

POLITO

Corso di Laurea Magistrale / Master
of Science in Architecture for
Heritage

The delicate balance between
conservation and integration
based on historical knowledge

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Tesi di Laurea Magistrale / Master of
Science Thesis by:
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Anno Accademico / Academic Year:
2023

Torino, Italia



**Politecnico
di Torino**

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Universidad de Belgrano

Facultad de Arquitectura y Urbanismo

Carrera acreditada por:



**“El delicado balance entre la conservación y la integración a partir
del conocimiento histórico”**

Murass, Murazzi del Po, Torino

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Marzo de 2023

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“The delicate balance between conservation and integration based on historical knowledge”

ABSTRACT

This thesis examines the fundamental principles of restoration and the various current approaches. It provides an implicit timeline that allows us to admire the evolution of the discipline, from its theoretical beginnings in the 19th century to tangible contemporary cases. Today's interventions on architectural heritage grant an architecture that presents two possible paths, one in which the modern amalgamates with the old, producing homogeneity. In the other, the contemporary additions create a rupture in the architectural language of the pre-existing building that evidences the intentions of the project. In both cases the interventions are identified; the current objective is not to produce historical falsifications but to encourage the preservation of heritage and the coexistence of different historical contexts. On this basis, an analysis is made of the theoretical side of restoration and a parallelism of the strategies adopted by diverse internationally renowned architectural studios, establishing criteria which, according to recognised theoreticians and critics of the discipline and traditional restoration methods, are fundamental when intervening on the built heritage.

To this end, four chapters are distinguished, opening with the founders and essential documents, those which have established tacit rules about the right thing to do when engaging with buildings of this type; from archaeological ruins to edifices of the modern movement, no matter the period, but the pursuit of the rules based on the theory underpinning the field. The second chapter presents a timeline that allows an understanding of the evolution in the discipline based on events of various kinds, such as the main bibliography, historical events, conventions that have marked history and significant projects. The third chapter develops a contemporary design that aims to maintain a dialogue with the existing architectural language and structure, without the necessity of making modifications that would alter the primary state of the building. Lastly, the fourth chapter examines a disruptive case study of the actuality, which involves gestures of contemporary architecture when recycling the skin of the building; its new morphology produces a strong contrast with the language of the built heritage that was lying on the property.

The concepts investigated emerge through the questioning of the project developed in the final project of the 'Adaptive reuse of the built legacy' workshop at the Politecnico di Torino during the 2022/23 academic year supported by the chair of the architect Matteo Robiglio. The project consisted of the refunctionalisation of the former port warehouses of Murazzi del Po, a construction that runs longitudinally along the Po River in the city of Turin in Italy. The trigger for the development of this research was the book by Paolo Torsello, in which 9 critics and theorists contribute to the understanding of restoration as a discipline in which memory and pre-existence must predominate. Thanks to the book the most relevant concepts were identified, as well as the founding fathers and their bibliography, whose paths would cross with the charters and treatises that not only accompany us to the present day but have also set the guidelines for practising in the field of restoration. Past and present are not antithetical in architecture, but complementary, and only those who have the historical knowledge required to carry out a good restoration can interpret this.

Keywords: identity, reuse, revaluation, pre-existing structures, integration, memory

ABSTRACT

La presente tesis trata acerca de los principios fundamentales de la restauración y los diversos enfoques actuales. Provee una línea del tiempo implícita que permite admirar la evolución de la disciplina, desde sus inicios teóricos en el siglo XIX hasta casos tangibles de la contemporaneidad. Las intervenciones actuales sobre el patrimonio arquitectónico conceden una arquitectura que presenta dos vías posibles, en una lo moderno se amalgama con lo antiguo, produciendo homogeneidad. En el otro, las adiciones contemporáneas crean una ruptura en el lenguaje arquitectónico del edificio preexistente que evidencia las intenciones del proyecto. En ambos casos se identifican las intervenciones; el objetivo actual no es producir falsificaciones históricas, sino fomentar la preservación del patrimonio y la coexistencia de distintos contextos históricos. En función de esto, se lleva a cabo un análisis sobre la parte teórica de la restauración y un paralelismo de las estrategias adoptadas por diversos estudios de arquitectura con renombre internacional, estableciendo criterios que, según los reconocidos teóricos y críticos de la disciplina y los métodos de restauro tradicionales, son fundamentales a la hora de intervenir sobre el patrimonio construido.

Para ello se distinguen cuatro capítulos, para comenzar, los fundadores y los documentos esenciales, aquellos que han establecido normas tácitas sobre qué es lo correcto a la hora de involucrarse con edificios de este tipo; desde ruinas arqueológicas hasta edificios del movimiento moderno, no importa el periodo, sino el proseguimiento de las reglas basadas en la teoría que respalda el campo. El segundo capítulo presenta una línea del tiempo que permite comprender la evolución de la disciplina a partir de acontecimientos de distinto tipo, tales como bibliografía, sucesos históricos, convenciones que marcaron la historia, proyectos significativos. El tercer capítulo desarrolla una obra contemporánea que tiene como objetivo mantener un vínculo con el lenguaje arquitectónico y la estructura preexistente, sin la necesidad de hacer modificaciones que alteren el estado primario del edificio. Por último, el cuarto capítulo desarrolla un análisis sobre un caso disruptivo de la actualidad, que involucra gestos de la arquitectura contemporánea al reciclar la piel del edificio; su nueva morfología produce un fuerte contraste con el lenguaje del patrimonio construido que yacía en el terreno.

Los conceptos investigados nacen a través del cuestionamiento sobre el proyecto desarrollado en el trabajo final de carrera del taller 'Adaptive reuse of the built legacy' en el Politecnico di Torino durante el ciclo lectivo 2022/23, respaldado por la cátedra del arquitecto Matteo Robiglio. El proyecto consistió en la refuncionalización de los antiguos depósitos portuarios de Murazzi del Po, una construcción que se desarrolla longitudinalmente sobre el Río Po en la ciudad de Torino en Italia. El disparador para desarrollar esta investigación fue el libro de Paolo Torsello, en donde 9 críticos y teóricos contribuyen a la comprensión del restauro como una disciplina en la cual debe predominar la memoria y la preexistencia. Gracias al libro se identificaron los conceptos más relevantes, así como los padres fundadores y su bibliografía, cuyos caminos se cruzarían con las cartas y tratados que no solo nos acompañan hasta la actualidad, sino que también han fijado las pautas para ejercer en el campo de la restauración. Pasado y presente no son antitéticos en arquitectura, sino complementarios, solamente logra interpretar esto quien tenga el conocimiento histórico que se requiere para llevar a cabo una buena restauración.

Palabras clave: identidad, reutilización, revalorización, estructuras preexistentes, integración, memoria.

EL PROYECTO

Situado a orillas del río Po, en la ciudad de Turín, el nuevo centro de bienestar y local gastronómico es una revitalización de un edificio industrial existente, formado por múltiples módulos y una nueva estructura en una única parcela, construidos en distintas épocas y con materiales y lenguajes arquitectónicos diferentes. La nueva estructura de hormigón y acero presenta un mayor nivel de simplicidad en comparación con las anteriores de mampostería. En los antiguos espacios hay un local flexible con actividades diurnas y un club nocturno, restaurantes, bares, un spa y centro de bienestar, una organización sin ánimo de lucro para el Po limpio y la sostenibilidad, un alquiler de kayaks y ropa para deportes acuáticos. El nuevo edificio tiene como prioridad la accesibilidad, conectando el nivel superior del recinto, situado en el Lungo Po Niccolò Machiavelli, con el paseo fluvial.

En el interior del edificio habrá tiendas de regalos y un centro de información turística, un recorrido que conecta el pasado del histórico Murazzi con la ciudad contemporánea. El espacio público es de carácter comunitario, donde se ofrecerán actividades al aire libre, que se extenderán hacia el nuevo embarcadero que incorpora el proyecto.

A lo largo del proceso de diseño se tuvo en cuenta el riesgo de inundaciones en la zona donde se ubica el proyecto, y se aplicaron distintas estrategias para proteger a los usuarios, los espacios y los materiales de este fenómeno. Las disciplinas de los locales son diferentes, pero en este complejo se integran la recreación, la cultura y el bienestar, priorizando la preservación del patrimonio arquitectónico. La planificación propuesta concluye que este edificio monolítico alberga funciones que tienen privacidad, las aperturas históricas fueron habilitadas en puntos estratégicos del proyecto con el objetivo de manejar diversos flujos de individuos dependiendo de las actividades.

ANÁLISIS CONSTRUCTIVO

Murazzi tiene una estructura modular, hecha de ladrillos y piedras de guijarros fluviales. Según los espacios, hay arcos y bóvedas que datan del primer periodo de construcción del edificio, en 1872, con el proyecto de Carlo Bernardo Mosca. Al tratarse de un edificio protegido históricamente, no se proponen modificaciones estructurales, sino elementos de intervención que aumenten la seguridad y la resistencia de la estructura histórica. Las obras incluyeron la introducción de materiales favorables al agua y a la humedad de la zona, y la sustitución de las aberturas por otras nuevas y estancas, manteniendo los huecos anteriores para conseguir las mismas cualidades estéticas preexistentes sin modificar la fachada.

En cuanto a las funciones, se han añadido nuevas entreplantas y se ha elevado el nivel para situar todos los aparatos eléctricos en un nivel superior; estas precauciones se deben a la alta probabilidad de inundaciones en el Po.

El objetivo es que todas las funciones sean evacuadas durante el avance de la crecida para preservar el bienestar de los usuarios, pero también que el mobiliario y la maquinaria pesada, especialmente la motorizada, estén elevados por encima del nivel del suelo para que esto tampoco sea motivo de preocupación.



Fig. 1. Carlo Scarpa's Castelvecchio.
Source: Peter Guthrie

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<< La condizione umana richiede un confronto con il passato, a volte per modificarlo artatamente, altre volte per distruggerlo o annullarlo, altre volte ancora per idealizzarlo in un aulico destino. >>



<< The human condition requires a confrontation with the past, sometimes to artfully alter it, sometimes to destroy or annul it, sometimes to idealise it into a courtly destiny. >>

Marcello Balzani, *Architettura e preesistenze: Premio internazionale Domus restauro e conservazione Fassa Bortolo, 2017.*

<< *Esta ciudad que yo creí mi pasado
es mi porvenir, mi presente*>>

*Jorge Luis Borges, Arrabal, Fervor de Buenos Aires (1923).
BUENOS AIRES, ARGENTINA.*

INTRODUCTION

According to the esteemed Argentinean writer Adolfo Bioy Casares¹ in his novel 'Dormir al Sol' published in 1973, he conveyed the idea that memory plays a crucial role in shaping one's identity. To establish our identity, it is important to acknowledge our roots and not conform to current trends. Self-knowledge forms the foundation of identity, especially when it comes to architectural heritage, which is closely tied to historical knowledge. This doesn't mean that other aspects like construction, technology, materials, urban planning, and sustainability are not important, but they are all influenced by historical events. Furthermore, the experiences associated with each building's modifications reveal how architecture is a reflection of the historical context. Each architectural piece carries a rich history of changes that correspond to different historical periods. Additionally, values and beliefs also play a role, highlighting the need to distinguish between contemporary reuse and restoration projects. Architects' approaches to these interventions can range from fully immersing themselves in the past to incorporating revised and updated historicism, or even rejecting the past completely through bold departures in design language.

The first chapter can be considered as a state of the art from a theoretical point of view. Restoration has been practiced for centuries, exemplified by the 19th century French architect Eugène-Emmanuel Viollet-le-Duc, renowned for his work in restoration and renovation of historic buildings. His approach to restoration was based on the idea of completing and reconstructing historic buildings according to their supposedly original form; his method has been the subject of debate and criticism over the years. Leaving aside the architectural manuals of Viollet-le-Duc and his successors, during the 20th century much of Europe's architectural heritage was destroyed during the wars, which led to the beginning of a necessary new path, which involved declarations, resolutions, documents and charters of restoration with a common goal; to protect and preserve the cultural heritage of historic cities. In this way, the identity and the architectural and urbanistic language of ancient cities would be preserved, even in times of modernity and new urbanisations. These documents provided essential guidelines for the restoration and conservation of historic monuments and sites, and formed the basis for international principles and standards in the field of architectural conservation and urban planning. Similarly, during the first chapter, experts and theoreticians of this discipline such as Camillo Boito (1836-1914), Gustavo Giovannoni (1873-1947) and Cesare Brandi (1906-1988), who have played a fundamental role in the establishment of principles and methodologies for the conservation and restoration of architectural heritage in Italy, will be developed.

The second chapter presents a timeline that enables the identification of the evolution of the discipline through the enumeration of historical and political events, conventions regarding historical heritage and its preservation in contemporary times, the enhancement of heritage and industrial archaeology -which had been undervalued until a few decades ago-, as well as case studies that present particular characteristics and allow us to analyse the gradients that are observed in the integration of contemporary architecture into pre-existing structures. These case studies all share the same main objective, to recycle constructions and encourage the continuity of use of buildings in order to avoid degradation, yet they all do so with different approaches.

Subsequently, the third chapter analyses the architectural interventions carried out on Wittenberg Castle, which prioritise the history and identity of the building. This new project respects the architectural language and the built environment. In addition, the original materials of the building are restored or, if they have to be modified due to their current conditions, they are modified by similar ones, it could be said that an attempt is made to preserve as much of them as possible. In these works we observe an essence that not only

1. Bioy Casares, A. (1973). *Dormir al Sol*. Buenos Aires, Argentina: Emecé Editores.

manages to endure over time, but is also emphasised by the new interventions, as it should be, isn't it? Theoretically, good architects find strategies to transmit their intentions correctly, in this case the dialogue between the past and the present.

<<Is "Restoration", in other words, a word that delimits the limits of a discipline? Or is it a way of thinking about architecture, of involving the knowledge and interests that it manages to unleash?>>

B.Paolo Torsello, 'Che cos'è il restauro? Nove studiosi a confronto', 2005.

Finally, in the fourth chapter, the CaixaForum example is presented. In this case, the concept of conservation is acknowledged but is secondary to the project's objectives and creative impulses. Unfortunately, important factors such as language, materials, structure, landscape, and the built environment are not given proper consideration. These kind of buildings are a product of contemporary whims, where the pursuit of harmony and homogeneity is no longer a priority. Instead, they aim to completely break away from conventional norms. While some may view these decisions as mere design pretexts, it is important to note that the architects involved are highly renowned internationally. They claim that their choices are driven by the current needs of humanity and the cities they inhabit, with a focus on sustainability and accessibility. Could it be possible that they genuinely seek to address these issues? Is it fair to assume that they are using these justifications to align with inclusiveness and environmentally friendly trends? It is possible that these justifications serve as a means to validate their design choices and subtly influence our judgment, but it is also worth considering their true intentions.

Therefore, while developing this thesis, we will discover parallelisms that will make it easier to distinguish the various nuances within this discipline. The contrast between traditional and contemporary disruptive restoration approaches is evident not only in observable characteristics but also in the support of critical thinking and architectural theories from renowned practitioners. Throughout this exploration, different perspectives are considered in the process of intervening in built heritage, with the main objectives being to understand the evolution of restoration approaches and their motivations. Comparing conventional and current methods and theories allows us to comprehend the changes in values, techniques, and criteria used in each approach and how they have adapted to present needs and expectations.

Another goal is to assess the value of authenticity and integrity. Traditional restoration methods in Western culture focus on preserving the historical and aesthetic authenticity of the building while also maintaining its original integrity. On the other hand, some modern approaches may involve more invasive or experimental interventions in order to have a greater impact based on current trends. The comparison between these two approaches helps us understand how the preservation of history and adaptation to current trends are balanced. Additionally, this research enables us to analyze the techniques and materials utilized in each approach.

Some methods often incorporate artisanal techniques and local materials, while others may leverage technological advancements and new materials. Would it be plausible to suggest that responsible construction with locally sourced materials, found within the geographical areas where the projects are conducted, aligns more closely with the concept of sustainability? Conversely, do we believe that the production and transportation of large quantities of prefabricated materials, along with the inclusion of air-conditioning systems and the associated energy consumption, demonstrate respect for the environment? This comparison aids in evaluating the effectiveness and sustainability of these techniques and materials across various circumstances.

It is essential to reflect on the cultural and social value when assessing the significant differences between these two approaches. It is possible to reflect on the cultural and social value attributed to built heritage. Conventional methods may focus more on the preservation of historical legacy, sense of place and identity, while contemporary approaches may consider functionality, community participation, but above all the *use*. This comparison allows us to explore how these values are balanced and how they adapt to the needs of today's society.

In today's society, it is common to observe a trend in which people do not question or deeply analyze the decisions they make or the trends they follow, regardless of the underlying motives. This could be attributed to several factors. We live in an age when information and external influences are readily available through media and social networks. This overexposure to a wealth of information can lead to an attitude of conformity, whereby people simply follow trends without stopping to reflect on the motives behind them. This lack of questioning also applies to architecture. How does this happen? It is as simple as saying that certain architectural practices have been selected; it is difficult to say who came first, whether it was the chicken or the egg, as they have international renown, but we could not define whether they were chosen to execute projects because of their renown, or whether they have become significant because of their position they have been given. Their theories and ideas have become embedded in the spectators of this field as absolute truth, which has led us to judge only the beauty of the building and not the value of the intervention itself.

In other words, this inquiry is not linked to my personal sympathies or apathies, but to certain criteria that have been chosen in order to juxtapose these case studies, for which it was essential to become involved in the course of restoration over the last centuries, to understand the evolution of this discipline and the criticisms that had and will always be valid, those that are linked to the relationship with the past, and the quality of human experience. Establishing certain specific parameters such as in-depth knowledge of the work, preservation of the structure of the pre-existing building, integration of the building with the current environment, objective of safeguarding the authenticity of the work while respecting the previously existing architectural language, enhancement of the work and its built environment, use of sustainable materials and technologies, and restoration of the balances lost due to the degradation of the building before intervention. The aim is to be able to contrast two types of interventions: works in which those responsible have made an effort to create a dialogue between the pre-existence and the additions, and those which, instead of seeking integration, seek to produce a contrast that denotes the rupture of the original architectural language.

01. **State of the art from a theoretical perspective; the course of restoration, the founders, treatises of this discipline**

Understanding the present through the past and the past through the present

*The emergence of the discipline
and its founders*

Over the last few centuries this discipline has emerged and evolved, starting with preservation and conservation from a stricter perspective, to stylistic restoration only, and then combining reuse with all of the above, which would be the best alternative to conserve pre-existing structures and not allow them to fall into disuse. If the aim is to understand the current context, it is essential to study the past, as new approaches to architectural heritage have arisen thanks to the definitions and proposals of the theoreticians in this field. From the 19th century onwards, critics and restorers of architectural heritage began to develop the discipline, and their contributions were able to define what restoration was for them. Consequently, the definitions produced different approaches which changed depending on the geographical location and the particular interests of the governments. Leon Battista Alberti, Andrea Palladio and Marc-Antoine Laugier were the first to create theoretical manuals in the history of architecture, which would be fundamental for the evolution of architectural theory and practice in the following centuries. Nineteenth and twentieth century restoration theorists in Europe - particularly Italy, France and the United Kingdom - led the way for their contemporaries, in centuries when the safeguarding of heritage was determined as urgent and vital, and their contributions provided clarity.

All the theorists discussed below are recognized as leading figures in the field of architectural restoration and the preservation of cultural heritage. It is important to categorize them based on their approach. Viollet-le-Duc advocates for restoring the building to its original state, while Boito, Riegl, Giovannoni, and Brandi support restoration but also accept contemporary interventions, always showing respect and a revised understanding of history. On the other hand, Ruskin and Morris completely reject restoration and traditional Italian restoration methods, instead emphasizing preservation and conservation. Each critic has a unique perspective and diverse experiences, which contribute to a richer debate and a better understanding of the subject.

Setting aside any differences, it is possible to unite these individuals into the same group due to their shared interests in preserving built heritage, contributing to significant theories, and criticizing incorrect restoration. Although they have different approaches, they have fostered an interdisciplinary dialogue that continues to this day, with architects, conservators, archaeologists, historians, and other restoration professionals collaborating. This collaboration has greatly enriched the field by incorporating diverse knowledge and perspectives. Moreover, their work in various countries has resulted in the creation of regulations and laws that have successfully preserved cultural heritage. It is important to recognize that this theoretical framework is an ongoing process and should not be evaluated solely based on isolated statements or absolute principles, especially considering that it originated two centuries ago. As the world evolves in this globalized era, our current conceptions also change. The primary goal is to capture the essence of each contribution and continue to improve upon these theories, just as contemporary theorists do. This will enable us to approach current conservation practices with a better understanding of the challenges they present in different contexts.

Eugène Viollet-le-Duc (1814-1879)

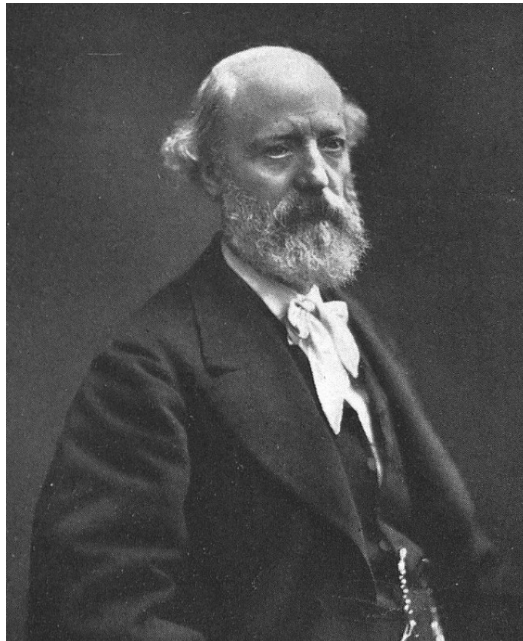


Fig. 2. Portrait of Eugène Viollet-le-Duc

Eugène Viollet-le-Duc, who was born in Paris in 1814, was a highly respected French architect and a prominent figure in the field of architecture and restoration of historical heritage. He is well-known for his innovative theories and critiques in the discipline, particularly in his work *"Dictionnaire raisonné de l'architecture française du XI^e au XVI^e siècle"* where he introduced his ideas and theories on architecture and restoration, advocating for a scientific and logical approach to the discipline. His theories have been controversial and criticised by many architects and engineers over the years, but it is impossible to deny that his legacy has been very significant, as the discipline was explained and developed by professionals who have been influenced by him.

Viollet-le-Duc was also entrusted with the task of restoring and reconstructing several historically important buildings in France, including Notre-Dame Cathedral in Paris, the Basilica of Saint-Denis, and the ramparts of Carcassonne, among others. Taking into consideration his pioneering role in the discipline, the architect refrained from using the term restoration as there was a lack of developed theory. Instead, the architect spoke of *completion*, whereby elements were added or substituted to bring the building to its intended state. The architect believed it was acceptable to incorporate architectural elements from other works as long as they were suitable for the specific building in question.

The architect emphasized the importance of interventions being applicable and regenerative, with the ultimate goal of allowing the monument to once again reveal the truth that had been lost, obscured, or never fully realized. Furthermore, the architect firmly believed that a poorly executed intervention could cause more harm to a historic building than the natural wear and tear of time or societal impacts.

Definition

"To restore a building is not to maintain it, repair it or remake it, but it is to restore it to a state of integrity which might not once have existed at a given time." Restoration, in the seventh volume of the *Dictionnaire raisonné de l'architecture française: du XI au XVI siècle*, 1866.

John Ruskin (1819-1900)

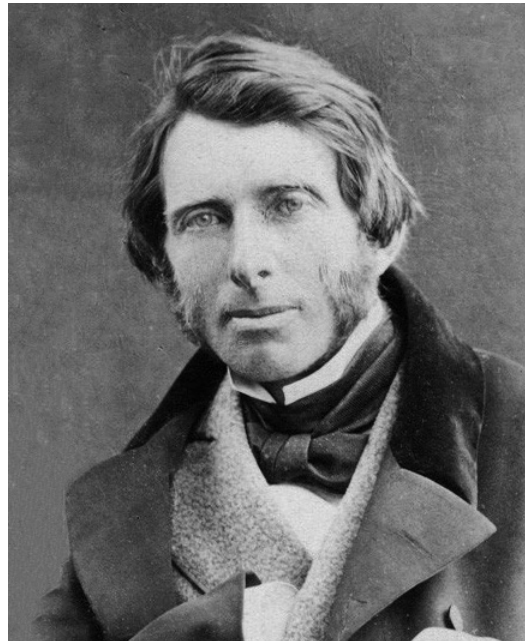


Fig. 3. Portrait of John Ruskin, 1863

John Ruskin, born in London, UK, on 8 February 1819, was a British art critic, writer and philosopher. His work on art criticism is extensive, as is his support for Gothic art and his ideas concerning the restoration of historical monuments. His insights on the subject had a significant influence on the mindset and traditions of the time, which ultimately led to the establishment of a new concept and culture of protection and conservation. This manifested through the promotion of safeguarding and an outspoken rejection to any intervention that was beyond basic maintenance or mere external contention of the work, as it was originally inherited.

Unlike the other critics discussed throughout this chapter, it should be noted that Ruskin was not an architect, his perspective was of an artist, which is the reason why his focus was on the value of the building as a piece of history and not on the technical characteristics of the building as a whole. Interestingly, Francesco La Regina² suggests that, just as Viollet-le-Duc and Brandi have created a positive definition of restoration as a concept, Ruskin has created a negative one, *<<restoration is destruction>>*. According to the critic, to replace elements of a building was to “subtract matter” and consequently “the authenticity of the work”, he conceived this activity as “falsifying and destructive”. There was a clear rejection towards new additions, even if they were not noticeable or significant; the priority was to conserve in its entirety.

According to La Regina, denouncing the destructive nature of restoration was a way of opposing to the manipulation and distortion of historical buildings. His aim was to establish a new approach towards the contemporary interventions based on principles such as the replacement of restoration by incorporating regular maintenance, limiting interventions to external measures, and promoting a culture of respect for the past. These principles were to be applied to the cultural heritage of different civilisations and periods, as subsequently specified in the Restoration Charters and the concept of “cultural and environmental property” in the 1960s.

Definition

‘Restoration’ means the most complete destruction that ignorance or folly can commit; and no more complete destruction has been wrought in all Europe, taking the centuries of which I am aware, than that of the cities of Italy by the measures called ‘restoration’.

William Morris (1834-1896)

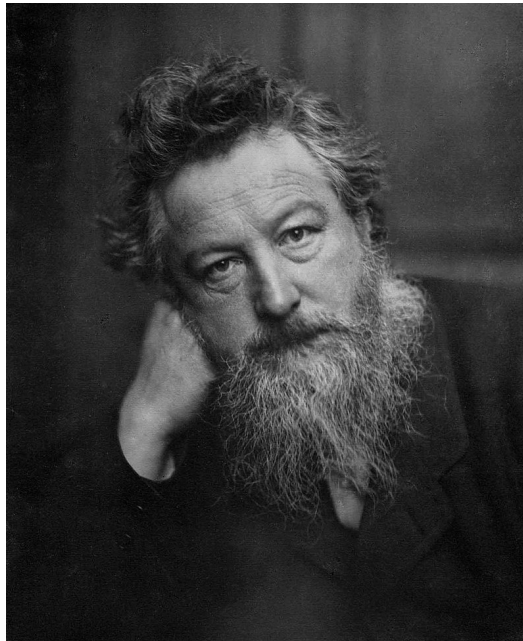


Fig. 4. Portrait of William Morris, 1887

William Morris, a hugely influential British designer, writer and activist, was born in Walthamstow, UK on March 24, 1834. He is known for his important contributions as a prominent figure in restoration during the 19th century, as he was the founder of the Society for the Protection of Ancient Buildings (SPAB). The purpose of this initiative was to promote historic preservation in the United Kingdom and raise awareness of the crucial importance of preserving the country's architectural and cultural heritage. The SPAB was founded in 1877, its birth was made public through a Manifesto that was published by Morris in the *Athenaeum* magazine³. There the theorist opposed to the restorations of the cathedrals of Tewkesbury and St. Alban's and asserted that the acts committed in the name of restoration had caused greater destruction than previous centuries of revolution, violence and offense to the monuments. The author emphasizes the importance of fully respecting all aspects of historic buildings, including their forms, proportions and material authenticity.

The SPAB promoted a conservative approach which recognized the value of preserving the original state of the building, considering it as a historical document that should not be altered. The text implies that interventions on monuments should be guided by ethical and historical-cultural significance. The manifesto also recognizes the need to limit expansion or integration projects of existing structures and instead focuses on transmitting the works of the past to future generations. If a building is no longer suitable for its current use, the author suggests constructing a new building rather than modifying or expanding the old one. In conclusion, the main objectives of the SPAB during its operation were to Promote and preserve authentic conservation and traditional craftsmanship and to improve the education and awareness of society - thus involving them in this process - to push for new policies and laws that would enable the conservation that the body believed was right. In addition, he was a prominent figure in Arts and Crafts, a movement that aimed to revitalize traditional arts and crafts during a period of industrialization that was drastically altering production methods and aesthetic values and involved diverse disciplines such as design, architecture, crafts and visual arts.

Considering his involvement in both the Society for the Protection of Ancient Buildings and the Arts and Crafts, it is notable that William Morris wished to return to the origin, from the use of traditional and natural materials, rejecting the changes that industrialization and the new world were bringing -especially in the United Kingdom-.

3. Society for the Protection of Ancient Buildings, in *The Athenaeum*, March 10, 1877, 2576, p.326.

Camillo Boito (1836-1914)



Fig. 5. Portrait of Camillo Boito

Camillo Boito, an esteemed Italian architect, restorer, and architectural theorist, was born in the beautiful city of Rome on October 30, 1836. Alongside the notable Gustavo Giovannoni and Cesare Brandi, he is widely recognized as one of the trailblazers in the field of restoration in Italy. His invaluable contributions to the architectural restoration movement were particularly noteworthy, even preceding the establishment of specific guidelines and treatises in the 20th century. The author's primary aim was to avoid any excessive interventions that might compromise the original character and identity of a building. In order to achieve this, he strongly advocated for thorough historical analysis and the use of appropriate techniques and materials in restoration projects. His profound impact extended far beyond theoretical frameworks, leaving a lasting and influential legacy in practical application.

From Boito's perspective, restoration should only be undertaken when the structure of the monument is in danger. The focus should be on repairing the most significant and dangerous damages without modifying the monument. Also advocated for preserving the original elements of the monument, ensuring that everything solid remains in its original place and form. It is important to note that Boito's main interest lies in medieval Gothic architecture, which is where his primary focus is directed. According to the architect, restoration consultation can be divided into two distinct categories: artistic and historical. Artistic conditions solely concern the aesthetic aspect of the monument and are limited to that. On the other hand, historical conditions aim to preserve the history of the monument. The author believes that when the historical aspects align with the artistic reasons, the restoration process is lively and harmonious. However, if the historical reasons deviate from or contradict the artistic reasons, the restoration process becomes complex and challenging, often resulting in unsatisfactory outcomes.

Aloïs Riegl (1858-1905)



Fig. 6. Portrait of Aloïs Riegl in the early XXth century.
Source: University of Vienna collection

Alois Riegl, who born in Linz, present-day Austria, in 1858, was a renowned art historian and restoration theorist of Austro-Hungarian descent. He is renowned for his major contributions to the theory and application of conservation and restoration of historic structures. His most impactful writing on this subject is “*The Cult of Modern Monuments: Its Essence and Development*” (German: *Der moderne Denkmalkultus: Sein Wesen und seine Entstehung*⁴), first published in 1903, which highlighted the change in attitude that took place in the 19th century, when society began to place greater emphasis on systematically valuing and safeguarding historic monuments. In his work, Riegl begins to refer to the as yet undeveloped theme of use in architecture and explains the competing values inherent in a monument, including “use value” and “antiquity value”.

Riegl suggested that whenever restoring elements, it would be more appropriate to reflect the period in which they were originally created rather than to combine different styles or periods in a single restoration. Unlike other theorists, he did not support the direct imitation of historic architectural elements but encouraged the use of a contemporary architectural language that harmonized with its setting and context. He believed that historical buildings were composed of layers, each with its own historical significance and value, including previous interventions and restorations. Therefore, he emphasized the importance of recognizing and preserving these transformations and modifications as an integral part of a building’s history, rather than erasing or replacing them; for him, time is the producer of monuments. In fact, he prioritizes the importance of those historical traces in the work of art as the focal point of its contemplation, as he considered them to be integral to the monument, how does this differ from the old system of restoration? It presents a completely opposite idea since the objective of the previous one was to eliminate submitting the building and its elements to a renovation that would not allow the traces of history, and above all, of human work, to become visible.

4. Riegl, A. (1903). *Der Moderne Denkmalkultus: Sein Wesen Und Seine Entstehung*. Montana, United States: Kessinger Publishing.

Gustavo Giovannoni (1873-1947)

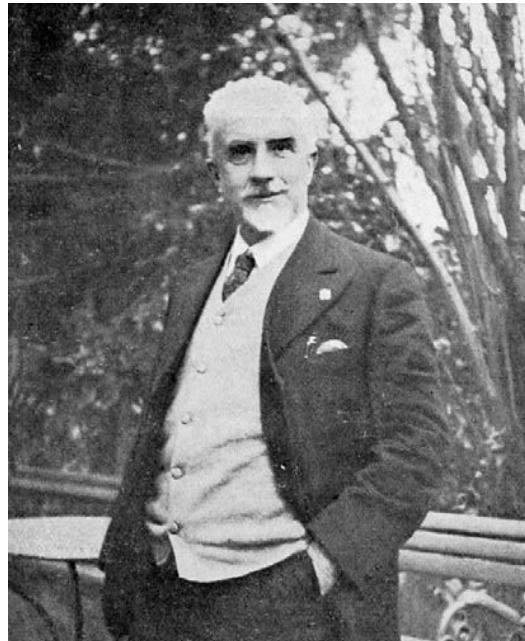


Fig. 7. Portrait of Gustavo Giovannoni in the early forties
Source: De Angelis d'Ossat 1949

Gustavo Giovannoni, a renowned Italian architect, engineer, and historian, was born in Rome, Italy, on 1 January 1873. He played a significant role in the field of restoration and preservation of historical heritage within his homeland. Giovannoni is highly regarded as one of the pioneering figures in restoration in Italy. His primary focus was on conserving and safeguarding the authenticity and identity of buildings, appreciating not only their architectural features but also the artistic atmosphere of the surrounding city. He emphasized the importance of maintaining a sense of proportion, color, and form that have endured over time, even as cities have evolved and undergone changes. Importantly, Giovannoni advocated for new additions to be in harmony with their historical context, discouraging the incorporation of historical imitations.

Giovanni strongly believed in the significance of using traditional methods and materials when restoring buildings and their components. His goal was to maintain harmony and consistency, not only with the building's history and style, but also with the surrounding environment. He also stressed the importance of reversible interventions, ensuring that any changes made during restoration could be easily undone or adjusted without causing permanent damage.

Spiridione Alessandro Curuni⁵, who extensively studied Giovannini and his theory, explains that the critic developed a classification system for restorations. This system consisted of five categories: simple consolidation restorations, recomposition restorations, liberation restorations, completion restorations, and innovation restorations.

<<Where the new construction is grafted onto the pre-existing, the building system of the old settlement should be respected. [...] Also as a stylistic sense there should remain a harmony between old and new; but in this reference to architectural tradition I would not like to be misunderstood. It does not mean that new elevations should be cold copies of pre-existing works, without new artistic research, without logical adaptation to new requirements. Every city has its own artistic 'atmosphere', that is, it has a sense of proportions, colour and form that has remained a permanent element through the evolution of the various styles, and this must not be disregarded; it must set the tone for new works, even in the newest and most daring inspirations>> Giovannoni⁶, 1913.

5. Torsello, B.P. (2005). *Che cos'è il restauro? Nove studiosi a confronto*. Venice, Italy: Marsilio Editori.

6. Giovannoni, G. (1913). *Vecchie città ed edilizia nuova*, Nuova Antologia XLVIII (1913): 449-472.

Cesare Brandi (1906-1988)



Fig. 8. Portrait of Cesare Brandi

Cesare Brandi, born in Siena, Italy, on 8 April 1906, was one of the most renowned Italian historians and theorists of architectural heritage restoration, had a great influence on the field of restoration and left a legacy in the discipline that prevails to this day. Brandi was instrumental in the evolution of restoration theory and practice, promoting a multidisciplinary and scientific approach. His work focused on the importance of conservation and respectful restoration of historic buildings and monuments. During the development of his concepts, Brandi never argued that interventions should simply be reconstructions or imitations of the architectural language of the building, as he considered that this would lead to artistic and historical falsifications, but suggested a restoration process that would allow the identification of new interventions on the building, thus being able to differentiate the pre-existing architecture from the new one; in this way there would be a better understanding of the modifications and evolution of the built object, and consequently, a better appreciation of its history. The main objective was to restore the potential unity of the work, without erasing the traces of the passage of time from it. Also to pass the object on to future generations, allowing individuals to experience the work of art internally and its recreation to endure over time. For the theorist, each art object has two essential values: one historical, which documents events in the history of humanity, and the other aesthetic, which gives it a formal coherence that makes it unique. From this, he argues that the work of art is experienced internally, it is recreated in the individual, who appropriates it. From this concept, the two instances, which are defined as values, are envisaged. As a 20th century theorist, and like his colleagues mentioned in this chapter, Brandi emphasised the importance of research and scientific analysis in this discipline in which the work of professionals from different fields is amalgamated. In order to carry out this work, it would be essential to have adequate historical knowledge. Furthermore, he did not remain solely in the critical and theoretical realm, but also supervised conservation and restoration projects in multiple spaces of historical relevance in his home country of Italy.

Definition

'Restoration' constitutes the methodological moment of recognition of the work of art, in its physical consistency and in its double aesthetic and historical polarity, with a view to its transmission to the future.

Divergent perspectives: the contrasting positions of the critics

Restoration	Anti-restoration
Le-Duc	Ruskin
Boito	Morris
Riegl	
Giovannoni	

In conclusion, it can be observed that during the 19th century, there were two contrasting approaches in the field of restoration. One approach was represented by Eugène Viollet-le-Duc, who led the restoration movement, while the other approach was represented by John Ruskin and William Morris, who advocated for the anti-restoration movement. It is worth noting that Viollet-le-Duc's proposals and executed works faced significant criticism from his contemporaries. In fact, Ruskin perceived his stylistic restorations, which involved adding new elements in the style of the original components, as a form of 'destruction accompanied by inaccurate portrayal of the original structure.' On the contrary, it was the French critic who first mentioned the concept of reusing buildings, emphasizing the importance of maintaining their continuity of use and preventing abandonment. This perspective was later supported by Alois Riegl, who recognized the significance of reuse as an integral aspect of restoration, with both scholars placing emphasis on the importance of functionality and value.

Camillo Boito held a different viewpoint on the matter. He himself expressed criticism towards both the 'restorers' and the 'anti-restorers'. The former, he feared, might compromise the authentic materials of the buildings with their methods. As for the latter, he disagreed with their strategy of prioritizing the decay of the building. Boito believed that each monument should be treated individually, taking into account its specific circumstances and characteristics. He advocated for new additions, but with the intention that these interventions should be easily distinguishable to prevent confusion and historical inaccuracies. This approach stood in stark contrast to Viollet-le-Duc, who also supported additions, but aimed to make them blend seamlessly with the existing elements, giving the impression of an earlier period. It is interesting to note that Boito's approach to modifications and additions remains relevant even in contemporary times.

Cesare Brandi shared a similar theoretical perspective with Boito, in which interventions were encouraged, always allowing for the recognition and contrast of the existing and the new. Gustavo Giovannoni, on the other hand, had a more delicate approach, preferring to restore buildings using traditional western methods. He did not view interventions as layers of different historical moments, but rather sought to make them irreversible, with the intention of being able to modify their history as needed. In contrast to other theorists, who see these buildings and monuments as layered palimpsests of history, Giovannoni believed that the beauty of a building was a result of its past marks and scars, akin to a patient with many stories to tell.

*Declarations, resolutions,
documents and letters of
restoration*

Following the military events of the 20th century, there was a significant increase in the awareness and importance attached to the preservation and conservation of historic monuments. Most of Europe's historic centres experienced great loss and destruction, and suffered considerable damage during the wars. Consequently, comprehensive restoration and reconstruction efforts of historic buildings and monuments became a necessity. In the years following the wars, a comprehensive effort was made to restore the affected infrastructure and urban areas. This initiative brought about a shared understanding, leading to a widespread acknowledgement of the importance of preservation as a vital aspect of identity. In addition, these historic events became a symbol of the resilience and strength of societies that had endured the horrors of war. Without the restoration and reconstruction efforts, cities would have lost a significant part of their identity, as historic architecture and monuments serve as tangible representations of specific historical contexts. The absence of these would have resulted in people feeling disconnected from their surroundings and lacking a sense of belonging.

Fortunately, the destructive consequences of wars have led to the establishment of a legal framework and international agreements aimed at safeguarding historical heritage during times of armed conflict. These legal instruments have played a vital role in raising awareness and underscoring the significance of preserving heritage after periods of war. Following the Paris Peace Conference of 1919, the victorious Allied powers established the League of Nations, an organization focused on international cooperation, with its headquarters in Geneva, Switzerland. Within the same organization, the International Committee for Intellectual Cooperation was founded, with the goal of promoting collaboration in areas such as education, science, culture, and communication among nations, while also emphasizing the importance of conservation. In 1926, the International Museums Office, which later became the International Council of Museums (ICOM), was established after the Second World War in 1946. Numerous meetings held by these organizations and societies over the years have provided guidance for professionals in the restoration field, establishing shared objectives that all must consider.

There are a variety of documents that play an important role in restoration and are known by different titles and names (such as declarations, resolutions, documents, and charters of restoration). However, they all share a common goal: to establish rules for proper discipline that promote the respectful preservation of monuments, with a focus on maintaining their historical character and identity. In Italy, the earliest precursor to such documents can be traced back to the final vote of the *II Congress of Italian Engineers and Architects* in 1883. Throughout the 20th century, these documents gained support through widely popular conventions. These include the *Italian Charter of Restoration* (1932, Higher Council of Antiquities and Fine Arts), the *Instructions for the Restoration of Monuments* (1938, Ministry of Education), the *Venice Charter* (1964), the *Italian Charter of Restoration* (1972), the *Charter for the conservation and restoration of objects of art and culture* (CNR Charter, 2003), and the *Charter for the Restoration of Monuments* (1938, Ministry of Education).

....**1931.** Athens Charter(1931)

....**1932.** Italian Charter of the Restoration (1932)

....**1964.** The Venice Charter (1964)

....**1972.** The Charter of the Restoration (1972)

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Athens Charter (1931)

This charter was drawn up during the First International Congress of Architects and Technicians of Historic Monuments in Athens, Greece, 21-30 October 1931, the meeting was organised especially to discuss architectural monuments after the damage caused by World War I. It established principles for the conservation of historic monuments and promoted the integration of monuments into modern city life. It established principles for the conservation of historic monuments and promoted the integration of monuments into modern city life. It was the first document of an international character, which has served on a global scale and is still valid today.

“Where, as a result of deterioration or destruction, restoration indispensable, it recommends that the historical and artistic work of the past be respected, without excluding the style of a particular period”.

“The Conference recommends that the occupation of buildings, which ensures the continuity of their life, be maintained but that they be used for a purpose which respects their historic or artistic character. respects their historic or artistic character”.

The seven points of the manifesto are:

- I.** Establish catering advisory organisations.
- II.** Ensure that projects are reviewed with well-informed critics.
- III.** Establish national legislation to preserve historic sites.
- IV.** Rebury excavations that will not be restored.
- V.** Allow the use of modern techniques and materials in restoration work.
- VI.** Place historic sites under custodial protection.
- VII.** Protect the surroundings of historic sites.

In the case of the restoration of materials, it is interesting to note that in the case of the Acropolis, the reconstruction of the northern colonnade of the Parthenon was approved, even while promoting modern restoration techniques at the time, concern was expressed about the use of cement and iron elements. However, the intervention was carried out with these materials, not with marble as the pre-existing building had been. Consequently, over the decades it was confirmed that the concern was well founded, as the concrete and rusted iron elements became a major problem and largely caused the deterioration and cracking of the original marble blocks, thus demonstrating that contemporary methods were not necessarily the most appropriate.

The charter marked the end of the period of development of the main concepts of conservation, so stylistic restoration was abandoned and the focus was placed on the conservation of monuments from an approach that showed historical respect. Giovannoni was one of the co-authors of the Athens Charter, and in 1932 -one year after the Athens Charter- he drafted the Italian National Charter for Conservation, which continued the model proposed in 1931. Indeed, it is possible to say that it was this Charter that formulated the guidelines and recommendations that would be developed in the decades to come.

Italian Charter of the Restoration (1932)

This document was written by the Superior Council of Antiquities and Fine Arts in 1931 and published in 1932. The critic and theorist Gustavo Giovannoni, developed earlier in the thesis, was one of the organisers. It repeats ideas reflected in the Athens Charter and it contributes the legal conception of heritage as a value of civilisation and the primacy of public law. During the development of this charter, there is a differentiation between the monuments of Antiquity and those of later times, as it is determined that they should be preserved differently. The Charter established important principles, including the importance of preserving the authenticity and integrity of works of art, the ability to reverse restoration actions, minimal intervention in restoration, and thorough documentation of interventions. These principles have had a lasting impact on the field of restoration not only in Italy but also worldwide. They have been widely adopted and adapted in many countries as a framework for the conservation of cultural heritage.

5. *“that all elements that have an artistic or historical memory, whatever their age, are preserved, without the desire for stylistic unity and a return to the primitive form intervening to exclude some to the detriment of others, and only those elements [...] that, lacking in importance and meaning, represent unnecessary disfigurement, may be eliminated; but that the judgement of these relative values and the corresponding eliminations must in any case be carefully considered, and not left to the personal judgement of the author of a restoration project.”*

8. *“that in any case such additions must be carefully and clearly designated either by the use of a material different from the primitive, or by the adoption of envelope frames, simple and without intaglios, or by the application of initials or epigraphs, so that a restoration carried out may never mislead scholars and represent a falsification of a historical document.”*

Definition

It is a professional activity dedicated to fostering the permanence of those cultural and artistic manifestations, protecting and rescuing them responsibly so that they can be passed on to future generations by ensuring their current use and respecting their historical, artistic and social significance. Decision-making in both cases is supported by a comprehensive process of multidisciplinary research and dialogue.

The Venice Charter (1964)

This charter was drafted during the Second International Congress of Architects and Technicians of Historic Monuments in Venice, Italy, between 25 and 31 May 1964, the meeting was organised especially to review and reformulate the concepts put forward during the Athens Charter, as at that time there was intense post-war restoration activity in Italy. This new charter would codify common guidelines for the field, which would mark a clearer path in the reconstruction process that war-affected countries were undertaking.

Originally, the conference took as its inspiration the dangers that threatened - and still threaten - the monuments of Venice, due to its geographical location and natural conditions. Roberto Pane and Piero Gazzola were responsible for drafting the charter, and the document is considered fundamental in modern restoration culture. It was taken as a reference text for the regulations of the nations, it begins to think about more functional and technical aspects and completely eradicates stylistic needs.

Article 3 makes explicit the aim of preserving not only the work in its materiality, i.e. as an object, but also as an artistic testimony, which is that which is part of the local identity. Subsequently, article 4 clarifies that conservation must be achieved through systematic maintenance operations; it was no longer a question of waiting for the structures to be abandoned or degraded before intervening, but that there had to be constant maintenance with the aim of not allowing the works to reach the point of degradation. In article 6 it is proposed to avoid alterations within the immediate surroundings that could damage the object, such as alterations between volume and colour relationships.

Subsequently in article 7 it is determined illegitimate to move parts or the totality of the monuments unless it is a decision linked to their protection. In the same way that after the Athens Charter concern was expressed about the use of concrete and iron reinforcement, which ended up being supported by the events at the Parthenon, in the Venice Charter it is expressed again, and the importance of using appropriate techniques is stated, regardless of whether they are traditional or modern, the basis of the decision must be linked to effectiveness.

For the purposes of this master thesis, article 5 is the most relevant, as it emphasises the new function given to the restored monument, to what is this due? Particularly in the 1960s, after the proposals and theories of the Modern Movement, interest in function was born, a subject that had not been addressed or developed in the context of the Athens Charter. With this new point, re-functionalisation was considered as the first form of conservation, which was to be carried out without transformation. Nevertheless, the charter recognises that there may be a need for additions, and in that case recommends ensuring harmony between the old and the new, just as the principle of distinguishability formulated by Camillo Boito in articles 12 and 13 was to be respected. What does this principle consist of? It is to preserve the integrity and authenticity of historic buildings, but at the same time without ruling out new architectural additions and evolutions. Boito's point was that contemporary interventions should be evident through diversity in the use of styles, architectural language, materials and construction techniques, the aim being to avoid false historicism and public confusion.

The aim of this rationale was to respect the identity and history of the monument, this document makes it clear that restorations following these guidelines should be exceptional in nature, never pursuing stylistic unity, but rather making decisions based on historical knowledge and archaeological studies that allow for an understanding of the subject matter of the work.

“The notion of historic monument includes both the isolated architectural creation and the urban or landscape environment that constitutes the testimony of a civilisation, or of a historic event”.

To summarize, it is important to recognize that the Venice Charter, although a pioneering document in the field of heritage preservation, should not be regarded as the definitive authority on conservation policies. As circumstances change and a greater understanding of the importance of heritage emerges, policies have evolved. The definitions of “monuments” and “sites” need to be carefully examined, as their meanings may differ across languages. However, it is crucial to avoid applying phrases from the Venice Charter without considering the unique circumstances of each situation. Despite this, the Charter remains a valuable resource for the preservation of historic heritage, providing useful guidelines that are still relevant today. It is important to mention that when the Charter was created, both commendable and disappointing conservation practices were observed. The purpose of this communication is to emphasize these different approaches and offer explicit instructions for the successful restoration and conservation of heritage. The Charter’s enduring importance highlights its essential role as a crucial tool in conserving 20th-century heritage. Nonetheless, it is important to recognize that the Venice Charter should not be viewed as the only international recommendation in today’s context. Instead, it should be considered as the historical basis and a fundamental resource for understanding the development of international conservation policies in response to evolving challenges. In fact, the entire process of adapting to and acknowledging heritage holds significance, shaping current methods of preserving cultural heritage and becoming a part of our intangible cultural heritage.

The French restorer Paul Philippot expressed in the draft of the preamble of the Venice Charter: *“Imbued with a message from the past, the historic monuments of generations of people remain to the present day as living witnesses of their age-old traditions. People are becoming more and more conscious of the unity of human values and regard ancient monuments as a common heritage. The common responsibility to safeguard them for future generations is recognized. It is our duty to hand them on in the full richness of their authenticity.”*

The Charter of the Restoration (1972)

The 1972 *Carta del Restauro* is an important Italian document that summarises the visionary ideas put forward by Cesare Brandi. This document establishes a comprehensive set of rules aimed at guaranteeing the safeguarding and restoration of various architectural, sculptural, pictorial, archaeological and other elements. Within its articles, it elaborates the indispensable methodology required for the recognition and implementation of the restorative intervention. Before the appearance of the 1972 Restoration Charter, there was the 1932 Restoration Charter, which focused solely on the conservation and recovery of monuments. However, the subsequent 1972 Restoration Charter can be understood as an extension or continuation of its predecessor, as it encompasses not only monuments but the entire artistic heritage.

Definition

‘Restoration’ is a process that must retain an exceptional character. It aims to conserve and reveal the formal and historical values of the monument and is based on respect for the ancient substance and authentic documentation. It must stop where the hypothesis begins: in terms of conjectural reconstruction, any work of completion, recognised as indispensable

*The outcome of the discipline
based on the theoretical
framework*



In the book *‘Che cos’è il restauro? Nove studiosi a confronto’* there is a discussion between nine Italian critics and theorists, all of whom provide their personal definition of restoration in architecture. The confrontation between their diverse theories is beneficial, as it allows for a greater diversity of perspectives and approaches in the field, where an exchange of ideas and debates creates a constructive dialogue. His theories challenge pre-existing ideas and promote critical reflection on the theoretical and practical foundations of restoration. In order to then be able to create a parallel between the early and then contemporary definitions of restoration, these are those provided by 9 current Italian theorists in the book:

AMEDEO BELLINI

<<‘Restoration’ is the execution of an architectural project that applies itself to a pre-existing structure, carrying out on it all the appropriate technical operations to conserve its material consistency, to reduce the intrinsic and extrinsic factors of degradation, to consign it to fruition as an instrument of satisfaction of needs, with the strictly indispensable alterations, using preventive study and design as instruments of increased knowledge.>>

GIOVANI CARBONARA

<<The term ‘restoration’ refers to any intervention aimed at preserving and transmitting works of historical, artistic and environmental interest to the future, facilitating their reading and without erasing the traces of their passage through time. It is based on respect for the ancient substance and the authentic documentation constituted by these works, and also as an act of critical interpretation that is not verbal but expressed in the concrete operation. More precisely, as a critical hypothesis and proposition that is always modifiable, without irreversibly altering the original.>>

STELLA CASIELLO

<<By the term ‘restoration’ we define the complex of techno-co-scientific interventions aimed at preserving the material evidence of the past and guaranteeing its continuity in time, having recognised this evidence as bearer of values to be transmitted to the future.>>

ROBERTO CECCHI

<<Clearance is a complex action that results in affecting an asset. This action must be compatible with the nature of that asset and guarantee its material integrity as much as possible, in order to allow the valorisation of its cultural contents.>>

MARCO DEZZI BARDESCHI

<<Restoration [is] any intervention that proposes the objective of the permanence over time, however relative, of the physical consistency of the material Good received as an inheritance from history, of which the conservation of each of its endowments and components can be guaranteed in an active use (better the latter if still original or at least of high compatibility and minimum consumption), to be pursued through opportune and calculated new project contributions (functional, plant-engineering-co-technological, furnishing), in view of its integral transmission in efficiency to the future.>>

PAOLO FANCELLI

<<Restoration [...] means handing down to the future that which, positively or negatively - in its values and disvalues - is nevertheless considered significant of the past. At the same time, such an intervention represents the methodological moment of the potential, vivid recognition, in medium rem, of the historical and possibly aesthetic object-context.>>

PAOLO MARCONI

<<Restoration means working on an architecture or an urban context in order to preserve them for a long time, when they are worthy of being learned and enjoyed by our descendants. The operator must ensure that the object of his or her work is handed down in the best conditions, also for the purpose of transmitting the meanings that the object possesses.>>

GIANFRANCO SPAGNESI CIMBOLLI

<<The restoration of the existing built physical space consists in the definition of a new phase of its transformation process, known through "history": a set of operations that are conditioned by the preservation of the documentary authenticity of each recognised phase of the process, up to the present contemporaneity, because of their transmission to the future.>>

B. PAOLO TORSELLO

<<Restoration is the system of knowledge and techniques that aims to safeguard the possibilities of interpreting the work as a source of culture, so that it is preserved and updated as a permanent source of questioning and transformation of the languages that we learn from it.>>

After analysing the contemporary definitions we can observe that all the critics show respect for the identity and history of the buildings, none of them propose false historicism or radical modifications. There is a clear evolution in the discipline, less rigid and with greater adaptation towards contemporaneity, which is fundamental in order to respond to the current needs, not only of the buildings and the city, but also of the individuals who inhabit them.

How has the focus of these interventions mutated? *Through a reordering of priorities, since initially the building used to be considered as an object, an ancient and precious object to be preserved merely for its great artistic and cultural value. Since the last century, particularly after the conception of the Modern Movement, individuals have become the focus of architecture, therefore, new interventions have begun to consider them, seeking ways not only to protect the building but also to transmit its values to the future, enabling future generations to enjoy these structures not only on a tangible level but also on an intangible, identity level.*

The Re-use and conservation of heritage today

<<Considerare il tempo come un architetto, come un pittore generoso o come un secondo architetto, significa attribuire a tutta l'architettura costruita il carattere di opera aperta>>
Dezzi Bardeschi, 2004.

The reuse and conservation of historic heritage offer a valuable opportunity to appreciate the richness, complexity, and identity of historic buildings. It allows us not only to connect with their past but also to envision their future through reinterpretation after necessary interventions. It is only recently that the importance of reuse has been recognized, especially in relation to architectural projects. At the outset of this chapter, the definitions provided by renowned theorists in this field were explored. It is evident that their suggestions always emphasized restoring the building to closely resemble its original form, but thinkers like Eugène Viollet-le-Duc and Alois Riegl had already mentioned the concept of re-using centuries ago; their ideas aimed to prevent the abandonment of buildings and ensure their continued use, even if it meant adapting their purpose.

Viollet-le-Duc⁷ on the re-use of buildings:

"... the best of all ways of preserving a building is to find a use for it, and then to satisfy so well the needs dictated by that use that there will never be any further need to make any further changes in the building. ... In such circumstances, the best thing to do is to try to put oneself in the place of the original architect and try to imagine what he would do if he returned to earth and was handed the same kind of programs as have been given to us. Now, this sort of proceeding requires that the restorer be in possession of all the same resources as the original master – and that he proceeds as the original master did" [15: 222-223].

Alois Riegl⁸ on the re-use of buildings:

"Where a monument has ceased to have use-value, the consideration of age-value has begun to prevail in its preservation. The situation is more complicated where the usevalue comes into play; most would prefer to regard a building in use as something sturdy rather than as something ages and decayed" [18: 44].

In order to modify the uses of buildings that have fallen victim to the passage of time and to ensure their integrity, they should be restored, therefore, it is possible to combine restoration and conservation with reuse. From a thorough analysis that allows to understand, interpret and make explicit evidence of the building's past in its tangible and intangible aspects, reuse becomes the opportunity to promote them, even giving them a diverse character.

We have not moved from restoration to reuse, it has always been practised. Previously, there were not many references to the theme of use and function, as these concepts only became significant in the period after the Second World War, which is why when we look at the proposals of previous centuries, we can see that the theme was not mentioned repeatedly until the 1960s. However, re-use has been carried out over a long period. Referring to the Italian territory there are several ancient buildings that have been reused over time which can be taken as examples, such as the Cathedral of Syracuse on the island of Sicily, the Malatesta Temple in Rimini or the Palladian Basilica in Vicenza; the reason for their conservation was the continuity of use.

7. Viollet-le-Duc, E. (1990 [1854]). *The Foundations of Architecture. Selections from the Dictionnaire raisonné*. New York, United States: George Braziller.

8. Riegl, A. (1903). *Der Moderne Denkmalkultus: Sein Wesen Und Seine Entstehung*. Montana, United States: Kessinger Publishing

The Cathedral of Syracuse *Island of Ortigia, Italy*

From Greek temple to Christian cathedral (& more...)

The Syracuse Cathedral, also called the Duomo di Siracusa, reflects the cultural and artistic diversity of Sicily as it harmoniously combines Greek, Byzantine, Norman and Baroque art. The stratification was produced by the different occupations, which left traces that coexist to this day. Originally, the site of the cathedral was the site of the temple of Athena, built in the 5th century BC by Gelone, the Greek military and political tyrant of Gela and Syracuse. The temple was created to commemorate the victory over the Carthaginians at the Battle of Himera in 480 BC. The transformation that led to the re-use of the building occurred in the 7th century, introducing a new architectural language reflecting Byzantine influence. During this procedure, the intercolumniation was modified, the opisthodomos and pronaos walls were removed, and walls with 8 arches were built to delimit the naves. This resulted in a basilica plan with three naves, a spatiality typical of Byzantine ecclesiastical architecture of the period. In addition, the entrance to the new cathedral was modified for religious reasons, as the Greek temple originally had its main façade facing east, corresponding to the rising sun, and in Christian churches the apse faces east.

During the Arab occupation of the island of Sicily, the Cathedral was converted into a mosque and by the end of the 11th century it was once again the property of Christian worship. In response to the new construction techniques of the time, new openings were drilled to allow light into the central nave, by which time it was realised that this would not compromise the load-bearing capacity of the walls, unlike in previous centuries when construction techniques were less developed. After the 1963 earthquake, the cathedral was terribly affected, especially the new façade.

Between 1728 and 1753 the main façade was built, which has survived to the present day. It was designed by the Trapani architect Andrea Palma and is a renowned example of Sicilian baroque. The most curious thing about the building is that at first glance it appears to be baroque, but on closer inspection, it is possible to identify elements of Greek architecture, such as the original Doric columns, the display of which is the work of the restorations of 1925. Today they do not function as a structural support but were incorporated into the masonry walls in such a way that, like traces, they denote the past. In 2019, a video mapping of the original Greek temple structure was created on the side elevation of the Cathedral. After sunset, visitors were able to observe the elements illuminated by directed beams of light, taking them on a journey back 2,500 years in time and promoting a better understanding of the history of the building.

In conclusion, the Greek temple mutated into a Byzantine church, then into a mosque, and finally into a Baroque cathedral, evidencing the coexistence of different civilisations and religious groups. Therefore, the building was reused numerous times, always depending on occupations and historical and political contexts. It is a fine example of architecture as an open work, as its history was rewritten numerous times, thus promoting a constant metamorphosis of the modifiable, and an extensive maintenance and preservation of the primary aspects of the work.



Fig. 9. East façade, ancient entrance to the Greek temple



Fig. 10. The Cathedral's main façade



Fig. 11. Ecclesiastic sculptures

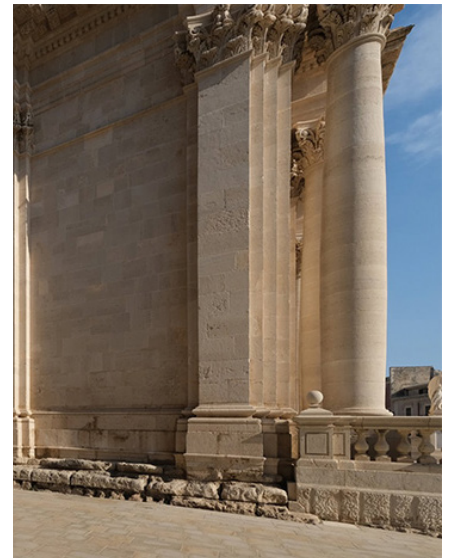


Fig. 12. The Greek elements



Fig. 13. The side naves running around the church



Fig. 14. The 'Duomo' of the Cathedral of Syracuse

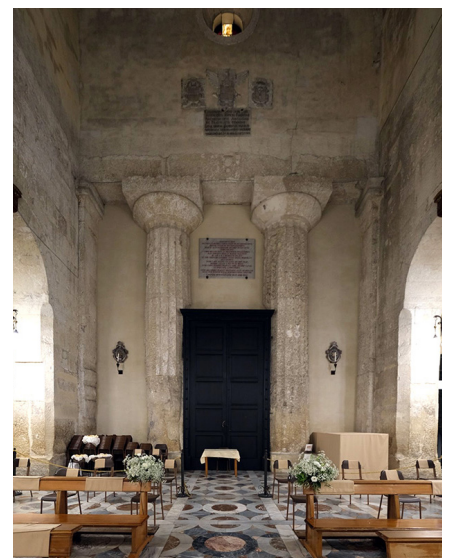


Fig. 15. The ancient Greek elements coexisting with the current function

The Malatesta temple

Rimini, Italy

From Gothic to Albertine harmony

In this particular instance, the concept of presence is conveyed through the absence of physical elements. This is accomplished by utilizing two central columns that support an arch that is not actually present. This architectural decision is believed to reference the nearby arch of Augustus of Rimini, which has a rich historical background dating back to 27 BC. The construction of the Malatesta church took place in the mid-15th century under the direction of Sigismondo Pandolfo Malatesta, the ruler of Rimini, Fano, and Cesena at that time. His intention was to create a grand chapel to honor his family. To achieve this goal, the existing structure of the 13th-century Church of San Francesco, which featured a Gothic design with a single nave and side chapels organized by ribbed vaults, was repurposed. Throughout this process, the old church gradually transformed into a temple-mausoleum that showcased the influence and prestige of the noble family.

Leon Battista Alberti was commissioned to take part in the project by restoring the main exterior façade of the building, the first major work of the architect whose theories have been studied up to the present day. This was a significant undertaking for Alberti, whose architectural theories continue to be influential to this day. Despite the façade being unfinished, it is still possible to appreciate the balanced and harmonious proportions of the structure. These proportions adhere to the principles of antiquity outlined by Alberti in his treatise *De re aedificatoria*. In essence, Alberti's main objectives in transforming the building were to establish order, harmony, symmetry, proportion, and unity among its various components. His aim was to ensure that any alterations, additions, or removals would only enhance the overall structure. Thus, emphasis was placed on beauty, form, and aesthetic value.

Through this intervention, Alberti introduced a new approach that subsequent architects would adopt. This approach involved preserving the structure and key elements of the original building, including its materiality, while developing a new facade that paid homage to the heritage and identity of the previous structure. In this manner, contemporary design seamlessly merged with the existing architecture, resulting in a cohesive aesthetic. Despite the facade being left incomplete, this building served as a catalyst for future architectural achievements. Furthermore, the underlying theory it represented holds great significance. That is why this work is widely regarded as a pivotal moment in the history of architecture.



Fig. 16. The main façade of the church, the pediment with subtraction draws attention



Fig. 17. Elements: Roman composition



Fig. 18. Allusion to the triumphal arch at the entrance



Fig. 19. Inscription in Malatesta's honour



Fig. 20. Vaults and arches of the pre-existing gothic building



Fig. 21. The typical central nave with gabled roof, wooden structure

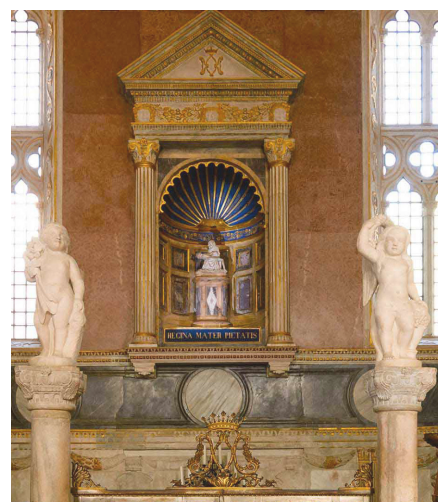


Fig. 22. Details of the interior materiality

The Palladian Basilica

Vicenza, Italy

The Serlian loggia hides Vicenza's Medieval past

The Palladian Basilica is an ensemble of various cores and they date back to different historical periods. Originally, the first building was the Palazzo della Regione, built between 1449 and 1460 from some pre-existing public buildings; the new building was the seat of the city's public magistrates and also had commercial premises on the ground floor, typical of the period. In 1481 Tommaso Formenton carried out a project in which a double loggia was added to three façades of the building, without modifying the medieval constructions on the east side. Between 1495 and 1496, Pietro Lombardo built the staircase leading to the upper loggia; it is possible to observe that the building was constantly intervened by various renowned architects of the time. After the collapse of 1496, architects such as Sebastiano Serlio and Giulio Romano were included in the discussions on the reconstruction of the southwest corner of the loggias, but it was not until 1546 that the town council agreed to carry out the proposal of Andrea Palladio and Giovanni da Pedemuro.

Andrea Palladio contributed his new addition to the pre-existing Gothic building with a new portico featuring delicate marble columns, thus ensuring that the structure would integrate harmoniously with the openings and aisles of the existing 15th-century building; presumably after this intervention he would become an established architect and artist.

Palladio himself, with a touch of rhetorical emphasis, describes the Palazzo della Ragione as a "basilica" surrounded by newly built stone loggias, paying homage to the ancient Roman structures where political matters were deliberated and commercial activities were conducted. It was not only the centre of political activities due to the magistrate, but also commercial, and for a period it housed the ancient theatre between 1561 and 1562, a temporary stage space made of wood. It would be the predecessor of the Olympic Theatre of Vicenza, whose project would be carried out 20 years later by his son Silla, from the beginning of its construction in 1580 until its inauguration in 1585. The Theatre was built on the site of a 13th century fortified building, which had already undergone several interventions over time and before its abandonment had functioned as a prison; it is another case of reuse.

In the years following the completion of its construction, the basilica underwent further additions or modifications carried out by various professionals., and after the bombings of the Second World War the wooden hull that covered the hall was destroyed, thus executing a reconstruction of the same in concrete, since the scientific-technological resources were greater, and the technique and materials could reflect it.



Fig. 23. Andrea Palladio's new portico featuring delicate marble columns



Fig. 24. The subsequent marble façade



Fig. 25. Double columns, a resource also adopted by the Mannerist architects



Fig. 26. Finishing of the building with the classical architectural elements

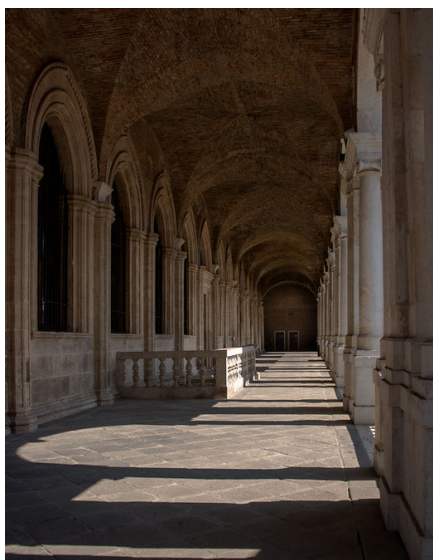


Fig. 27. the new marble volume by Palladio, the Serlian loggia as a result and the barrel vaults from the medieval period



Fig. 28. View of the building from the alleyways



Fig. 29. Orders, capitals, entablatures, semicircular arches and decorative figures; all materialised in marble

To return to the current discussion, in 'L'architettura come opera aperta. Il tema dell'uso nel progetto di conservazione' Annunziata Maria Oteri⁹ makes explicit that the reuse project should be nothing other than a methodologically grounded relationship between object (the building) and subject (the users), without altering the object. Moreover, the function belongs to the object; the use, on the other hand, belongs to the sphere of those who use the object. Therefore, reuse means changing behaviors, not objects. For that reason, the main basis of this execution is based on modifying functions and finding alternatives for the better exploitation of an asset, to achieve this it is not necessary to eradicate the testimonial value of the work or produce radical modifications in its appearance, but to provide new proposals and, through restoration, to maintain the essence, identity and original architectural language of the intervened building; *"it is, like everything that belongs to the field of restoration, an act that acts on the past but aims at the future"* according to Oteri. During this process, there are interaction phenomena between architecture, users, and designers. There is a wide range of outcomes behind the discipline, starting from disuse: buildings in a state of abandonment, whether archaeological ruins or buildings that have lost their original function. In any case, the design choices of the project must be compatible with the requirements of architectural conservation.

When architect Nino Sulfaro¹⁰ speaks of *l'architettura come opera aperta* he refers to a cognitive-interpretative model, in which architecture is organized as a text, which he and his contemporaries read from the present point of view, but which is still open to present and future modifications. It consists of the idea of architectural mutations, which respond to the circumstances of diverse contexts and adapt to their needs, but always emphasizing maximum historical knowledge. However, *l'opera aperta* should not be predisposed to too many subjectivities, as they can consequently produce abuse, which ends up making erroneous modifications. In his doctoral thesis, Sulfaro mentions John Ruskin, since the critic considered the traces of the past as something integral to work, then if we consider architecture as an *opera aperta*, it could expand infinitely in the successive interpretations that occur over time, producing countless traces in the architectural heritage, all linked to the interpretations and modifications of the recipients depending on each historical period.

A veritable field of study has emerged, focusing on concepts such as adaptive reuse, remodeling and modernization. This discipline is bolstered by a body of literature that showcases numerous projects that revitalize existing structures. However, it also generates reflection on the inevitable trade-offs between tangible and intangible value that often accompany such efforts. As defined in 2004 by Graeme Brooker and Sally Stone¹¹, who develop renovations and interventions in preexisting buildings, in terms of adaptive reuse *"the function is the most obvious change, but other alterations may be made to the building itself such as the circulation route, the orientation, the relationships between spaces; additions may be built and other areas may be demolished."*

According to Sulfaro¹², *"the difference between "recuperation" and "conservation-restoration" intervention is radical: the former indicates intervention on pre-existing structures to bring them out of a condition of abandonment or under-utilization in order to reactivate an economic resource; an intervention aimed at "conservation" is, on the other hand, inextricably linked to cultural issues. Conservation is, on the other hand, inextricably linked to essentially cultural issues, to which all other aspects must be subordinated. to which all other considerations (social, economic, etc.) must be subordinated. Reuse, as an act of changing the use of an architecture, is theoretically neutral with respect to the two*

9,10,12. Sulfaro, N. (2018). *L'architettura come opera aperta. Il tema dell'uso nel progetto di conservazione*. Università degli Studi Mediterranea. Reggio Calabria, Italia: ArchistoR Extra.

11. G. Brooker, S. Stone. (2007). *Form & Structure: The organisation of the interior space*. Uk/Switzerland 2007: AVA Publishing.

terms. neutral with respect to the two terms. The term, although widely used to indicate any intervention aimed at a variation of use, does not reveal, per se, an unequivocal project intention, nor does it allow us to glimpse what real link it has with the action of protection: it will be the modalities in which the intervention is applied that will make the difference."

Another relevant concept today is timid restoration. In the book "*Restauro timido*" published in 2007 by Marco Ermentini¹³, the author states that restorers have adapted to the madness of the contemporary world, thus giving rise to the need for recreation. However, timid restoration is carried out by professionals who are protective of life, attentive, sensitive and overly cautious; contrary to them are the brave ones who change, modify and alter historic heritage buildings. The timid understand the limits and provide understanding to others, they possess wisdom, which is reflected when restoring a building by knowing how to read history wisely, knowing how to listen. The basis of this ideology is to intervene with little, contrary to traditional restoration methods and those of contemporary architecture, where resources are squandered to satisfy the whims of certain social contexts. "*The great richness of timid restoration is its absence*", in which interventions are classified as useless if they are not necessary and are not made into a spectacle. It also addresses aspects of the discipline - and of traditional architecture - that are usually neglected.

Ermentini explains that the rules established more than a hundred years ago no longer match the present time, so the task of his contemporaries is to abandon restoration for timid conservation, quoting Amedeo Bellini¹⁴, "*to regulate transformations in a cultured way maximising permanence*" with the aim of passing on cultural heritage to future generations. It is not that the building cannot be altered, but that interventions should only be carried out if they are unavoidable due to the degradation of the building; the works must be enhanced through these interventions, not eradicated from their pre-existing richness; the new languages should dialogue with the old ones, thus recognising the historicity of the object. Bellini also states¹⁵ "*we become aware of things when they disappear or are ruined. Then after so many years Cronos eats his children (the materials)*", the author promotes the scheduled and periodic maintenance of monuments, which is already an obligation introduced by the law on public works, in order to guarantee the permanence of the materials, especially considering that technological advances know how to provide various ways of doing so. The tools of the contemporary world can help professionals in this field and the society that inhabits these sites of interest to conserve the testimonies of the past.

It is interesting to observe how these two disciplines, conservation and architecture, have managed to amalgamate in such a way that the adaptive reuse achieved its emancipation, taking the theories of the other two and becoming an independent field. In what follows, multiple case studies are identified and analysed, starting with the work of Carlo Scarpa in Castelveccchio, and ending with some of the freshest projects, it is important to recognise the variation in choices based on the diversity of contexts. Scarpa was intervening after centuries of destruction, his choices - and those of his colleagues - had to coincide with events, the aim was the recovery of monuments, but above all identity, because after the two world wars the devastation was so great that it seemed that the cities had lost their essence; it was time to recover it. If the purpose was to return to the origin, it was essential to demonstrate a high level of historical knowledge and, above all, respect. Contemporary works have other objectives, today architects represent their class, and that means executing projects that have a positive impact on society. There are gradients in reuse, from greater to lesser respect for the pre-existence, and from the differences and similarities between the next interventions these nuances are evident.

13. Ermentini, M. (2007). *Restauro timido: architettura affetto gioco*. Florence, Italy: Nardini Editori.




14,15. A. Bellini. (1990). *Architettura, uso e restauro*, in Pirazzoli 1990, pp. 17-42.

Legenda

The typographies in different tonalities serve to symbolize various types of events, and the choice to represent them in different colors is based on their respective influences on the development of restoration and reuse. The **black** text is used to document the historical and political events associated with treaties, charters, conferences, and international regulations that played a crucial role in establishing a legal framework for the discipline. Furthermore, the bibliography also contributed to these charters, as previous critics and theorists in the 20th century not only borrowed concepts from their predecessors but also added their own unique contributions.

On the other hand, the **orange** text serves as a visual contrast to highlight the major social, political and military conflicts, as the Revolutions and Wars. which destructive events such as fires, riots, and violence often resulted in the destruction of historic buildings. Particularly during times of war in Europe, such as World War I and World War II, entire cities were reduced to rubble, necessitating the reconstruction of entire communities. This had a devastating impact on both cultural heritage and society as a whole.

Lastly, the color **blue** is used in relation to architectural and construction works, as they exemplify the different approaches that can be taken when intervening in existing structures. These interventions can range from pure conservation to the juxtaposition of old and new elements, or even complete reintegration. Such variations in approach not only enrich the analysis but also contribute to the creation of a new architectural language.

-  Treaties, Charters, Conferences, International Regulations and Bibliography
-  Revolutions and Wars
-  Architecture, Construction and Development

Between Crisis, Revolutions and Development

Pope Pius II, *Cum aliam nostram*

1492

Pope Pius II issues the papal bull prohibiting the destruction or removal of the ancient ruins

Letter from Raffaello Sanzio to Pope Leone X

1519

For the safeguard and preservation of the remnants of Ancient Rome

Rise of the First Industrial Revolution

1750

French Revolution

1789

Declaration of the Rights of Man and of the Citizen

Rise of the Second Industrial Revolution

1870

M A S S I V E
DESTRUCTION

WW1

Foundation of the *Congrès internationaux d'architecture moderne* (CIAM)

1928

Promotion of Functional Architecture and Urban Planning

The Athens Charter

1931

The first achievement of International Cooperation in Heritage Conservation

Carta Italiana del Restauro

1932

Consiglio Superiore Per Le Antichità e Belle Arti. Norme per il restauro dei monumenti.

“Lo que llamamos recuerdos
no son más que rutas
que la mente sigue como
las líneas del universo.”

Julio Cortázar, ‘Rayuela’, 1963

1849

John Ruskin

‘The Seven Lamps of Architecture’

1866

Viollet-le-Duc

‘Restauration’

1899

Alois Riegl

‘Die Stimmung als Inhalt der modernen Kunst’

CIAM Congress in Athens

1933

On the Functional City

M A S S I V E
D E S T R U C T I O N

WW2

The Hague Convention - UNESCO

1954

For the Protection of Cultural Property in the Event of Armed Conflict

11th and last edition of the CIAM

1958

The Venice Charter

1964

For the Conservation and Restoration of Monuments and Sites

European Convention in London

1969

For the Protection of the Archaeological Heritage

UNESCO Convention

1972

Concerning the Protection of the World Cultural and Natural Heritage

Carta del Restauro

For norms in the Restoration of the Pictorial, Sculptural, Architectural and Urban Heritage

UN Conference on Human Environment in Stockholm

1st International Congress of TICCIH

1973

The International Committee for the Conservation of Industrial Heritage

Amsterdam Declaration

1975

Conclusion of the European Year of Architectural Heritage

International Conference "Old into New" and "Old and New Architecture"

1977

La Carta della conservazione e del restauro degli oggetti d'arte e di cultura

1987

To renew, integrate and substantially replace the 1972 "Carta Italiana del Restauro"

Emergence of the concept of Sustainable Development

Past and Present are not supposed to be Antithetical

1957 Castelvecchio Museum - Carlo Scarpa
The precursor of the discipline

1959 Emergence of the concept of Industrial Archeology

Concept of Cultural Heritage
World Heritage Convention

1984 Castello di Rivoli - Andrea Bruno
“è meglio l’uso improprio che l’abbandono”

1986 Ironbridge
Ironbridge becomes the first UNESCO’s industrial site

Earth Summit in Rio de Janeiro	1992
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Conference on Environment and Development (UNCED)	
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The Nara Document on Authenticity	1994
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To evaluate the value and authenticity of cultural property more objectively	
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Kyoto Protocol	1997
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The United Nations Framework Convention on Climate Change	
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Convention of Faro	2005
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On the Value of Cultural Heritage for Society	
---	--

Castello di Saliceto - Armellino & Poggio	
---	--

Neues Museum - David Chipperfield	
---	--

United Nations Conference Rio de Janeiro	2012
--	------

On the Sustainable Development	
--------------------------------	--

Paris Agreement	2015
-----------------	------

UN Climate Change Conference	
------------------------------	--

XVI International Congress of TICCIH in Lille	2016
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Industrial Heritage in the Twenty-First Century, New Challenges	
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1999 Fondazione Prada - OMA

2000 Concept of Landscape

Council of Europe, European Landscape Convention



Opening of the Tate Modern London - Herzog & de Meuron

The new gallery was built at the former Bankside Power Station, *"that their proposal retained much of the original character of the building was a key factor in this decision"*

2003 Concept of Intangible Cultural Heritage - UNESCO

Convention of the Safeguarding of the Intangible Cultural Heritage in Hangzhou, China



Kunsthhaus de Graz - Peter Cook, Colin Fournier

Santa Caterina Market - Enric Miralles, Benedetta Tagliabue

2008 CaixaForum - Herzog & de Meuron

2009 Punta della Dogana - Tadao Ando

2010 Torre Bofilla - Vegas López & Mileto

2011 Dresden's Military History Museum - Libeskind

Museo Städel - Schneider + Schumacher

2014 Elbphilharmonie Hamburgo - Herzog & de Meuron

Castello dei Doria - LDA + SR

Antwerp Port House - Zaha Hadid Architects

Inauguration of the new Tate Modern building

2017 Wittenberg Castle - Bruno Fioretti Marquez

2019 University of Graz Library - Atelier Thomas Pucher

2022 Denmark's Refugee Museum - BIG

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02. The delicate balance between conservation and integration based on historical knowledge

Who knows, can...

<<A harmony between the old and the new must also remain in terms of stylistic sense; but in this reference to architectural tradition I would not like to be misunderstood. It does not mean that the new presents cold copies of pre-existing works, without new artistic research, without a logical adaptation to new needs: [...]”...But every city has its own artistic “atmosphere”, that is, it has a sense of proportions, of colour, of forms, which has remained a permanent element through the evolution of the various styles, and must not be ignored; it must set the tone for new works, even in the most novel and daring inspirations.>>

Gustavo Giovannoni, ‘Che cos’è il restauro? Nove studiosi a confronto’, 2005.

By analysing and discussing specific cases, we can identify more effective approaches, innovative methods, and best practices that can be applied in future restoration projects. Each of the buildings selected in the timeline shows distinct approaches, but some have successfully preserved the building’s identity and historical significance. In these cases, the interventions are subtle but distinguishable, allowing us to understand the rich history of the building and its connection to historical events and societal changes. Referring back to the previous chapter, it is important to consider restoration theories as guidelines for thinking, designing, and executing in this discipline. However, they should not be strictly followed as rigid rules. The examples presented here demonstrate interventions that skilfully combine the old and the new, respecting the essence of the building and its surroundings, as well as its current historical context. These interventions do not seek to falsify history or recreate old elements; instead, they create new elements that coexist harmoniously with the existing structure. However, knowledge of the construction techniques of the past is an essential element for working with restoration techniques today, thus creating exceptional restoration works.

In these projects, architects interpret the needs of the present and accompany that heritage into the future. These professionals have revolutionised the field, demonstrating that restoration and project work are not contradictory, but that restoration is an integral part of the project. There are several approaches to intervening in heritage buildings. The first approach is pure conservation, which focuses on preserving the artefact as it is, with all its layers of history. The second approach is to juxtapose the old and the new, treating them as separate entities. The third approach is reintegration. Finally, there are interventions that establish a dialectical relationship between the old and the new. According to Giovanni Carbonara¹²:

Restoration	Conservation	Re-use
“Direct intervention on the piece and also as its possible modification, always carried out under rigorous technical procedures. Scientific and historical-critical control.”	“A work of prevention and safeguarding, which must be implemented precisely to avoid having to intervene later with the restoration, which is still a traumatic event for the artefact.”	“A valid means of ensuring the conservation of a historic building and converting it, if possible, for social purposes, but it is not the main purpose, nor can it alone claim to solve the whole problem of restoration.”

12. Carbonara, G. (2011). *Architettura d’oggi e restauro. Un confronto antico-nuovo*. Turin, Italy: Utet.

There has been a significant change in the history and development of the discipline; we find ourselves in a context where the notion of advancement predominates, with a strong emphasis on rationality and understanding the connections between cause and effect. It is important to recognise that not everything can be preserved, as some objects wear out naturally or cannot be technically preserved. In addition, the need for change and adaptation must be considered. Therefore, the conservation approach has both technical and ethical limits, which are influenced by collective and political factors. Rather than simply restoring, the focus should be on regulating transformations in an intelligent way to ensure that they endure over time.

Amedeo Bellini, the Italian architectural historian and theorist, has drawn attention to the fact that the use of materials plays a crucial role in how we connect with architecture on a personal level. Physical engagement with an object is essential to experiencing the true essence of architecture, as it only truly exists when it is appreciated and enjoyed by individuals. In the analysed case study it is possible to observe the use of materials that seek to unify the pre-existing and the contemporary, one could assume that it alludes to these ideas; the greater the homogeneity, the greater the possibility of enjoyment on an aesthetic level. Paying attention to buildings in decay, material degradation, wounds, scars and places of crisis does not contradict modernity, but rather enables architects and restorers to enhance the value of the works, since through historical knowledge we project with a new - and prudent - language and the combination of the same with the pre-existing can enrich it considerably.

<<A restoration intervention limited to the minimum is also economical and therefore less appreciated by the market. A restoration intervention that respects the existing stratifications and does not operate with arbitrary selections based on supposed historical or aesthetic instances is more cautious and less costly.>>

Marco Ermentini, 'Restauro timido: architettura affetto gioco', 2007.

Wittenberg Castle

by Bruno Fioretti Marquez

Location: Wittenberg, Germany

Project: 2011-2015

Construction: 2012-2017

The Rise

1180

The small village is founded by Flemish colonists under the rule of the House of Ascania

Transitions

14th century

Due to its central location Wittenberg developed into an important trade centre

Political, social and urban changes

1486

Frederick III "the Wise" becomes the Elector of Saxony, role he held until 1525 and made his residence in Wittenberg. The town's boundaries were extended in several areas shortly after that

Foundation of the University of Wittenberg

1502

Some writers, including Martin Luther who was a professor of theology, were drawn into the institution

Luther's Thesis

1517

According to legend, on October 31, 1517, Luther is said to have posted his 95 theses opposing the sale of indulgences on the door of the Castle Church of All Saints. This occurrence is commonly seen as the inception of the Protestant Reformation

Start of the Seven Years War

1756

This was a global conflict that encompassed several influential nations of that era. The prominent powers engaged in this conflict comprised Great Britain, France, Spain, Austria, and Prussia, alongside their respective allies

Ending of the War

1763

The Treaty of Paris ended the Seven Years War conflict

1260

The Arrival of the Dukes

The village became the residence of the dukes of Saxe-Wittenberg

1422

Into the House of Wettin

The Ascasian rulers concluded their rule, and authority over Saxe-Wittenberg shifted to the House of Wettin, one of the most ancient German dynasties

1496

Construction of the Castle Church

1506

The castle church, known as the Schlosskirche in German, was constructed

1547

The Capitulation of Wittenberg

Negotiations and adjustments regarding the possession of the territory between John Frederick the Magnanimous and the House of Wettin

1760

Prussian Occupation

The town was occupied by the Prussians, meanwhile, the Austrians bombarded it and damaged the infrastructure.

The French took control of Wittenberg

1806

Yet Another War...

the Prussian Army attacked the town

1814

The Proclamation of the German Empire

1871

In January 1871, the German Empire was established after German states, including southern ones, united following their victory in the Franco-Prussian War. This led to the proclamation of King William I as German Emperor on January 18 at the Palace of Versailles

During the First World War the town contained a prisoner-of-war camp

1914 - 1918

WW1

Loss and Occupation

1945

Following the triumph of the Allies, Wittenberg was occupied by Soviet forces

WAR IS OVER!

1989

The fall of the Berlin wall and the end of the Communist Regime

The end, the Resurgence

2017

Finalization of the intervention on the castle

1813

Period of Refortification

Napoleon Bonaparte and his army were in charge of the refortification of the town

1815

Wittenberg became integrated into Prussia

Falling under the administration of the Province of Saxony. Wittenberg steadfastly maintained its status as a fortress of the third class.

The Castle was converted into a military building, on the drawings that date back to that period it is possible to observe that 4 meters of soil had been added on top of the vaults on the upper floor. This is due to the incendiary bombs, which had repeatedly damaged the wooden structure; this was a desperate measure to prevent the continued destruction of the pre-existing structure of the castle. the volume of earth would not allow the flames of the fire to advance into the castle premises

WW2

1939 - 1945

Unlike many other historic German cities during World War II, Wittenberg's town center was fortunate to escape destruction in the conflict. The castle church of Wittenberg, owing to its historical importance in relation to Martin Luther and significant events in the town, held a revered position within the Protestant church

1949

The town became part of East Germany

1990

The town started to be governed democratically again

2011

VOF Competition

Bruno Fioretti Marquez win the first prize to carry on the conversion and extension of Schloss Wittenberg. Start of the development of the project

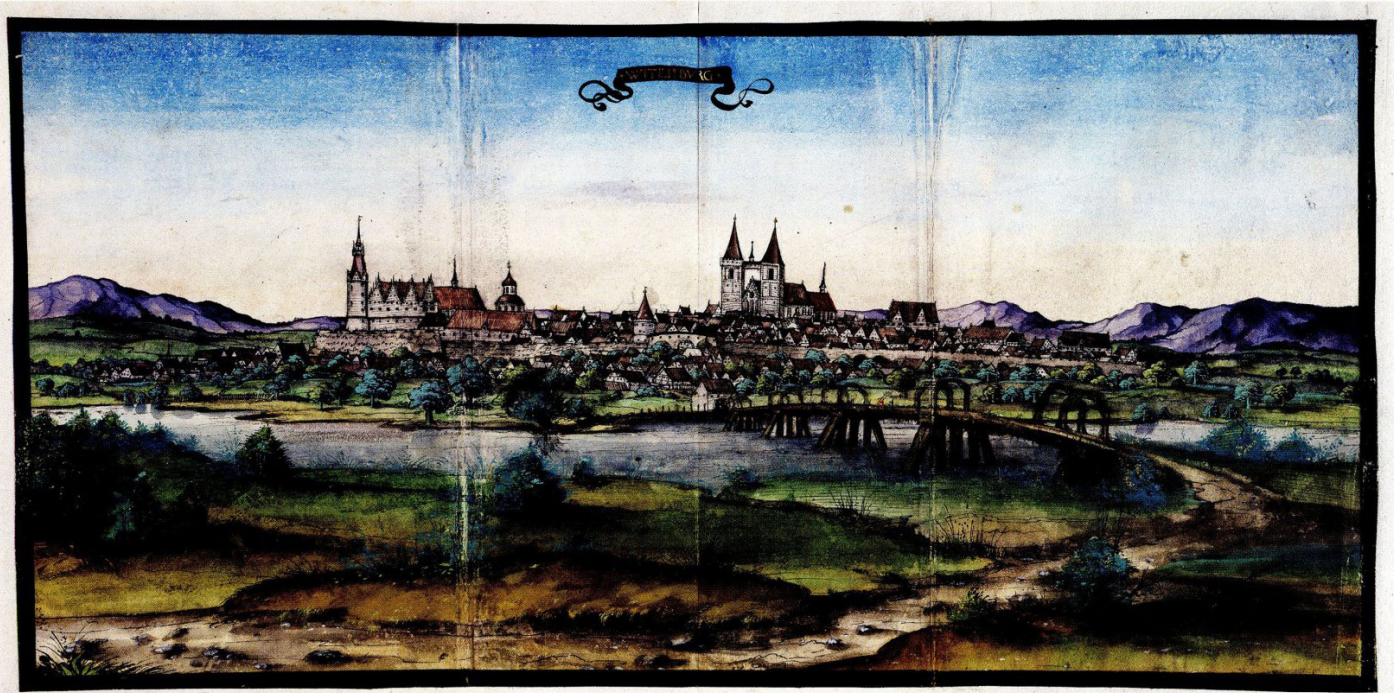


Fig. 30. Wittenberg, 1537 - During this period Martin Luther had been in Wittenberg

The beginnings

Wittenberg Castle has more than 800 years of history and has been part of the fortifications since its beginnings. Together with its church, it is of great importance as a site for Protestant religious communities thanks to Martin Luther's visit to the castle; it is a symbol of identity and memory. Some gestures of the building denote its historical context, the vertical access to the castle is formed by external stairs in the inner courtyard, which allows us to identify a typology that refers to the fortifications of the Middle Ages. The purpose of the castle was to support the church in Wittenberg. When Luther published his 95 Theses in 1517, a much larger number of visitors began to arrive, and the new building and its facilities were to receive visitors and welcome them. An internal connection was created between the castle and the church.

Later, during the Renaissance, the castle was extended to create a residence. The towers were intended for residential use and the prince had an individual access system. The current load-bearing structure dates from this period, as do the solid oak beams between the mezzanines, but the barrel vaults were not made of wood in earlier times. Due to the war, the roof structure had been damaged, so a strategy was adopted to cover the upper floor vaults with 4 metres of rough earth, thus enabling the structure to withstand incendiary bombs. During this process, the walls were also reinforced, their thickness is greater on the façade towards the current park as it was the attack side, and towards the courtyard the walls are thinner as they faced the complex's interior. When observing the openings, it can be seen that they were partially closed, since at the beginning the openings were made up of Gothic arches and for security reasons they were walled up until small openings were achieved that did not allow the passage of threats.

Furthermore, the building is characterised by its integration with the landscape, it is fundamental to the city's skyline, a reference to the time when the orientation of travellers depended on buildings that conquered the landscape and served as a point of reference and orientation. The fact that the building has a long-distance effect is the result of a calculated intention, it was to dominate as a symbolic monument.



Fig. 31. Wittenberg Castle 1611

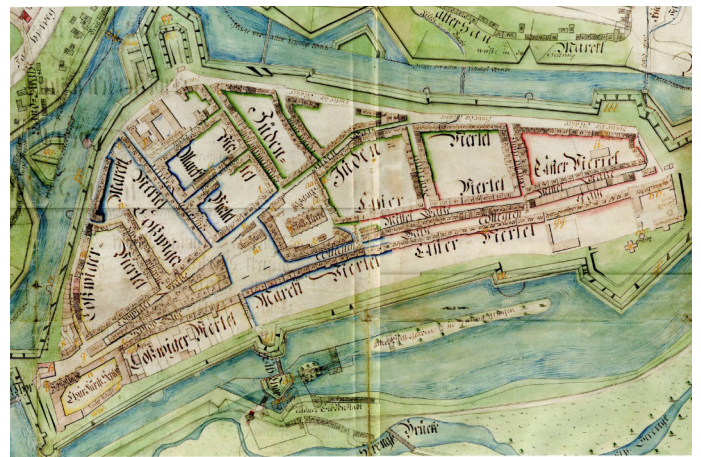


Fig. 32. Historical City Plan, 1742



Fig. 33. Wittenberg during the Seven Years War, 1760

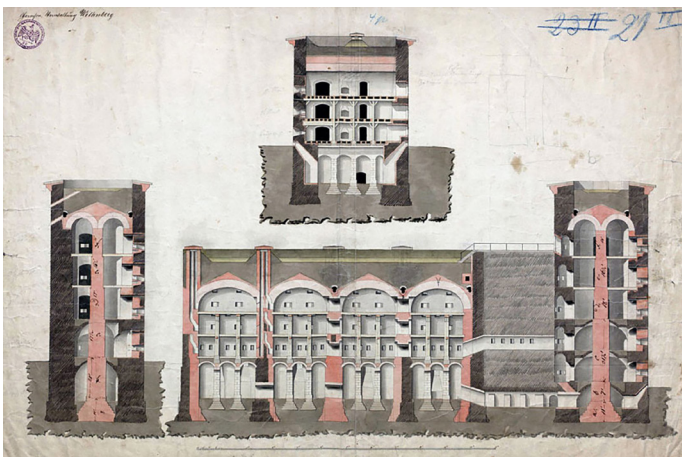


Fig. 34. Conversion into a military building, 1815

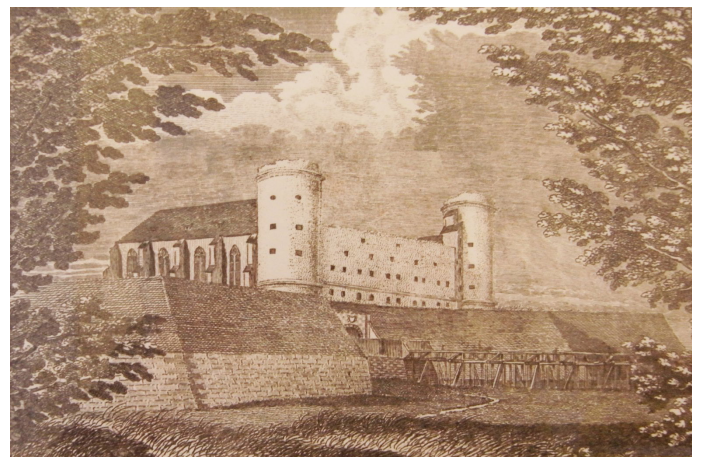


Fig. 35. The Castle as a fortress during the XIXth Century



Fig. 36. The Courtyard in 1930



Fig. 37. The Courtyard in 1885

The new functions

Ground floor: public area: visitor reception, connection to the castle church, event rooms and additional exhibition. In the south wing, the Christian art exhibition.

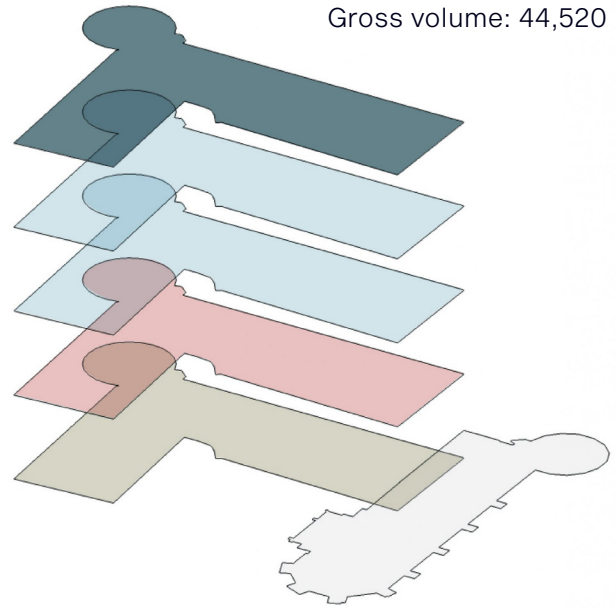
First floor: magazine associated with the research library.

First floor: research library.

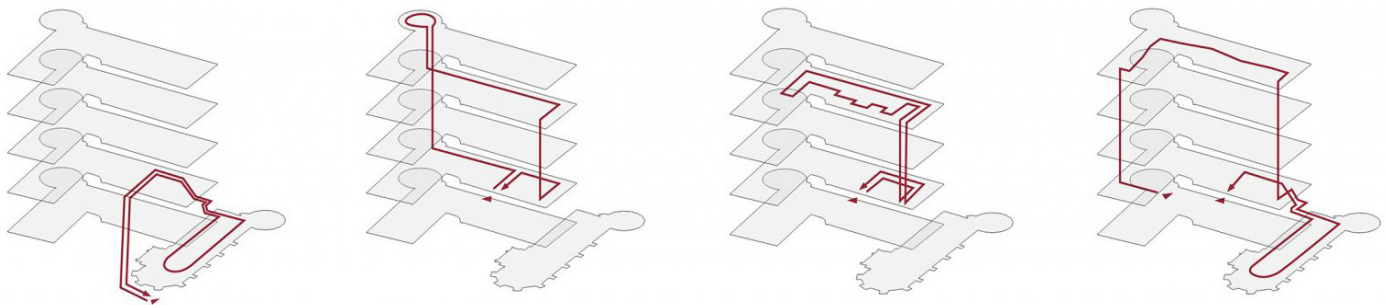
South tower: cultural-historical tour, visit to the former princely residence.

Attic: Protestant priests' seminary, the cloister.

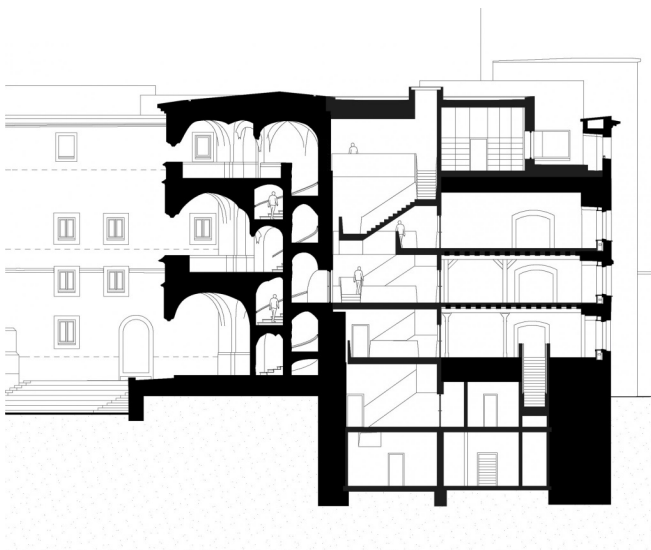
Useful area: 3524 m²
Gross area: 10,538 m²
Gross volume: 44,520 m³



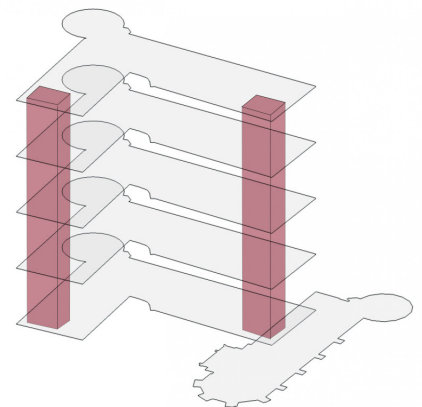
Functions per floor (BFM drawings)



Circulation diagram (BFM drawings)



Section historical and new staircase (BFM drawings)



Project's new staircases (BFM drawings)

The Vertical Circulations

In addition to the correct intervention on the elements and materials, the project's central challenge was to ensure barrier-free access to the entire complex, which historically did not have a continuous vertical connection. How is this achieved? Through new stairs and lifts, thus promoting accessibility for all visitors. Above all, this is where the new stairwell plays an important role, as it had to be designed in a space that presented several limitations, as the function must adapt to the form, inverting the paradigm of functionalism.

Considering that the principal objective was to connect pre-existing levels that were irregular in their heights, they had to design in an unexpected way and the result presents interesting particularities. The staircase, materialised in concrete and developed in situ, extends freely and becomes the protagonist of the spatiality, developed from two load-bearing concrete slabs, positioned orthogonally to each other.

The free-standing staircase construction connects the three-storey Wendelsteine with the four-storey castle. In addition, the interior walls of the core retain their traces, thus allowing the circulation to be experienced as an experience of appreciation of its history, as the reliefs and textures of the various masonries and interventions on the walls from various periods can be observed; **it is architecture as a palimpsest.**





Jorge Luis Borges thought that the past centuries, which also inhabited the houses, left them enriched with their past.

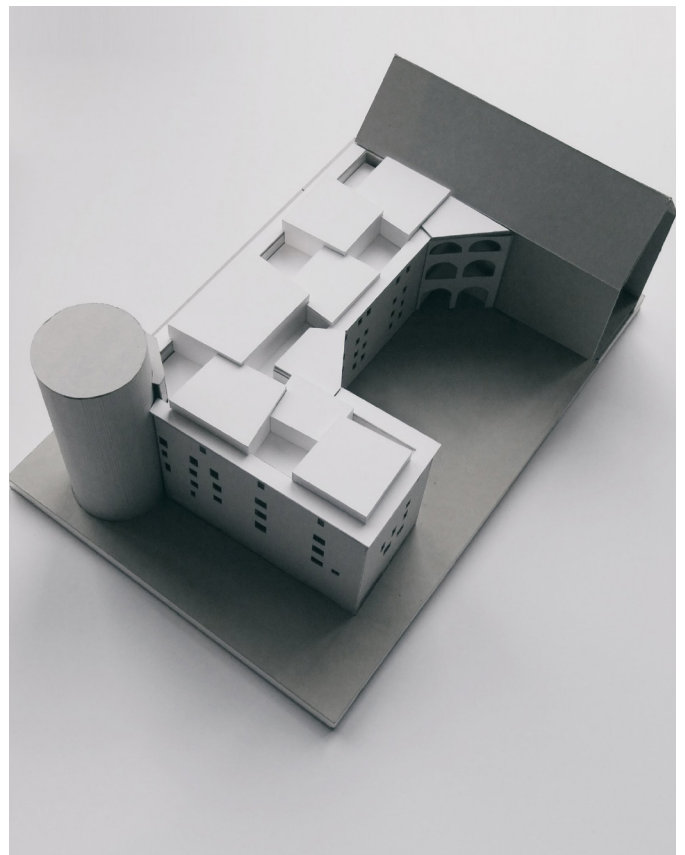
Allowing traces enhances the building...

Traces from the past

The new functions follow the principle of layering that already existed in the existing structure, the public and private areas remain as such. One of the windows, which had been bricked up to the size of a porthole during the barracks period, has been restored to its original size, allowing a panoramic view of the Elbe valley and the incoming light to enter; the point where this window is located is the highlight of the route. the intention of evidencing the passage of time through the material by preserving the texture of the original surface, in this case the resource employed by the architects was to plaster all but a little of the wall, creating a homogeneous space that nevertheless allows its scars to be seen.

The Cloister

At present the attic belongs to the seminary of cures, it is based on an alternate system of buildings and open spaces that delimit and develop from the existing structure. In the same way as the functions were adapted to the existing spaces, there was no possibility to adapt this particular function, consequently it had to be executed as an additional volume. The centrally located cloister articulates the volumes made up of monolithic hot concrete cubes, promotes external circulation and runs along the entire floor, promoting new perspectives. The courtyards take up the idea of the cloister, as in the old European universities, but they also allude to the time before the barracks era, when the attic was open to the sky, even when filled with earth; in the same way that openings are reopened, the courtyard is reopened, in a certain way the building is returning to its origin. The reinforced wall structure of the building was so strong that it allowed the addition of new concrete constructions in the attic, all of which are part of the seminary and provide the insertion of a new architectural language.



What is architecture as palimpsest?

When metaphorising their work, architects Bruno, Fioretti, and Márquez have expressed the link between the use of palimpsest and interventions on historical buildings. Since ancient times the surfaces of palimpsests have been reused and rewritten, allowing them to be reused. Nevertheless, the palimpsests had layers of text, and consequently of history. According to the architects in question, if we consider the reuse of buildings as a palimpsest, we could say that we are dealing with a document that is not in its original state, it has undergone successive alterations in different times and spaces, leaving its scars imposed. Moreover, from the transformations it has undergone, those intervening in the object can understand its value through its marks. As predecessors, they are in the position of “adding text” or “scraping and removing it”, but always trying to promote legibility and understanding to increase its value, “originality” no longer prevails, but the possibility of intervening sensitively, increasing the possibilities of identifying and understanding the traces of the past with ease.





Enhancing value through historical knowledge

“Study the past if you would define the future.”
– Confucius

In the case of historic heritage buildings, it is essential to carry out a meticulous analysis of their history and physical condition, with the aim of identifying and understanding the chronology of the layers that make up the building from its beginnings to the present day. In order to add value and exploit the identity characteristics of the building, as opposed to making mistakes during the interpretation process, it is necessary to be able to read between the lines. Buildings of this type have a long history to tell, it is possible to recognise moments of the past whose architectural value has been lost during ancient transformations. However, not all layers have the same value, there are some that should prevail over others because of their greater coherence or significance, the architects' goal is to reveal moments of hidden beauty.



The materials

The materials used were selected on the basis of the existing building and its characteristics. The aim was to produce as little damage as possible to the original surfaces, paying attention to the main characteristics of the passage of time, respecting those resources that were worthwhile, and hiding those that were not. In order to define which were worth preserving, a thorough investigation of the castle and its development was necessary in order to operate on the basis of historical knowledge. Each time the building was attacked and rebuilt, or otherwise modified, the material underwent mutations that would grant the appearance or loss of other layers of material; all of which are undeniably part of history. In this new project, coatings were avoided, all surfaces respect the materials and allow them not only to endure over time but to age gracefully and admirably. The installations and extensions were made with varnished oak wood, as well as the new windows and their interior cladding, which include a seating area, thus showing the windows themselves as an extension space; providing an experience.

The existing timber structure was reinforced, thus achieving its conservation and amalgamating the beams and columns with the new cladding and furniture of the library, creating a homogeneous spatiality between the fine lime plaster and the wood, in a sequence of rooms that are articulated through a longitudinal axis.

All the materials are characterised by their craftsmanship, there is a reduction of materials that objectively sensitises the visitor's perception of the plastic quality and spatial sequences. On the other hand, in order to be able to make these decisions correctly, it was necessary for BFM to take into account the new current standards and regulations, which demanded safety, hygiene, thermal and acoustic insulation, accessibility, and more. These demands reflect how needs evolve from contexts, thus allowing the building intervention to really have a social impact and promote change.

Staccato or legato?

Legato is a technique of musical interpretation that produces a fluid and continuous movement between notes, on the other hand, staccato is the opposite of legato. The notes do not blend into each other, each individual note sounds vigorously. Bruno, Fioretti, and Márquez use this metaphor to categorise the transformations carried out, the dialogue between the pre-existing and the new, based on homogeneity or, failing that, contrast. These techniques allow us to read the elements from their integration or separation, depending on what we are trying to emphasise. To give an example, it is possible to read the traces of old windows that were later walled up, the levels can be identified from horizontal evidence, the change of materials, all of this is executed through contrast.

The inner courtyard

The inner courtyard, as in most historical heritage buildings that have undergone modifications over the centuries, is one of the points where most architectural elements and languages from different periods can be identified. On the one hand, Gothic arches denote the building's medieval past. These arches were not walled up during the barracks period, as the courtyard was considered a safe place, so neither the thickness nor the openings in the walls were altered. Furthermore, the courtyard is identified as an external staircase core, which before the BFM project used to be the only vertical circulation core connecting different areas of the castle. It is also possible to identify smaller windows, which are later than the arches and have a language characteristic of fortresses. In general, the architects chose to make entrances that continued the language and abstract geometry of the new entrances.



The Furnishings

In order not to eliminate or damage the most interesting elements of the spaces, all the furniture in the new library has a limited height, otherwise it would have clouded the text of the environment. If the objects had a significant height, they would have altered the spatiality, blocking the view outside the castle and impoverishing the sensations of the users inside the premises. The same varnished oak wood can be seen in the furniture, in the wall and floor coverings, and also in the woodwork, creating a single language in which the different components are amalgamated; this is *legato*.



The Visual Integration of the Elements

New openings make it possible to appreciate different areas and elements of the castle, thus promoting the reading of them, and unifying the spaces through visual connections. In this way, various languages can be integrated, including through the contrast between the diversity of the parts that make up the castle and highlight the social and historical changes throughout the construction.





Light as a Scenographic Resource: The Winter Chapel

Reminiscent of historic skylights, the winter chapel has a geometrically complex skylight that allows light to enter as a *mise-en-scène*. In this case, natural lighting becomes an artistic resource that creates and transforms the space through its presence and variation, it is responsible for creating sensations for the users of the building. The creation of atmosphere through natural lighting in ecclesiastical spaces has been used since the Middle Ages, in this case through synthetic architecture.

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03. The (dis)connection between the past and the present through contrast

*The past is no longer what it used to
be...*

<<The study of a restoration must represent the complete abandonment of the personality of an architect, so that no private interest can prevail over the integrity of a work of art in its execution. None of our monuments must be touched without complete respect for Art and History; otherwise, they may well bide their time. They have been used to it for centuries.>>

Gustavo Giovannoni, 'Che cos'è il restauro? Nove studiosi a confronto', 2005.

In recent years, architects such as Rem Koolhaas, Diller Scofidio + Renfro, Herzog & de Meuron, Jean Nouvel, have criticised the traditional approach in conferences and interviews, all agreeing on certain points such as: excessive conservatism, the freezing of heritage in completely different contexts, the loss of authenticity. Let's agree that these architectural studios represent innovation and creativity, if we look at their projects, they have designed things out of the conventional. They believe that restoration needs to be reinvented, adapting architectural heritage to contemporary needs, innovating with the designs and materials used in construction, reinterpreting heritage with contemporary perspectives. They also emphasise the promotion of respect for the environment and accessibility, as well as the integration of the building with the current built environment, a theme that is currently fundamental and we can note in Giovannoni's position that he considered it essential as well, stressing the importance of dialogue between contemporary interventions and their built context.

For these architects, deviating from traditional schemes will allow them to freely present their ideas and design without limits. Their aim is to introduce new principles that meet the needs of 21st century individuals. Regardless of our personal opinions as architects or designers, it would be wrong to assume that there is only one correct approach. However, it should be noted that these projects generally do not demonstrate respect for the pre-existing building, nor a great deal of historical knowledge. When comparing the case studies in Chapter II with those in this chapter, it becomes clear that altering the approach significantly affects the appreciation of the building. A book that was essential to understand the vision of this group of architects was 'Preservation Is Overtaking Us' by Rem Koolhaas, winner of the Pritzker Architecture Prize in 2000, which presents a strong critique of traditional architectural heritage restoration approaches. Koolhaas is a renowned Dutch architect, theorist and writer. He is known for his innovative approach and influence in the field of contemporary architecture, but also for his critical thinking and architectural theories. He is also the founder of the architectural firm Office for Metropolitan Architecture (OMA) and has worked on numerous projects worldwide, one of which is the Fondazione Prada, an example of an intervention on a former industrial site that now serves as a museum.

In his book, Koolhaas offers a critique of the traditional approach to restoration, suggesting that it tends to 'preserve' heritage rather than allowing architecture to transform and meet the changing needs of society. He suggests that excessive restoration efforts and an over-focus on historical accuracy can hinder architectural vigour and impede creativity in modern design. The author challenges the conventional approach to preservation and argues for an architecture that embraces change and can effectively address modern challenges and demands. In his work, he takes a stand against an overly conservative mentality that hinders contemporary adaptations and interventions, as well as against rigid heritage preservation that is not adapted to today's needs. He criticises the exploitation of heritage restoration for the purposes of gentrification and tourism promotion, and also highlights the limitations imposed by a focus on authenticity, which restricts experimentation and innovation. However, in the lecture he gave at Columbia University on 26 June 2013 in New York City for the Graduate School of Architecture, Planning, and Preservation (GSAPP), the architect

expressed his displeasure with the current architecture scene, quoting his words: *"We are becoming people who propose things in situations that are becoming undignified. It is ambiguous, we have unlimited amount of attention, but less and less people take it seriously. It is a contradiction; the life blood of the discipline is washing away"*. To which he adds a sentence that had been published in Nicolai Ouroussoff's article "Let the 'Starchitects' Work All the Angles" in the New York Times on 16 December 2007: *"It is hard to pinpoint when the "starchitect" became an object of ridicule. The term is a favorite of churlish commentators, who use it to mock architects whose increasingly flamboyant buildings, in their minds, are more about fashion and money than function"*. Most architects who are willing to question the current direction of the field consider that the above mentioned architects execute projects simply to make extravagant things, without considering users, use and function. In addition, the term "starchitect" is a blend employed to characterize architects who have become architectural icons, achieving both fame within the field and, in some cases, recognition among the broader public due to their celebrity and critical acclaim. Their fame is typically linked to pioneering and innovative approaches. A noteworthy aspect is that starchitects' designs are nearly always considered "iconic" and prominently stand out in their surroundings. Because their status relies on their current media presence, a decrease in media recognition results in the loss of the "starchitect" designation, leading to the identification of former "starchitects."

The choice of the CaixaForum cultural centre designed by the Swiss studio of Jacques Herzog and Pierre de Meuron is linked to the break in language, as a pre-existing object has been reused but its intervention denotes contemporary architecture and not so much the preservation of the identity of the industrial building and the traces of the past. The aim is to separate the architecture from the intervention, in the case of CaixaForum there is an attractive aesthetic and spatial quality at the architectural level, but by focusing on the intervention carried out on the building, the degree of preservation is very low. It would be wrong to judge a restoration on the basis of its aesthetic or design attributes because that would mean ignoring the identity, purpose, memory and history of the building. After analysing the modifications and additions that the building has undergone, it would be possible to evaluate through the parameters established by the grid, which provide an objective analysis of the fundamental principles of intervention on historic heritage today.

CaixaForum by Herzog & de Meuron

Location: Madrid, Spain

Project: 2001-2003

Construction: 2003-2008

The Bureaucracy

1900

The construction licence for the plant was obtained on 28 November, promoted by the businessman José Batlle. The aim was to supply energy to the southern sector of Madrid's old town by burning coal

Transfer of Ownership

1910

Ownership of the factory is transferred to Unión Eléctrica Madrileña, a Spanish electricity generation and distribution company

More Power Infrastructure

1921

Next to the power station, another power station was built to supply energy to the trams in the city of Madrid

Commencement of the Spanish Civil War

1936

Initiation of Franco's Dictatorship

1939

The Civil War ends, or, failing that, the Franco Dictatorship orchestrated by the military man Francisco Franco Bahamonde begins.

The Fall of the Franco Dictatorship

1975

Finally, Democracy

1978

Start of the democratic period in Spain

The General Plan of Madrid

1997

It granted it partial protection, only the façades are now under historical protection, not the building as a whole

The New CaixaForum

1978

The abandoned power station was acquired by the "la Caixa" Foundation to house the new CaixaForum cultural headquarters. The new project was commissioned to the architects Jacques Herzog and Pierre de Meuron

The end, the Revival

2008

Completion of the New Building, it was inaugurated by the then King Juan Carlos and Queen Sofia and the President of "la Caixa", Isidro Fainé



1899

The Construction

The architect Jesús Carrasco-Muñoz y Encina designed the Mediodía Power Station together with the engineer José María Hernández. The building was to be located on the site of the former "La Estrella" spark plug factory

1916

Modifications to the Building

One of the building's naves was modified by the architect Modesto López Otero with the aim of reinforcing the structure to house a new battery of accumulators

Termination of the Spanish Civil War

1940

The Abandonment

The factory was dismantled and abandoned, its windows were boarded up and the entrance to the site was fenced off

1989

The Attempts to Avoid Degradation

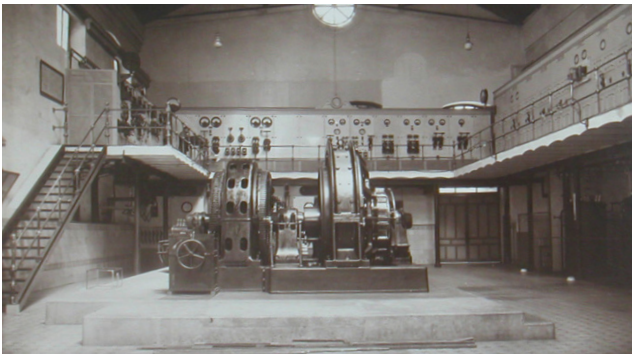
1996

Sebastián Mateu Bausells and Gilbert Barbany Fontdevila proposed rehabilitation projects for the building that were never carried out

2003

Hands-On

2003 the design of the building is concluded and intervention on the degraded structure begins



The beginnings

The CaixaForum cultural centre is located in the former Mediodía Power Station, one of the few examples of industrial architecture located in the historic centre of the city of Madrid. The building dates back to the beginning of the 20th century and its construction began in 1900, the project was designed by the architect Jesús Carrasco y Encina and the engineer José María Hernández. The building was not appreciated by the inhabitants of the Paseo del Prado area, as it was an industrial building in a central, upscale neighbourhood. The purpose of the coal-fired power station was to supply electricity to the southern part of Madrid's old town. After 40 years of operation the plant was dismantled and abandoned, leaving degraded industrial archaeology in the centre of the Spanish capital. The coal and water tanks are still on the site and are responsible for supplying the electricity. The building comprises two parallel volumes, characteristic of the typology used in industrial power stations between the 19th and early 20th centuries. It is considered a building of historical protection, which is why the original façades and materials were maintained during the intervention. It is a relevant project as industrial structures are generally considered obsolete today and are not given the same relevance as buildings with greater longevity and history. Still, they all have historical protection, whether to a greater or lesser extent. There are gradients of protection, which presents coherence considering the diversity in the meaning for/with the identity of cities and inhabitants that each particular building possesses, it would not be valid to believe that all historic buildings are the same. The architectural plan for CaixaForum-Madrid is part of the Recoletos-Prado Axis Redevelopment Project, an urban initiative of great importance for Madrid. Álvaro Siza and Juan Miguel Hernández de León direct this project.

Traces of the past

During its operation, the building has always had the same function, and having been in use for only 40 years prior to its abandonment, it has not undergone any alterations. Therefore, in what has been preserved of the pre-existences there are no traces of interventions, nor is there the presence of changes in materialities or textures, nor does it present architectural elements or languages of different historical moments.

When the design of the building was begun in 2001, the studio of architects Pierre de Meuron and Jacques Herzog carried out a photographic survey that allows us to appreciate the state of degradation of the building. In those images it can be seen that the windows on all the façades had been boarded up, which is still the case today. After the restoration work to recover the original materials of the façades, work was also carried out on this gesture, so that the traces of the building's industrial past and the layout of its openings can be easily identified; this is done on the basis of contrast.



The historical structure bears a resemblance to a convalescent patient

Thanks to the contributions of the critic John Ruskin in his book “The Seven Lamps of Architecture” published in 1819, the metaphor of the historic building as a sick patient is used in the field of restoration. Each individual presents a particular illness and is assigned an appropriate treatment, in the same way it applies to monuments, they must be diagnosed and evaluated, in terms of their structural, material, stylistic, historical and other particularities. Based on the diagnosis, a personalised treatment is provided and preventive measures are carried out to preserve the durability of the building, i.e. its life. Like doctors, restorers must operate ethically and respectfully.

Numerous problems are found in industrial buildings, which are usually linked to their advanced state of ruin due to the long period of abandonment. In the case of CaixaForum, during the construction process the building was gutted, leaving only the historic walls. The pre-existing structure was removed, allowing the insertion of new elements such as a metal structure, an iron shell on the roof and a new vertical core: the conical staircase, one of the main features of this cultural centre. In addition, excavations were carried out to allow for the development below ground level to create the two basements that make up the performance and service area; during this process, numerous shoring and temporary structures were observed to support the building envelope while everything else was torn apart.



The new functions

The new cultural centre houses spaces for cultural activities. Given the free floor plan that has been created by generating a floating volume, the building is divided into two worlds, the terrestrial and the underground.

Underground -2: access for works of art, auditoriums/theatres, services and car park

Underground -1: multi-purpose rooms, conservation workshop, storage, auditoriums/theatres and services

Underground -2: access for works of art, auditoriums/theatres, services and car park

Underground -1: multi-purpose rooms, conservation workshop, storage, auditoriums/theatres and services

Ground level: public square and access

First level: main foyer

Second level: exhibition hall

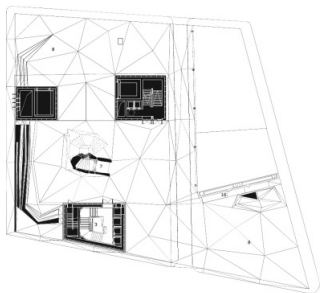
Third level: exhibition hall and media library

Fourth level: administration offices and restaurant

Area of the pre-existing building: 2,000 m²

Area after the intervention: 2,500 m²

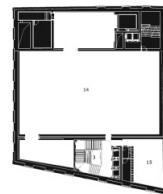
Total area distributed among all floors: 8.000 m²



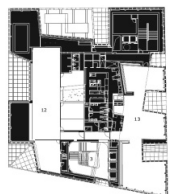
Ground Floor



1st Floor

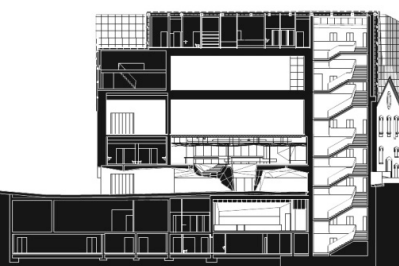
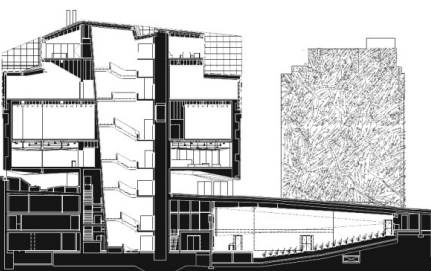


2nd Floor

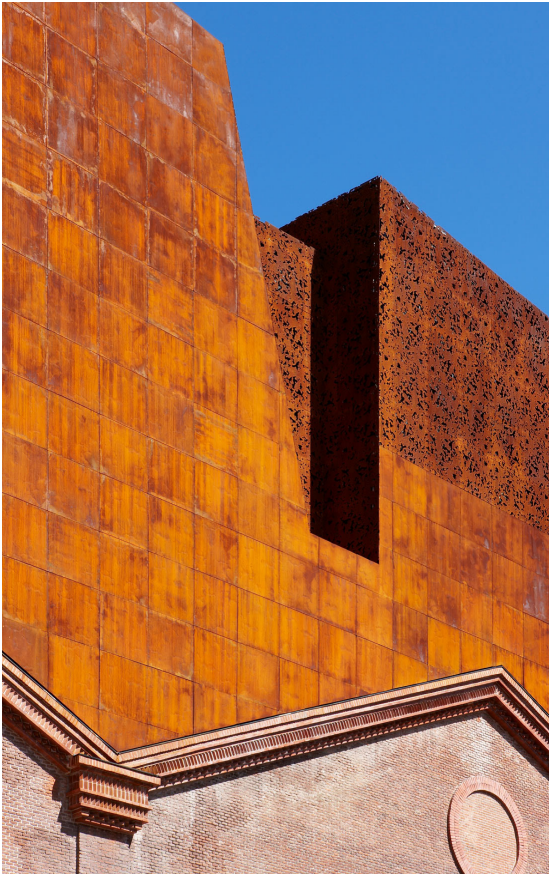


4th Floor

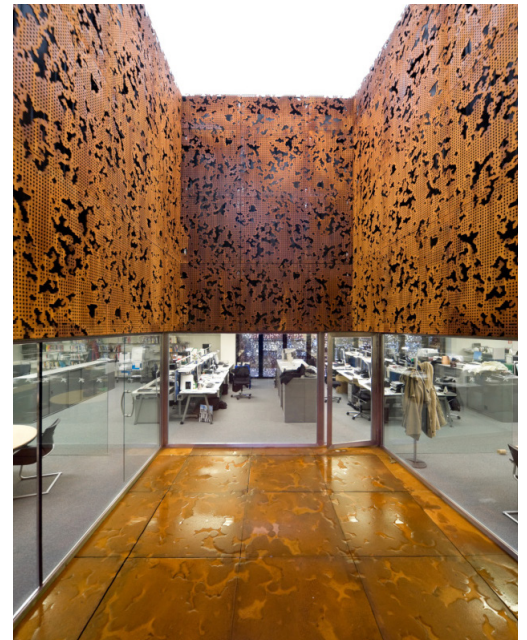
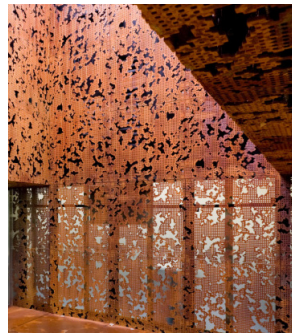
GF, FF, SF, FT (Herzog & de Meuron)



Section S1 and S2 (Herzog & de Meuron)



III.



The materials... which are also the contrasts

As only the old façade of the power plant remained, the only material that prevailed was brick. In order to homogenise the materials, the architects opted for a mesh made of metal panels in the colour of the old red bricks, so that the metal appears to be corroded. This material is known internationally as COR-TEN steel and its use in architectural works has increased since the mid-20th century, making it a design choice on several continents.

To quote Herzog & de Meuron in their building specification, *"the superimposed structure has incisions echoing the roofscape of the neighbouring buildings"* and does so also through the incorporation of a mesh of a similar colour to the pre-existing ones. This new addition of a massive character produces a completely opposite effect to the pre-existences; it produces a visual shock in the viewer. In addition, the visual effect produced by the free ground floor is also linked to the choice of materials, not only due to the absence of matter, but also to the use of dark colours in the paving and the windows. Between the shadow produced by the massive upper volume and the choice of dark colours, the contrast between the brick and the void creates even greater depth.

The strategies of contemporaneity

Only the brick façade was reused, as it was the protected part of the building. At its base there was a granite plinth that was removed in order to turn the building into a floating volume that presents an unexpected void; this is thanks to the fact that the central support is not visible. This actually allows free circulation under the brick skin, protecting the users and constituting the entrance to the building, all from a semi-covered plaza that crosses the Paseo del Prado and resolves the difficulties of the narrow streets of the site. It was an urbanistic and sculptural gesture.

When the project was started in 2001, the openings were bricked up, as the structure had been abandoned and closed to prevent access to the site. The final project includes new openings, which do not match the pre-existing ones, they are “alien in size and position to the late 19th century compositional logic of the industrial building” (Maglica, 2009). Instead of taking some of the elements already given by the pre-existences, the architects chose to add another contrast. The addition of these glass windows completely distorted the order of the only remaining parts of the previous project.

The final result after the interventions has a particular morphology and silhouette, which is due to the architects' intention to recreate the roofscape of the surrounding buildings. The intention is good, but is it well achieved? It is not understandable as a user of the building, if one did not read the architects' intentions it would not be possible to identify it... like most of the building's intentions, indeed, impossible to identify.

According to the architects, in order to link the botanical garden on the Paseo del Prado and the building, a vertical garden was created together with the renowned botanist Patrick Blanc, who has also contributed to projects such as the Quai Branly Museum in Paris and One Central Park in Sydney together with the architect Jean Nouvel.



IV.



V.

End of the Analysis: The Grid

Wittenberg Castle

Preservation of the pre-existing building structure	+
Integration of the building with the existing environment	+
Safeguarding the authenticity of the work while respecting the existing architectural language	+
Enhancement of the site and its built environment	+
Use of sustainable materials and technologies	+
Restoration of balances lost by previous intervention	+
Adaptation to current regulations and needs	+
Seeking dialogue between old and new	+
Seeking to contrast	+

CaixaForum Madrid

Preservation of the pre-existing building structure	-
Integration of the building with the existing environment	-
Safeguarding the authenticity of the work while respecting the existing architectural language	-
Enhancement of the site and its built environment	+
Use of sustainable materials and technologies	-
Restoration of balances lost by previous intervention	-
Adaptation to current regulations and needs	+
Seeking dialogue between old and new	-
Seeking to contrast	+

LOW
level of respect shown

LOW

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Final Conclusions

As mentioned above, there are several gradients within the protection of historical heritage, and among these are a vast number of case studies on buildings that present different identities, memories, materials, functions, and more. However, there are some aspects that they all present in common, principally their function as a testimony of history, since they are the manifestation of certain historical, political, social, economic, and scientific-technological contexts; they preserve and recall significant events from cultural influences that, in some cases, are repeated despite diversity in geographical location. Moreover, they have a cultural and symbolic meaning, thereby representing the values of the society in which they are embedded; historical heritage contributes to the construction of identity and the emotional connection of individuals with their environment. This type of heritage encourages community participation and engagement through the creation of a shared narrative that allows the inhabitants of cities, in some cases even the world, to interact with each other through engagement with and by monuments, reinforcing social bonds and fostering a sense of shared responsibility towards the preservation of history and culture. Historical heritage plays a fundamental role in building a sense of belonging not only physically and tangibly, but also emotionally.

When we look at Wittenberg Castle we can notice many particularities that belong to different memorable periods, this is thanks to the type of intervention that has been carried out, which has sought to create a dialogue between the old and the new, without erasing the traces of the past; one could have easily covered the walls with plaster, painted over, and pretended that this was the new truth of the building, but that is not what happened. Even when making new volumetric additions such as the new monastery with its cloisters, or the new staircase volume, the aim is always to amalgamate the pre-existence with the contemporary additions, restoring the equilibrium lost through the degradation of the materials and the previous damage. The structure has been preserved, the building's original materials have been maintained even through the incorporation of new matching furnishings, and the surfaces retain their ancient textures; the intention to safeguard the authenticity of the work is evident. When the building was converted into a fortress, the old gothic arches were converted into small openings in order to prevent the passage of possible dangers; this gesture was maintained until the intervention of BFM, who considered it important for the memory of the building to reopen them in order to vindicate the medieval past of the castle, as well as to improve the views of the Elba Valley and allow light to enter the spaces. Through the techniques employed, Bruno Fioretti Marquez has demonstrated a profound knowledge of the work, allowing us to appreciate the distinct periods and modifications that the building has undergone over the centuries, as well as its relevance for Protestant Catholics. The castle church already had a large flow of visitors due to its historical relevance given its link to Martin Luther. Still, the re-functionalisation that has been promoted by integrating the research library and its journal, as well as the premises for the Protestant priests' seminary and its small chapels, has boosted the value of a castle that would otherwise have been used only as a museum to the former king's residences; this would have limited its use and promoted its disuse. The fact that there are permanent users prevents the degradation of the building and encourages constant maintenance, which contributes positively. The aim of this proposal was to merge the architectural project with the previous construction in such a way that it could cater to current needs and regulations, promoting sustainability and accessibility. In addition, to promote strategies and tactics to bring understanding to the work, since by possessing the historical knowledge necessary to execute it they were able to decide which elements should remain - and prevail - and which should not, in such a way that the priority was not the "originality" of the building, but its legibility, the ability of the users to identify the passage of time through the *materia*.

What is the reason for this enquiry for understanding? Because the castle has undergone too many structural and functional modifications over the centuries, changing its character as a building several times, thus modifying its physiognomy and leaving historical scars that would remain to this day, it was essential to classify and prioritise these scars in order to decide which ones were the most relevant to tell the stories of the building; it was essential to bring clarity.

The CaixaForum is a completely opposite example since as industrial heritage it possesses a cultural testimony to the results of industrial civilisation, which has brought scientific and technological advances that have completely changed the course of humanity. As Manuela Mattone¹⁶ explains, *“assimilated to indeterminate spaces, although available, they have been treated as architectures “daughters of a lesser god”, paying little attention to the cultural values of which they are the bearers”*. This is why these types of structures used to be dismantled and, when intervening in sites such as the former Mediodía power station, those responsible had much greater freedom in terms of eradicating structures, elements, machinery, and more. The main problem is that these heritage assets tended to be seen as ephemeral architecture, and deserving of total demolition since when the production phases were completed it was implicitly taken for granted that their useful life was over; on the contrary, even if they lose their use value, they should acquire cultural value given their testimonial value. The quality and potential that could be generated through new intervention strategies, thus avoiding destruction, were taken for granted. Preserving all heritage is neither feasible nor favourable, it is preferable to move from attitudes that imply discarding what is no longer functional to embracing models that revive and give new life to architecture.

The former industrial building has been subject to an intervention in which the requirements of conservation and transformation are not adequately combined, even when the historically protected facades are maintained, the identity of the building has been completely lost. What this shows is that the architectural project and design have been prioritised over the essence of the building, consequently, we notice design choices that promote the integration of the building with the built environment, but in reality, leave much to be desired. When reading the objectives of the architects Jacques Herzog and Pierre de Meuron, we understand that the executions were vague; I would not like to be misunderstood, it is not because of my apathy or sympathy towards this type of architecture, but of the objectivity through which this thesis seeks to evaluate the interventions. The new proposal is innovative, it has definitely given value to the pre-existences by putting an end to their disuse and possesses a spatial quality worthy of admiration, but that does not mean that it has been a fine transformation; rather it is an attractive project proposal which can be admired through its actualisations and not through its dialogue between the old and the new. In such interventions one does not comprehend if there is a profound knowledge of the work, however, it is clear that there is a lack of respect, since the entire structure was removed, as well as the machinery and elements that could have remained as testimonies of the site. As for the structure of the naves, it did not present any degree of historical protection and so was removed and replaced, even a lengthy procedure was carried out to carry out excavations to accommodate the functions of the sub-floors, and the intervention became an operating theatre.

One of the authors' objectives was to integrate the building into its current surroundings, so the square on the ground floor attempts to connect different alleyways and generate a new access, the morphology of the new added volume attempts to replicate the silhouette of the buildings that integrate the block where the site is located, and the vertical garden attempts to merge the visuals with the botanical garden of the Paseo del Prado. However, these executions fail to live up to expectations, as when walking through the building or its exteriors as a user one does not manage to perceive these intentions.

16. Mattone, M. (2017). *Il Recupero Delle Cattedrali Dell'energia*. V Congreso Internacional sobre documentación, conservación y reutilización del patrimonio arquitectónico y paisajístico - ReUSO Granada 2017.

The original windows that had been boarded up were never reopened, in a way silencing the memory of the building and creating new windows that would have nothing to do with the layout and arrangement of the façades, so my question is: if the only thing that was kept were the façades, why reducing the few usable elements to silence them? Just as happened with the removal of the basement. Beyond this, the enhancement of the building is undeniable, from an abandoned power station to a cultural centre financed by a bank, which offers multiple activities and attracts not only locals but also national and international tourists; if there is one thing that the architects in question did, it was to give continuity of use to a structure in complete disuse. It is not a sustainable construction, and if it were, then all the elements that still had a good useful life in the building would have remained. Nor is there any restoration of the lost equilibrium, because little or nothing of the original building has been preserved, only the superficial part, its skin. It does adapt to current regulations and needs, as it is an accessible building that takes into consideration all current standards in terms of safety, fire, and hygiene. As it was developed practically from scratch, the possibility arose to revise and add the necessary infrastructure. Finally, it is possible to say that even when the authors militate for a dialogue between the old and the new, it is impossible to identify it and the intentions are drowned in themselves. The use of COR-TEN steel does not facilitate the homogeneity between brick and itself, nor does the new morphology of the upper floors incorporated later, and even less so the windows with their enigmatic dimensions and positioning. It would seem that they used the technique of contrast but disguised it as an intentional dialogue, which for an architect with other guidelines might be understandable, but for those of us who have a background in restoration and reuse it is not. All the elements and materials, whether current or old, contrast with each other, as does the use of the floating volume.

After carefully examining two contrasting case studies, it is clear that they represent two extreme approaches. One concerns, for example, a castle of historical significance, which has great importance for the believers and requires a high level of responsibility. The other case concerns a building with minimal conservation value. The question arises: who should be entrusted with the decision-making process of what should be preserved and what should be removed? Bruno Fioretti Márquez, limited in their interventions, prioritised the preservation of the building's identity by maintaining as many of the original elements, traces and intentions as possible. On the other hand, Herzog & de Meuron had the freedom to choose but opted to renovate the building in depth. The question then arises: what is the point of intervening in the historical heritage if this results in a total modification? Those responsible for these projects have the authority to determine what remains and what is eradicated. It is their duty to provide users with the information necessary to understand the historical significance of the site. In the case of industrial heritage, the machinery, artefacts, chimneys and other elements of the site bear witness to one of humanity's most crucial eras. Removing them can be seen as a way of censoring the pre-existing state of the building.

In conclusion, I believe that there is a general indoctrination of architects and architecture students that is leading us away from critical thinking. Between this and the influence of the media and social networks, we are constantly consuming and venerating characters in the field and buildings that are based on flamboyance and feeding the desires of current trends. Maybe it's time we all start to question the motives behind these buildings and who they really favour, especially us, the young people who have been born and raised in this context that allows us to feel comfortable with the lack of questioning. Architects represent their peers, therefore they design on the basis of what everyone will like, but it is a race already won if their peers are willing to accept anything that is branded; we must be able to critically evaluate contemporary interventions.

It is no longer based on spatiality, the new floor plan, or the materials used, but on determining certain fundamental parameters that facilitate the analysis and appreciation of the work on a level that is not only professional but also human, as users and inhabitants of cities, those that have years of testimonies that constitute our sense of belonging and collective identity. By considering the management and care of these buildings, which serve as representatives of their cities and ourselves, and reflect the history of those who came before us, we can better understand the importance of preserving our architectural heritage both nationally and internationally. It is crucial to remain open to change, as the world, science, technology, and society are constantly evolving, and anything that does not adapt will become obsolete and eventually disappear. This is why it is essential to promote intervention in historic buildings, but always with respect and establishing clear guidelines that allow for impartial and objective assessments.

<< *Ma inutilmente mi sono messo in viaggio per visitare la città: obbligata a restare immobile e uguale a se stessa per essere meglio ricordata, Zora languì, si disfece e scomparve. La Terra l'ha dimenticata.*>>

Italo Calvino, *Le città invisibili*, 1972. Milan, Italy: Mondadori.

Conservation and reuse must be promoted to encourage the continued use of those buildings that carry sentimental and significant value to society, and they must be integrated in such a way that it is impossible to ignore or forget them. Freezing historic areas of cities prevents them from evolving, which is why today's reuse projects can and should serve as a bridge between the past and the present, prioritising the undeniable link between history and contemporary individuals.

Many “*starchitects*” preach sustainability in their new constructions, however, the reuse of existing buildings has the positive effect of reducing the demand for new building materials, which helps to conserve natural resources and plays a role in decreasing the carbon footprint associated with the production and transportation of those materials. Re-use also saves money on new materials, construction processes and relocation, as it builds on an existing structure, and at the same time contributes to the preservation of the structure; it is better to modify it than to let it die. To quote Elena Vigliocco¹⁷, “*If fewer changes are made to buildings, the less energy will be needed to produce them... it is essential to define a new system of useful values to deal with existing buildings, starting from the consideration that the fewer changes are made to buildings, the less energy will be needed for their reuse, also taking into account the improvement of the process of implementation of the transformation.*”

I also believe that the most significant aspect at the city level is the revitalisation of urban areas, since by modifying the functions of the building, new services are provided that contribute to the economic and social revitalisation of urban neighbourhoods. In this way, new strategies and tools are created that produce an economic stimulus that positively affects the quality of life of its inhabitants, recovering marginalised spaces, creating jobs and encouraging community participation, meaning that reusing a structure can have an enormous transformative impact on individuals in any urban area. In this regard, she adds, “*The most recent experiences of reclamation and redevelopment of defunct areas, whether isolated artefacts or large areas, show the widespread recognition of disused buildings and production areas as an opportunity to trigger processes of redevelopment and ecological regeneration of natural resources in urban areas*”. Adapting existing buildings creates a balance between development needs and the conservation of architectural heritage, promoting a harmonious connection between past and present. Reuse is the future of architecture and preservation together.

17. Vigliocco, E. (2013). *Riciclare l'architettura. L'archeologia industriale e i parchi di cemento*. Labor & Engenho, Campinas [Brasil], v.7, n.1, p.29-42.

REDUCE carbon footprint,

RECYCLE elements and materials,

RE-USE pre-existing structures

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I. Miguel Ángel Rebollo y Cecilia Casares, *Arquitectura y Ciudad*

II. Kalam España

III. Marcelo Isarrualde

IV. CaixaForum website's

V. Página Oficial De Turismo De La Ciudad De Madrid

I would like to thank,

To Universidad de Belgrano and Politecnico di Torino, for allowing me to carry out the double degree and the experience of studying and living in Italy these two years. It has been a joy to study, to learn Italian, to improve my English and to meet international students with completely different backgrounds from mine.

To my professor Manuela Mattone, who made me feel very comfortable during this process, accompanying me and making me feel heard, always suggesting methods and tools which made this research not an obligation, but enjoyable. I don't think it would have been possible to feel more at ease with another thesis advisor.

To Professor Elena Vigliocco, who helped me to organise my ideas and to finish choosing the right path for this thesis. It was also very interesting to see how the two supervisors are complementary through the contribution of their diverse perspectives, but in dialogue with each other; they are two professors whom I admire very much.

To my parents, Mara and Sebastian, who are my whole life together with my brother, Thomas. The beauty of having parents with such diverse personalities is that they both contributed in different ways to my academic and personal development. My mother is aware of how many moments of anxiety and hysteria I have experienced during these 6 years of studying, but she always supported me and did not allow me to give up or doubt my abilities; she has given me her unconditional support. My father, on the other hand, helped me to mature, gave me the instruments to become a pragmatic and ambitious person, especially since I moved to Italy, as well as encouraging my initiatives.

Thomy accompanied me from afar, I never felt alone because I had his daily calls or messages making the distance disappear.

To my grandparents, Celia and Silvio, who waited for me with dinner ready every Sunday while I finished assembling the models for the Atelier. How grateful I am, for my family and for my life. I spent 23 years with people who made me feel special and loved, which was fundamental to build myself, piece by piece.

To my friends, in Argentina and in Torino, who make my life better, and who are my adoptive family, as they accompanied me in all the processes as well. Special mention to Caterina, who allowed me to have a year of peacefulness in my own home and became a sister.

Finally, to Tommaso, who made himself an unconditional companion in my daily life, projects and adventures. During the difficulties of the last months you were my engine.

Thanks to all of you.

Me gustaría agradecer,

A la Universidad de Belgrano y al Politecnico di Torino, por permitirme llevar a cabo el doble diploma, la experiencia de estudiar y vivir en Italia estos dos años. Ha sido un placer el estudio, aprender italiano, perfeccionar mi inglés y conocer estudiantes internacionales con trasfondos completamente distintos al mío.

A la profesora Manuela Mattone, quien me ha hecho sentir cómoda durante este proceso, acompañándome y haciendome sentir escuchada, sugiriendo siempre métodos y herramientas que hicieron que esta investigación no fuera una obligación, sino entretenida. No creo que hubiera sido posible sentirme más a gusto con otro relator de tesis.

A la profesora Elena Vigliocco, quien me ha ayudado a organizar mis ideas y a finalizar de elegir el camino adecuado para esta tesis. Fue muy interesante también ver como las dos relatoras se complementan a través del aporte de perspectivas diversas, pero que dialogan entre si; son dos profesoras que admiro mucho.

A mis padres, Mara y Sebastián, que son mi vida entera junto a mi hermano, Thomas. Lo lindo de tener padres con personalidades tan diversas es que ambos contribuyeron de distinta manera a mi desarrollo académico y personal. Mi mamá es consciente de cuantos momentos de ansiedad e histeria he vivido durante estos 6 años de carrera, pero siempre me apoyó y no me permitió abandonar ni dudar de mis capacidades; me ha dado su apoyo incondicional. Mi papá, por otro lado, me ayudó a madurar, me dió herramientas para convertirme en una persona pragmática y ambiciosa, sobre todo desde que me mudé a Italia, además de fomentar mis iniciativas. Thomy me acompañó a la distancia, jamás me sentí sola porque me tuve sus llamadas o mensajes diarios haciendo que la distancia desapareciera.

A mis abuelos, Celia y Silvio, que me esperaron con la cena lista todos los domingos mientras que yo terminaba de montar las maquetas para el Atelier. Qué agradecida estoy, de mi familia y de mi vida. Pasé 23 años con gente que me hizo sentir especial y querida, lo cual fue fundamental para construirme, pieza a pieza.

A mis amigos, en Argentina y en Torino, que mejoran mi vida, que durante estos años fueron mi familia adoptiva, ya que me acompañaron en todos los procesos. Mención especial a Caterina, que me permitió tener un año de tranquilidad en mi propio hogar y se convirtió en una hermana.

Finalmente, a Tommaso, quien se convirtió en un compañero incondicional, de cotidianidad, proyectos y aventuras. Durante las dificultades de los últimos meses fuiste mi motor.

Gracias a todos.