

OPERATIC 5719089

ELEVATION

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SCALA'S NEXT ACT

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Research Plan (2024/25 Q1)
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COMPLEX PROJECTS
Bodies and Building Milan
AR3CP010

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Arruga, L. (1976). *La Scala*. Praeger
Publishers New York.

La Scala
Teatro alla Scala

The world of performance has always captivated me. I spent three years working at Theatre Rotterdam in an impressive concrete structure by Dutch architect Wim Quist, where I obtained knowledge about large-building operations, as well as backstage complexities, audience flow, and theatre construction in general. This sparked a deeper interest for large, intricate buildings like towers, theatres, and airports.

While I was employed at Foster + Partners and Powerhouse Company, I had the privilege to work on remarkable buildings including airport terminals and skyscrapers. However, I've not yet had the opportunity to design an opera house. An opera house is truly a unique structure - most major cities contain but one, and they are frequently designed by well-known architecture firms following international competitions. To redesign an opera house such as Teatro alla Scala, where iconic works from composers such as Verdi premiered (Arruga, 1976), is both a challenge and a dream. The opportunity to develop a new design for such an famed site that retains immense historical and cultural value, excites me greatly.

In positioning myself within this research, I bring a strong commitment to the reinterpretation of La Scala's iconic identity while responding to the evolving needs of contemporary audiences. The theme of 'Bodies & Building' resonates with my design philosophy, which emphasizes the relationship between human proportions and architectural form. I envision a new La Scala that invites audiences of all generations, sparking curiosity and encouraging engagement with the performances within. This project is an opportunity to merge my passion for the theatre with my architectural expertise, and I am eager to take on the challenge of designing a building that honours La Scala's rich heritage while embracing the future.

The objective of this research plan is to present a comprehensive approach to redesigning Teatro alla Scala as a new opera house that honours its historical legacy while embracing Milan's cultural temporality. The project seeks to balance historical reinterpretation with the integration of elements that attract younger audiences. Rethinking opera to comply with an ever changing audience. Grounded in the 'Bodies & Building' theme, which emphasizes the relationship between human proportions and architectural form, this project focuses on the creation of an opera house that resonates with La Scala's iconic identity and attracts audiences of all generations while adapting to Milan's ever evolving cultural calendar.

The redesigned La Scala will honour its iconic identity and serve as a venue for diverse audiences and give back to the city. The new design should support a range of cultural events year-round, expand beyond traditional opera, ballet, and symphony performances to engage with contemporary cultural expressions and attract the next generation.

Teatro alla Scala is renowned globally for its significance in the world of opera. However, diverging cultural trends, particularly the low interest in opera, ballet and theatre among younger audiences with only 19% of generation Z expressing interest (Statista, 2024), highlight the urgent need to rethink opera and La Scala's role, ensuring it remains relevant.

This research plan proposes a design strategy for a new opera house at Teatro alla Scala's site, aimed at reinterpreting its iconic identity and cultural significance while re-imagining it as a contemporary venue. By examining La Scala's architectural history, exploring audience engagement strategies, optimizing spatial relationships, and establishing feasible funding models, this project seeks to create a design that interests with both traditional and modern audiences. The redesigned La Scala will serve as a cultural landmark that supports Milan's year-round cultural calendar and stimulates renewed interest in opera among younger generations.

Generation Z

People born between 1996 and 2010

Statista Consumer Insights. (2024). Target audience: Theater, ballet & opera goers in Italy. Statista. <https://www-statista-com.tudelft.idm.oclc.org/study/123338/target-audience-theater-ballet-and-opera-goers-in-italy/>

RESEARCH QUESTIONS

Main

How can the design of an opera house at La Scala stimulate cultural interest among young audiences?

Sub

- 01 How can La Scala's history, program, and urban context inform a contemporary reinterpretation of its iconic identity?
- 02 How can a design for La Scala revitalise interest in opera among younger audiences and contribute to Milan's cultural calendar?
- 03 How do spatial relationships in opera houses influence visitor experience?
- 04 What funding models will make the new La Scala financially feasible in the long term?

THEORETICAL FRAMEWORK

Operatic Elevation

Operatic Elevation

This research framework integrates principles from architectural theory, cultural contribution, audience engagement, and economic feasibility to guide the re-imagining of Teatro alla Scala. The project aims to respect La Scala’s historical significance while adapting it to meet contemporary cultural demands and attract a broader, younger audience. The framework reflects the themes and objectives presented by the studio, focusing on the human-design relation of public spaces.

Cultural and Architectural Analysis

The research incorporates historical and cultural analyses of opera houses as social and architectural structures. As noted by Arruga (1975), La Scala’s historical significance is anchored in Milan’s cultural landscape, serving as a site of shared cultural identity in addition to architectural grandeur. This cultural dimension will be a critical aspect of the redesign, ensuring that the new opera house remains a symbol of Milan. The analysis will examine how the building’s architectural elements, such as the neoclassical facade and iconic horseshoe-shaped auditorium, will find a contemporary interpretation in the proposed cultural and architectural identity.

Through the cultural lens, the new opera house will adapt its program and spaces to accommodate Milan’s cultural events such as the Design Week, Fashion Week and the upcoming 2026 Winter Olympics. By adapting the program and exploring outdoor stage possibilities, the new design will respond to the ever-changing city of temporality.

Additionally, insights from “Great Opera Houses Masterpieces of Architecture” (1979) provide an understanding of how opera houses historically served as landmarks. This framework will guide the design strategy, ensuring that the essence of La Scala is preserved while integrating modern functionalities. The redesign will consider how to maintain its historical identity while introducing new elements that make the building more versatile, accommodating a broader range of cultural activities and introducing a younger audience to this scene.

Arruga, L. (1976). *La Scala*. Praeger Publishers New York.

Kaldor, A. (2002). *Great Opera Houses: Masterpieces of Architecture*. Antique Collectors’ Club.

Vitruvius. (1914). *Ten Books on Architecture*. Harvard University Press.

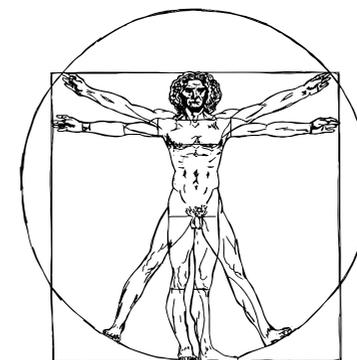
Le Corbusier. (1954). *The Modulor: A Harmonious Measure to the Human Scale Universally Applicable to Architecture and Mechanics*.

Modulor
Systematic tool of mathematical ratios by Le Corbusier

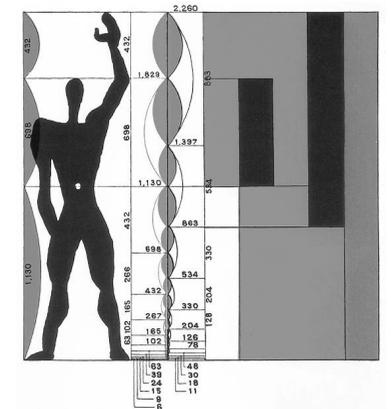
Bodies & Building

The studio theme of ‘Bodies & Building’ focuses on the relationship between human proportions and architecture. This principle will be applied by incorporating insights from Vitruvius’s *Ten Books on Architecture* (1914) and Le Corbusier’s *The Modulor* (1954). Vitruvius emphasised the importance of symmetry and proportions in architecture, grounded in the human body’s natural measurements. “Without symmetry and proportion there can be no principles in the design ... that is, if there is no precise relation between its members, as in the case of those of a well-shaped man” (Vitruvius, 1914). This perspective serves as a foundation for understanding how architecture can be designed to fit human needs.

Le Corbusier’s *The Modulor* (1954) introduces a more systematic approach to human proportions, that is universally applicable to architecture and mechanics (Le Corbusier, 1954). By utilising the Modulor, the redesign of La Scala aims to create spaces that resonate with natural human proportions, enhancing comfort, movement, and the overall user experience. This human-centric approach will ensure that La Scala remains an accessible and engaging space, with careful consideration of different user groups, including young audiences and international visitors.



Vitruvian Man, Leonardo da Vinci (1490)
https://www.researchgate.net/figure/Image-Canon-of-proportions-from-Vitruvius-De-architectura-Ten-Books-on-Architecture_fig9_226283092



Modulor, Le Corbusier (1948)
https://www.researchgate.net/figure/Modulor-Le-Corbusier-1948-Corbusier-1998_fig1_268221925

Audience Engagement

The theoretical framework will also address cultural adaptation strategies to engage diverse audiences. Research on cultural trends, particularly in classical music and theatre, will inform the strategies to stimulate audience engagement. Vercammen (2017) noted a decline in attendance among younger generations for classical music, which is a key consideration in the redesign. A recent report shows that only 19% of theatre, ballet, and opera attendees in Italy belong to generation Z, indicating potential to stimulate a shift in audience demographics (Statista Consumer Insights, 2024).

To stimulate interest growth among younger audiences, La Scala will integrate flexible spaces, and expand programming to rethink opera as we know it today. The Magnifica Fabbrica initiative will be revised and seamlessly integrated into the new design to ensure a cohesive experience between the two sites. Through assessment of the proposed program, the new opera could exchange program to ensure a cohesive balance of audience groups. By making the opera house more accessible, the new design aims to foster increased interest from younger generations and support the long-term cultural relevance of La Scala.



Viva, A. (2022). Magnifica Fabbrica for the Teatro alla Scala in Milan
Arquitettura Viva. <https://arquiteturaviva.com/works/magnifica-fabbrica-en-milan>

Serbanescu, A. (2022). Millennials and the Gen Z in the era of social media. ResearchGate.

Vercammen, M. (2017). Audience development for classical music performances. Erasmus University Rotterdam

Statista Consumer Insights. (2024). Target audience: Theater, ballet & opera goers in Italy

Generation Z
People born between 1996 and 2010

Magnifica Fabbrica
A new complex for La Scala for production and public engagement.

Gossett, P. (2007). Divas and scholars: performing Italian opera. Choice Reviews Online, 44(11), 44-6153. <https://doi.org/10.5860/choice.44-6153>

Research by Serbanescu (2022) shows that Gen Z only has an attention span of about 8 seconds. Much shorter than any other generation and over a thousand times less than the duration of the average opera.

Throughout its existence, opera has evolved constantly, from small performance halls during the Baroque to social gathering space where it was common to talk during the play in the 1800's. It has long since ceased to be customary to talk, walk or eat during opera. "During the first two decades of the century (1800 - 1820) a secondary singer might also demand his or her moment in the sun, a so-called "aria di sorbetto". "The name aria di sorbetto reflects the practice of buying and consuming ices during short arias sung by secondary characters." (Gossett, 2007). Perhaps, reviving some of these old customs, could stimulate a young audience to reconsider a visit.

While the classical opera still attracts large numbers of audiences, with La Scala's occupancy rate at 90% (Redazione, 2024), there is still room for improvement. Rethinking the opera at certain evenings with dining experiences, collaborations with other genres or organising an opera festival, like O. in Rotterdam, could further stimulate the younger generation to attend La Scala's next act.

Redazione. (2024, September 11). Filarmonica della Scala, presentata la nuova stagione di concerti 2025;

Visitor Experience

Opera house design has evolved from the functional horseshoe shape to halls that maximise visitor experience. La Scala isn't the only one in Italy with the horseshoe shape and the architect, Giuseppe Piermarini, took inspiration from Naples (Arruga, 1976). This shape optimised both acoustics and visibility, and stimulated social interaction.

A number of case studies will provide further insight in how the different elements in opera houses influence visitor experience. The case studies will be divided into 4 categories; spatial relationships, staircases, classical proportion and underground potential.

Spatial Relationships

This study will explore the relation between the foyer, hall, stage and back-stage areas. The case studies include both historical buildings such as; Palais Garnier (FR), Royal Opera House (UK), Wiener Staatsoper (AT) and, modern and contemporary examples like; Sydney Opera House (AU), Elbphilharmonie Hamburg (DE), Harbin Opera House (CH) and Oslo Opera House (NW).

Staircases

Perhaps the most well known staircase in any opera house, Palais Garnier, will be included, as well as Sydney Opera House (AU), Casa da Musica (PT), Shanghai Opera House (CH),

Classical Proportions

The case studies that will be conducted in this topic, relate to the 'Bodies & Building' theme, incorporating classical proportions into the design, such as The Metropolitan Opera House New York. Because there are few opera houses that do this, other building types like the James Simon Gallery (DE), Neue Nationalgalerie (DE) and architects will be included as well.

Underground Potential

Most halls don't need daylight and could potentially be positioned below the surface, leaving valuable space to rooms that need it. The Steve Jobs Theatre (US) applies this principle as well as the Apple Store in Milan which gives back to the city by keeping the square its positioned below.

Arruga, L. (1976). *La Scala*. Praeger Publishers New York.

Kaldor, A. (2002). *Great Opera Houses: Masterpieces of Architecture*. Antique Collectors' Club.

Hammond, M. (2006). *Performing Architecture; Opera Houses, Theatres and Concert Halls for the Twenty-First Century*. Merrell Publishers Limited.

Stairs

Stairs have been an essential part of architecture for thousands of years, evolving from simple functional elements to symbols of power, social hierarchy, and ritual (Mark, 1990). Across cultures, stairs and elevated platforms have shaped movement and defined spaces in public buildings, particularly in performance venues like opera houses, where they enhance both the aesthetic and social experience.

In ancient Greece and Rome, staircases in structures like the Parthenon and the Temple of Jupiter conveyed the elevated status of the gods they honoured. As Murray notes, in Renaissance architecture, staircases were designed not only as connectors but as monumental features that orchestrated movement through the space (Murray, 1969).

Dogma's research on platforms explores how stairs and elevated spaces historically regulated social behaviour. "The role of steps in these structures was to theatrically emphasize the movement of people by orienting them and providing a sense of rhythm" (Dogma, 2020). By elevating participants, platforms and stairs create visible distinctions, reinforcing social hierarchies. In opera houses, grand staircases symbolize the transition from the common to the artistic, with the act of ascending becoming a ceremonial experience.

Modern examples like Jørn Utzon's Sydney Opera House highlight how stairs and platforms guide visitor experience. The terraced platforms not only support the structure but also direct visitors through a carefully chosen path, building anticipation. This idea of using stairs to create a dynamic spatial experience echoes Michelangelo's Laurentian Library staircase, where movement becomes performative (Murray, 1969). As Blanc points out, in venues like Palais Garnier, "The grand staircase is more than just a connector; it is a ceremonial path that builds anticipation and leads the audience into the heart of the opera" (Blanc, 1996).

Mark, R. (1990). *Light, wind, and structure: The mystery of the master builders*. MIT Press.

Murray, P. (1969). *The architecture of the Italian Renaissance*. Schocken Books.

Dogma. (2020). *Platforms: Architecture and the use of the ground*.

Murray, P. (1969). *The architecture of the Italian Renaissance*. Schocken Books.

Blanc, A. (1996). *Stairs, steps, and ramps*. Butterworth-Heinemann.

Historical Funding Models

The model used to fund La Scala involved private investors, so called box-holders, who were granted exclusive access to boxes in exchange for their financial support. This model contributed significantly to the opera house's early success, collecting the 1 million Milanese Lire necessary for the construction and 120k to purchase the site (Arruga, 1975). Analysing these historical funding models will provide insights into how similar strategies could be applied in the redesign (Arruga, 1975). The historical analysis will help identify elements of these models that can be adapted to secure financial backing while maintaining the cultural integrity of the opera house.

Modern Economic Strategies

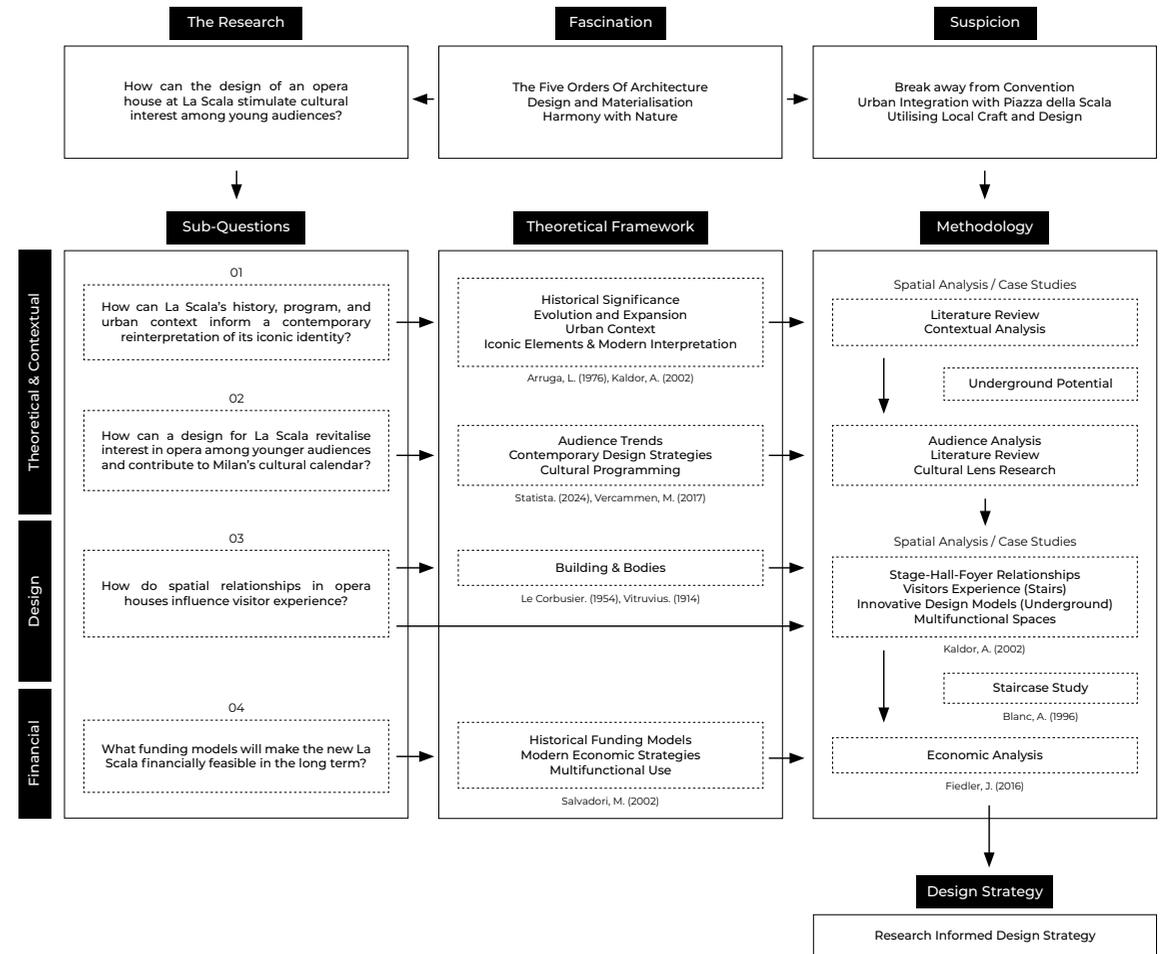
Modern funding strategies, including PPP's, government grants and crowdfunding, will be explored. These approaches have been successfully employed in similar projects and will be assessed for their applicability to La Scala's redesign. For instance, the renovation of the Royal Opera House in London was partially funded through a combination of public funding and private donations, a model that could be adapted for La Scala. The integration of commercial spaces, such as restaurants, retail shops, and office space, will be considered as a source of ongoing revenue. These commercial areas will not only provide financial support but also help attract a broader audience.

The Elbphilharmonie in Hamburg serves as a valuable case study on the financial challenges associated with large-scale cultural projects. Originally estimated at €351.8 million, the project costs escalated to €560.8 million by 2008 due to poor governance and planning (Fiedler, 2016). This example underscores the importance of robust financial planning and governance in avoiding cost overruns and ensuring sustainability (Fiedler, 2016).

Arruga, L. (1976). *La Scala*. Praeger Publishers New York.

PPP's
Public-Private Partnerships

Fiedler, J. (2016). *The Elbphilharmonie Hamburg*. Large Infrastructure Projects in Germany https://doi.org/10.1007/978-3-319-29233-5_3



The methodology of this research plan integrates a theoretical and conceptual framework with a contextual approach, supplemented by historical, spatial, and audience engagement analyses. This multifaceted approach will inform a design strategy that balances Teatro alla Scala's historical significance with contemporary adaptations to attract younger audiences.

Theoretical and Conceptual Approach

The project is grounded in the "Bodies & Building" theme, focusing on human-centred design by applying Vitruvius's principles of proportion and Le Corbusier's Modulor. This theoretical basis will guide spatial configurations to enhance user comfort and accessibility, reflecting a balance between classical elements and modern functionality to make La Scala appealing and accessible to all ages.

Contextual Approach

Positioned in Milan's cultural heart, La Scala's redesign considers its role within the urban context, exploring connections with year-round events. This contextual approach involves architectural adaptations that integrate La Scala with the city, connecting the site with the Piazza della Scala in front, extending performance spaces outdoors and creating an inviting venue that supports Milan's cultural calendar.

Cultural and Architectural Analysis

A study of La Scala's historical and cultural significance will inform the preservation of key architectural elements, such as the horseshoe auditorium and neoclassical facade. Through literature and historical analysis, the project will develop a design strategy that respects these iconic features while adapting them to meet contemporary needs for flexibility and engagement.

Case Studies of Opera Houses

Comparative case studies of opera houses like the Palais Garnier and Sydney Opera House will inform spatial layout and visitor experience. By analysing the relation between the foyer, hall, and back-stage, the project will explore ways to create spaces that embrace performance quality and enhanced visitor experience.

Human-Centric Design Principles

Human-centred design principles will be applied to optimise aesthetics, movement, and accessibility throughout the building. Classical proportions will be analysed in a number of case studies and will ensure that the design is a contemporary interpretation of classical elements that make up La Scala's architectural identity.

Audience Engagement Strategies

Strategies to engage younger audiences are critical, given the low interest in opera among generation Z. This will include flexible spaces, dining experiences, and mixed programming to attract a broader audience. Inspired by past customs like the 'aria di sorbetto', the design will incorporate modern, informal elements to offer unique engagement opportunities.

Economic Feasibility Analysis

A review of historical and modern funding models will guide a feasible financial strategy. Insights from Scala's original box-holder system and the modern funding models like public-private partnerships, government grants and commercial integrations, as seen in the Elbphilharmonie, will ensure that the construction and operation of the new design is achievable.

Design Strategy Development

By integrating insights from the above analyses, a design strategy will be developed, outlining architectural principles, programmatic elements, and audience engagement approaches. This strategy will ensure La Scala's place as a versatile cultural venue that honours its past while engaging with Milan's evolving cultural scene.

ARGUMENT OF RELEVANCE

Operatic Elevation

Operatic Elevation

CONCLUSION

The relevance of this research lies in addressing the need for cultural institutions to evolve with changing demographics and urban dynamics. Teatro alla Scala, a historic and globally recognised institution, faces the challenge of engaging a new generation that shows declining interest in traditional opera and classical music. This project's relevance is underscored by its potential to redefine La Scala's role within Milan's cultural landscape by making it a versatile venue that resonates with younger audiences. By reinterpreting La Scala's iconic architectural identity to include flexible programming, modern audience engagement strategies, and economic sustainability, the research not only revitalises the opera's appeal but also contributes to Milan's year-round cultural events. Ultimately, this project aims to design an opera house that ensures its ongoing significance for Milan by adapting to changing trends and attracting audiences of all-ages.

This research plan outlines a comprehensive methodology to design a new opera house at Teatro alla Scala's site, grounded in theoretical, contextual, cultural, and audience engagement frameworks. By combining historical analysis with contemporary strategies for engagement and economic feasibility, the project addresses the objective of preserving La Scala's cultural significance while adapting it to the needs and interests of a modern audiences. The theoretical principles of "Bodies & Building" provide a human-centred approach to spatial design, while the contextual analysis ensures that the new opera house integrates seamlessly with Milan's cultural scene.

The insights gained through this research will directly inform the design brief, establishing clear design goals that prioritize historical sensitivity, contemporary adaptability, and inclusion. The design brief will reflect strategies to create flexible spaces that support diverse programming, architectural elements that harmonize tradition with modernisation, and audience engagement models that attract younger generations. This approach ensures that the new opera house design not only honours La Scala's legacy but also positions it as a forward-thinking cultural landmark in Milan.

REFERENCES

Operatic Elevation

- Arruga, L. (1976). *La Scala*. Praeger Publishers New York.
- Blanc, A. (1996). *Stairs, steps, and ramps*. Butterworth-Heinemann.
- Dogma. (2020). *Platforms: Architecture and the use of the ground*.
https://editor.e-flux-systems.com/files/287876_e-flux-architecture-platforms-architecture-and-the-use-of-the-ground.pdf
- Fiedler, J. (2016). *The Elbphilharmonie Hamburg*. Large Infrastructure Projects in Germany: Between Ambition and Realities (pp. 39-87). Palgrave Macmillan.
https://doi.org/10.1007/978-3-319-29233-5_3
- Gossett, P. (2007). *Divas and scholars: Performing Italian opera*. Choice Reviews Online, 44(11), 44-6153.
<https://doi.org/10.5860/choice.44-6153>
- Hammond, M. (2006). *Performing Architecture: Opera Houses, Theatres, and Concert Halls for the Twenty-First Century*. Merrell Publishers Limited.
- Kaldor, A. (2002). *Great Opera Houses: Masterpieces of Architecture*. Antique Collectors' Club.
- Le Corbusier. (1954). *The Modulor: A Harmonious Measure to the Human Scale Universally Applicable to Architecture and Mechanics*. Harvard University Press.
- Mark, R. (1990). *Light, wind, and structure: The mystery of the master builders*. MIT Press.
- Murray, P. (1969). *The architecture of the Italian Renaissance*. Schocken Books.
- Redazione. (2024, September 11). *Filarmonica della Scala, presentata la nuova stagione di concerti*.
<https://www.ilgiornaleditalia.it/news/mondo-imprese/640116/filarmonica-della-scala-presentata-la-nuova-stagione-di-concerti-2025-beretta-filarmonica-i-dati-ci-danno-delle-buone-notizie--tasso-di-occupancy-oltre-il-90-.html>
- Serbanescu, A. (2022). *Millennials and Gen Z in the era of social media*. ResearchGate.
https://www.researchgate.net/publication/358228253_Millennials_and_the_Gen_Z_in_the_era_of_social_media
- Statista Consumer Insights. (2024). *Target audience: Theater, ballet & opera goes in Italy*.
<https://www-statista-com.tudelft.idm.oclc.org/study/123338/target-audience-theater-ballet-and-opera-goes-in-italy/>
- Vercammen, M. (2017). *Audience development for classical music performances*. Erasmus University Rotterdam.
- Vitruvius. (1914). *Ten Books on Architecture*. Harvard University Press.
- Viva, A. (2022). *Magnifica Fabbrica for the Teatro alla Scala in Milan*. Arquitectura Viva.
<https://arquitecturaviva.com/works/magnifica-fabbrica-en-milan>

Operatic Elevation

ANNOTATED BIBLIOGRAPHY

- Arruga, L. (1976). *La Scala*.
 Culture
 “La Scala looked upon itself as a kind of affectionate mother to the operas which its public had adopted, and for years cradled and nursed them as though they had no legs of their own to stand on, while at the same time putting off the production on its stage of creations which were different from the customary ones.” (p. 12)
- Historical significance
 “The history of the Milanese theater often reflected the history of the city in which it stood and even, in certain obvious instances, the history of Italy.” (p. 13)
- Funding
 “The construction, ... , cost about a million Milanese lire, paid for by the sale of the boxes.” (p. 27)
- Aria di sorbetto
 “... for a good part of the century, the less important arias were called the “sherbet arias”. Singers were obviously offended at being confined to the “sherbet” section of a work.” (p. 36)
- Blanc, A. (1996). *Stairs, Steps, and Ramps*.
 Stairs
 Visitor experience
 “The open vertical circulation eloquently arranged at the core of buildings can certainly become the most captivating experience. Designs as diverse as Garnier’s Paris Opera, Le Corbusier’s Villa La Roche-Jeanneret, and Lasdun’s National Theatre in London all reveal the magic that is possible with creative designers” (Blanc, 1996, p. 3).
- Dogma (2020). *Platforms: Architecture and the Use of the Ground*.
 Stairs and platforms
 “Platforms are stages that gave public emphasis to the actions that took place upon them... steps became the main architectural feature. The role of steps in these structures was to theatrically emphasize the movement of people by orienting them and providing a sense of rhythm” (Dogma, 2020, p. 4).
- Stairs and platforms
 “Platforms manipulate the most essential datum of existence—the ground—turning it into a space that both enables and restricts what happens upon it” (Dogma, 2020, p. 2).

“A “commercial envelop” would surround the core: investor-owned areas, consisting of a hotel, gastronomy, a parking garage, and private apartments. The commercial envelope should generate enough profit to satisfy the investor and simultaneously subsidize the core’s construction.” (p. 42)

“The feasibility study predicted total project costs of €186.7 million. The commercial envelope, financed by the private investor, was estimated at €69.7 million and the public core at €117 million. The costs for the public core would mainly be provided by private donations (€30– 35 million) and the city (€77 million). The private investor would be expected to cross-finance the remaining €10 million out of his profits” (p. 45)

“... Miller believed that modern audiences are too easily distanced from events on stage.”

“... authenticity simply gets in the way of a reasoned approach to the complex interactions of theory and practice, history and contemporaneity, tradition and innovation.”

“A key factor in the design of the 1200 seat concert hall is flexibility. The stage and seating can be adjusted according to the performance’s requirements.” (p. 57)

“His [Norman Foster] ambition was to “create a building that not only fully integrated with the cultural life of Dallas, but which would become a destination in its own right for the non-opera-going public, with a restaurant, cafe and bookstore that will be publicly accessible throughout the day. The recognition of the need to break down the barriers - both physical and psychological - surrounding opera forms a key theme ...” (p.204)

“Foster’s design makes a bold visual statement with its dominant canopy stretching out into the square - a physical blurring of the boundaries to follow through the ideology.” (p. 204)

Fiedler, J. (2016). The Elbphilharmonie Hamburg.

Mixed-use

Financial feasibility

Gossett, P. (2007). Performing Italian opera.

Audience engagement

Historical reinterpretation

Hammond, M. (2006). Performing Architecture.

Flexibility

Audience attraction

Urban integration

Le Corbusier. (1954). The Modulor

Bodies & Building

Bodies & Building

Mark, R. (1990). Light, wind, and structure

Visitor experience

Murray, P. (1969). The architecture of the Italian Renaissance

Classical proportions

Classical proportions

Vitruvius. (1914). Ten Books on Architecture

Bodies & Building

“the ‘Modulor’ is a measuring tool based on the human body and on mathematics.” (p. 55)

“It has been proved, particularly during the Renaissance, that the human body follows the golden rule.” (p. 56)

“Einstein had the kindness to say this of the ‘Modulor’: ‘It is a scale of proportions which makes the bad difficult and the good easy.’” (p. 58)

“... more money went into reconstructing the terraced platform on which the shells were to rest ... A simpler and far less expensive structural system, composed of hidden steel trusses, could have been used to support the sculptural shells, but the designers rejected this option and chased after their vision.”

“Together with the relationship of all the parts the classical architect sought for symmetry and harmony, so that in a blank wall pierced by three windows he would be careful to see that the height of the wall was proportioned to its width, that the openings were pierced symmetrically within it, and that the shape of the rectangle of the window bore some satisfactory relationship to the shape of the wall as a whole.” (p. 2)

“without symmetry and proportion no temple can have a regular plan” (p. 6)

“Without symmetry and proportion there can be no principles in the design ... that is, if there is no precise relation between its members, as in the case of those of a well-shaped man” (p. 72)

SCALA'S NEXT ACT

JUSTIN TJON KIE SIM