorum). Archivio Francesco Corni. Retrieved March 25, 2025, from <https://archivio.francescocorni.com/scheda/21373>)

1.2 *The Baroque Period: The Abandonment of the City Gate as a Node on the Urban Axis*

The urban axis indicates the direction of a city's expansion. Both in the East and the West, settlements often formed outside city gates, where post stations and tax offices were located. Additionally, urban axes were often tied to the assertion of political and religious power. In the case of Roman military camps, the two main axes not only served defensive purposes and facilitated troop movement but also symbolized authority over the Gallic tribes through visual means such as symmetry.

Urban axes often shift due to the relocation of a city's center, profoundly impacting its spatial structure. For example, in 1267, Kublai Khan, the founder of the Yuan Dynasty, established the central axis of Dadu (modern-day Beijing) around the Taiye Lake northeast of the former Jin Dynasty capital, abandoning the axes of the Liao Southern Capital and the Jin Central Capital. Similarly, in Turin, during the Savoy period, the construction of the twin churches (Chiesa di San Carlo and Chiesa di Santa Cristina) and the Royal Palace of Turin created a new axis. The main gate of the Royal Palace aligned with Piazza San Carlo and the twin churches, and Via Roma was widened to become the new central axis of the city. This axis, connecting the palace, churches, and the city, can be referred to as the "axis of power." As the city expanded, a new heart-shaped wall with bastions encircled the old city from the Roman and medieval periods, and new gates were built west of the Porta Palatina. Under the planning of the Baroque architect Filippo Juvarra, Via Milano was widened to form a new axis, which

can be called the "axis of transportation." From this point on, the Porta Palatina lost its role as a node on the urban axis, and the surrounding area gradually became filled with residential buildings. However, this abandonment also ensured the preservation of the gate's main structure, making it one of the most intact ancient Roman gates in the world. Of the four ancient Roman gates in Turin, two were completely destroyed, one was transformed into a palace in the 14th century (the famous Palazzo Madama), and only the Porta Palatina remains well-preserved. (Ratto, S., 2015)

1.3 *Architectural Typology of the Porta Palatina*

Around the 1st century CE, Roman city gates in Gaul can be classified into two types:

- i) **Fortress-type gates:** These were primarily located in newly conquered regions north of the Alps, where frequent rebellions and wars necessitated thicker walls and larger internal spaces for garrisoned soldiers. A representative example is the Porta Nigra in Trier, Germany.
- ii) **Twin-tower gates:** These were mainly found south of the Alps, in what is now northern Italy. They featured tall twin towers and an inward-extending courtyard, with the Porta Palatina being a prime example. The Porta Palatina is the oldest and largest surviving twin-tower gate.

In terms of architectural typology, the Porta Palatina is similar to the Porta Leoni in Verona and the Porta Nigra in Trier, both of which belong to the fortress-type gate category.

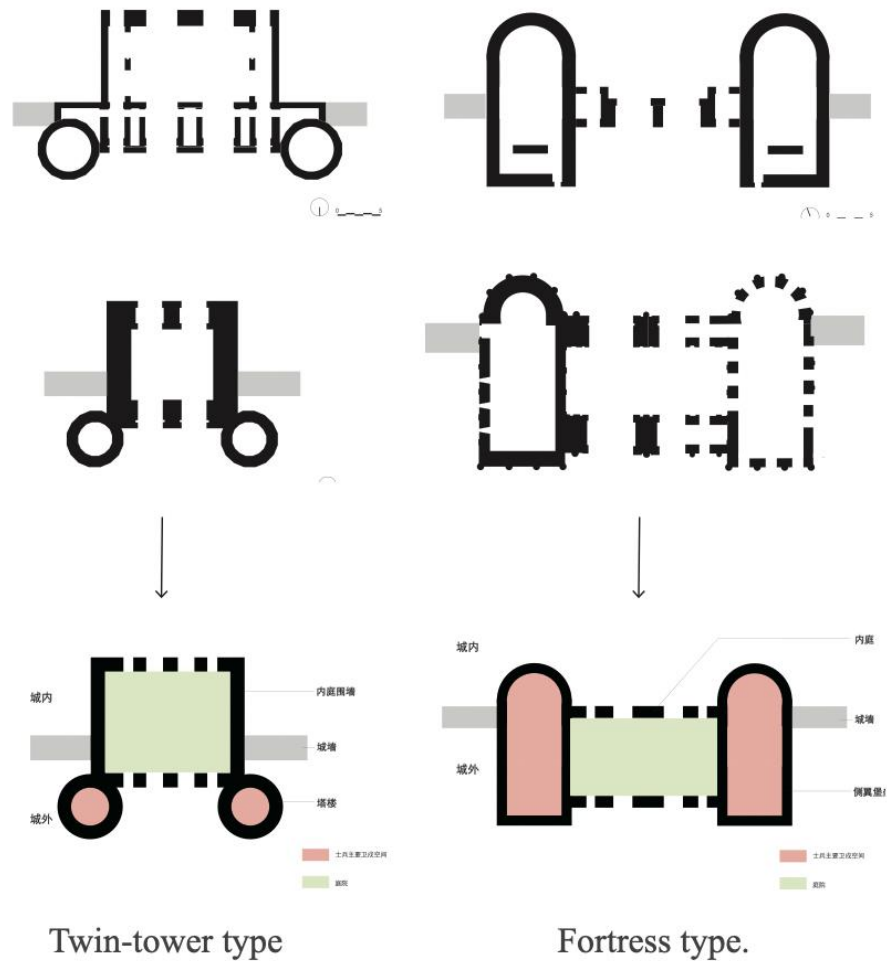


Figure 3. The two main types of Roman city gates in Gaul around the 1st century CE: twin-tower type and fortress type

The Porta Palatina is flanked by polygonal towers with staggered windows, enclosing an internal courtyard that served as a checkpoint for entering the city. Two larger archways allowed for the two-way passage of carts and horses, while smaller side archways were designated for pedestrians, creating a clear separation between vehicular and pedestrian traffic. The gate is constructed of red brick, with thin yet sturdy mortar layers, showcasing the Romans' advanced masonry techniques (*opus testaceum*). Such well-preserved ancient Roman towers are rare even in Rome itself. Of the more than 50 towers remaining in Rome, most were built during the Middle Ages and are relatively crude in construction, reflecting the chaotic family feuds of medieval Rome (e.g., the Colonna and Orsini families built towers to compete for territory, often engaging in archery battles; similar towers can be found in cities like Bologna and Pavia). Among these, the Tor de' Schiavi in Rome retains the most imperial

Roman character, as it was built on an octagonal base from the 3rd century CE. Unfortunately, only a fragment of its wall remains today. In contrast, the Porta Palatina stands as a unique example of such a complete and towering 1st-century BCE structure, unparalleled even on the Italian Peninsula, which is rich in Roman ruins.

Archaeologists have uncovered well-preserved remnants of the Roman road *Le strade di Iulia Augusta Taurinorum* (The Roads of Julia Augusta Taurinorum) at this site. The road surface is made of neatly cut, flat stones, with some slabs bearing clear ruts from cart wheels.

Since the 18th century, the gate has undergone three significant restorations, reflecting the evolving approaches to architectural restoration in Italy over time. These restorations provide a clear glimpse into Italy's exploration of architectural preservation. Key milestones include:

Palladio's survey and documentation

Andreade's restoration

The 1908 restoration

Re-excavation and further discoveries

These efforts highlight the gate's enduring significance and the ongoing commitment to preserving its historical and architectural legacy.

2. The Rediscovery of the Axis Under the Evolution of Restoration Thought

The restoration history of the Porta Palatina reflects, to some extent, the turning points and crises in cultural heritage preservation. It demonstrates that Europe's well-established cultural heritage restoration system was not achieved overnight but evolved through the interplay of various historical ideologies and disciplines such as archaeology and art history.

2.1 "Stylistic Restoration": Promis and Gabetti (1866–1873)

In the early 18th century, the Porta Palatina was nearly demolished. Due to its obstruction of traffic, Duke Victor Amadeus II of Savoy planned to dismantle the gate. However, Antonio Bertola, the chief military engineer and architect of the duchy at the time, recognized the value of the structure and ultimately persuaded Victor Amadeus II to abandon the demolition plan. Instead, the gate was converted into a prison, built on the ruins of the Roman courtyard (*cavaedium*). The towering twin towers served as housing for the jailers, while the structure between the towers, resembling a barbican, functioned as the prison. (Ardissone, P., Bornaz, L., Turco, M. L., & Vitali, M., 2005)

By the early 19th century, Romanticism had

gained popularity in literature and art, fostering a longing for past eras. Eclecticism (*eclettismo*) and historicism (*storicismo*) in architecture became prevailing trends, with figures like Viollet-le-Duc advocating for "stylistic restoration"—restoring structures to their original state, often summarized as "repairing the old as it was." In 1860, Vittorio Emanuele II, King of Italy, appointed the eclectic architects Carlo Promis and Carlo Gabetti to undertake the first restoration of the gate. After thorough research, they confirmed that the gate was indeed the northern entrance of Turin from the Roman era. By 1873, their restoration was complete, largely restoring the gate's original simplicity. They removed medieval additions such as rose windows, defensive *Bertesche*, and Ghibelline battlements (*merlo ghibellino*), cleared surrounding ruins connected to civilian buildings, and excavated the site to reveal the long-buried remains of the Roman road. The alignment of the Roman road coincided with the city's ancient axis. As Turin was then the capital of the Kingdom of Italy, this rediscovery heightened public awareness of the city's "historical axis," fostering a sense of historical pride among its citizens.

However, Promis and Gabetti also reconstructed the palace between the towers, a decision later criticized as excessive and lacking historical basis. This highlights a limitation of "stylistic restoration": restoration should not be based on historical imagination, nor should it erase traces of other eras. This critique, voiced by Alfredo D'Andrade, led to a second wave of intervention.



Figure 4. Comparison of the Porta Palatina Before (Left) and After (Right) the Restoration by Carlo Promis and Carlo Gabetti (1861–1873). Left: The gate before restoration (Source: ASAP©, Image Archive) Right: The gate after restoration (Source: ASCT©)

2.2 Scientific Restoration: Alfredo D'Andrade's Restoration in 1883

In 1883, architect Alfredo D'Andrade began the restoration of one of Turin's central landmarks—the Palazzo Madama in Piazza Castello. During this project, he pioneered a method that combined architectural and anthropological research, placing particular emphasis on construction techniques and authentic archaeological evidence. In 1891, he was appointed chairman of the Regional Monuments Restoration Committee for Piedmont and Liguria, where he initiated research on Turin's city walls and gates, with a particular focus on the Porta Palatina. Through detailed surveys and studies, he discovered that the ancient Roman sections of the palace between the two towers had been obscured by the reconstructions carried out during the 1860–1873 restoration. In 1903, after extensive discussions among experts, the Turin City Council unanimously decided to establish a special restoration committee with the goal of “fully revealing the original appearance of the ancient Roman gate.” The second restoration, led by Alfredo, involved simultaneous archaeological excavation and restoration. During this process, the remains of the Roman courtyard (*cavaedium*) were uncovered, and the internal structure of the eastern tower was revealed through cross-sectional analysis, largely completing the understanding of the Roman-era internal layout. The restoration was meticulous and well-organized, earning high praise. (Brancati, L. E., 2015)

Alfredo D'Andrade was a master of Italian restoration. Born in Lisbon and a graduate of the École des Beaux-Arts in Paris, he designed and restored numerous historic buildings in Liguria, Piedmont, and the Aosta Valley, including the Sacra di San Michele in Turin (the inspiration for the monastery in Umberto Eco's *The Name of the Rose*), the medieval village within Turin's Parco del Valentino, and the Palazzo San Giorgio in Genoa. He also served alongside Camillo Boito as a member of the Milan Cathedral Facade Committee. (Pesando, A. B., 1999)

After the restoration, the two 16-sided polygonal towers were fully revealed, representing the pinnacle of masonry construction techniques during the Roman Republic. During the reign of Emperor Aurelian, the aesthetician Cassius Longinus summarized Roman aesthetics as

“sublime” (Greek: *Peri Ypsous*; Latin: *sublimis*). Although the concept of the sublime was originally used to describe rhetorical texts, it undoubtedly hints at something more modern and profound.

In 1932, Italy passed its first **Cultural Heritage Protection Law**, drafted and revised by the renowned restoration theorist and architect **Gustavo Giovannoni**. This law later inspired the **Athens Charter**. Giovannoni introduced the concept of “**scientific restoration**,” which emphasized that architectural remains from different periods hold equal value and should be preserved accordingly. As the proponent of “scientific restoration,” Giovannoni argued that architectural heritage serves as a historical document, and its most important role is to function as a “**documento**” (document). He believed that the relationship between historical buildings and contemporary development must address the balance between old and new. This could be achieved by adjusting functions to meet current needs without compromising the distinctive features of historical structures.

Alfredo D'Andrade's restoration philosophy aligned closely with Giovannoni's ideas, and his practices even predated the formal proposal of “scientific restoration.” (Gustavo Giovannoni, 1913) This highlights D'Andrade's forward-thinking approach and his significant contribution to the field of architectural heritage preservation.

Little known is the fact that Le Corbusier, one of the main advocates of modernist architecture, visited Turin at the age of 16. In 1902, at the International Exhibition of Modern Decorative Arts (*L'Esposizione internazionale d'arte decorativa moderna*), the young Le Corbusier won a silver medal for a watch he designed. The exhibition was held in Valentino Park (*Parco di Valentino*) along the Po River. Within the park, the Medieval Village and Fortress (*Il Borgo e la Rocca medievali*), also known as the Medieval Street, is a group of historically inspired buildings designed by Alfredo D'Andrade. These structures were based on D'Andrade's extensive research into the architectural characteristics and construction techniques of ancient buildings in the Piedmont region. This experience in Turin, surrounded by D'Andrade's work, may have subtly influenced Le Corbusier's later architectural philosophy and designs. (Le Corbusier, 1923)

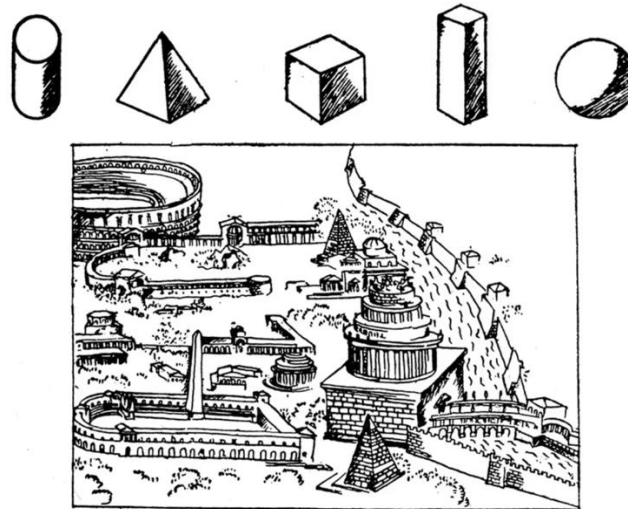


Figure 5. “The lessons of Roma” Le Corbusier, *Towards a New Architecture*

3. The Revival of the Porta Palatina as a “Historical Axis” After World War II

The development of cultural heritage conservation theory and practice underwent a significant turning point during and after World War II. The war caused extensive destruction of cultural heritage, with many historic cities reduced to rubble and their identities lost. In the post-war period, attitudes toward architectural heritage were often contradictory, leading to frequent issues in heritage conservation. On one hand, the concept of heritage protection expanded from individual buildings to encompass entire environments. On the other hand, emergency interventions on monuments and buildings were often carried out without careful research, resulting in the misuse of new materials, insufficient expertise, and hasty actions that caused irreversible damage.

In response, the academic community adopted a more conservative approach to restoration, seeking to update existing theories with new knowledge. A series of international charters and conventions on cultural heritage conservation were established through professional discussions, including the Venice Charter (1964), the European Charter of the Architectural Heritage (1975), and the Washington Charter (1987). The European Charter of the Architectural Heritage emphasized the immeasurable cultural value of architectural heritage, stating that its protection must become a primary goal of urban and territorial planning. The Washington Charter

focused on the conservation of historic cities, advocating for the protection of historic centers as integral parts of the urban fabric and recognizing that “all historic cities in the world should be preserved, as history is a material for understanding social diversity.”

In Italian academia, Cesare Brandi, in his 1963 book *Teoria del restauro* (*Theory of Restoration*), established two key principles: i) Restoration should respect the material, aesthetic, and historical integrity of artworks, employing a methodological approach to reinterpret them and carry out restoration from a future-oriented perspective; ii) Restoration should preserve the original emotional and historical traces of artworks, avoiding the invention of historical or aesthetic content and not erasing the marks left by time.

These principles have been widely accepted in the international restoration community and have had a profound impact. (Valentini-PhD, F., 2008)

Between 2003 and 2006, the Turin-based architectural firm DAR, consisting of Giovanni Durbiano, Luca Renerio, Aimaro Isola, and Eugenio Cupolillo, designed and completed the Parco Archeologico delle Torri Palatine (Palatine Towers Archaeological Park). (DAR_Architettura, n.d.) Their design was based on historical documents and archaeological materials, employing a subtle topographic strategy to reflect the medieval moat and Baroque-era bastion slopes. Red brick columns were used as enclosures,

complementing the Porta Palatina and the ancient Roman archaeological park. (Canevese, M., & Di Venti, M., 2014) The Roman Road uncovered by archaeologists, representing Turin's "historical axis," was integrated into the design through careful architectural interventions. Today, the site has become a major tourist attraction and urban landmark, drawing international visitors and highlighting Turin's rich historical legacy.

4. Conclusion

The restoration of the Porta Palatina, spanning over 130 years, reflects the evolution of restoration philosophies in Italy. As a significant relic of Turin's Roman era, the Porta Palatina has undergone multiple restorations, each mirroring the shifts in restoration theory and practice over time. From the stylistic restoration of the early 19th century to the scientific restoration of the mid-20th century, the evolution of restoration thought has been closely intertwined with advancements in architectural technology, as well as changes in culture, history, and public consciousness.

Restoration is not merely about reconstructing historical forms; it is also about respecting and preserving historical culture. Each wave of restoration philosophy, like ripples in water, has

matured through continuous debate and discussion. Early restoration efforts emphasized stylistic recovery, reflecting the Romantic era's longing for and imagination of the past. However, this approach often overlooked the multiple layers of history and the traces of time. With the development of restoration theory, the concept of scientific restoration emerged, emphasizing the preservation of the original appearance and historical traces of buildings and introducing more rigorous restoration standards.

The significance of the Porta Palatina as a node on the urban axis has evolved over time. As a key element of Turin's Roman-era urban axis, the gate has witnessed the transformation of the city's structure, highlighting the important role of architectural heritage in urban development. During the Baroque period, the city's center of gravity shifted, and the Porta Palatina lost its function as an urban axis. However, its historical value was rediscovered and redefined through subsequent restoration efforts. The restoration journey of the Porta Palatina is not only a testament to technological progress but also a reflection of evolving cultural identity, historical awareness, and the turning points in restoration philosophy.



Figure 6. Current State of the Porta Palatina

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