Paris of the Tropics:

Re-Situating the Teatro Amazonas's role in representing an image of Manaus, Brazil, at the turn of the Twentieth Century

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Cover image: The Teatro Amazonas, Manaus, Brazil, 2017. Photo by Robert Baron

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The intention of this research is to explore how the conception of an eclectic, disparate and theatrical architecture, such as Manaus's Teatro Amazonas, can bear profound implications upon the representation and experience of its surrounding urban environment

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1

Introduction:

An Afterimage of a Performance

A Belle Époque Drama

A Dramatic Architectural Protagonist

Situated, or "as some thought imprisoned,"[1] amidst the vast and alluring Amazonian rainforest, the city of Manaus, Brazil, loudly boasts one of the most illustrious opera houses of the late 19th Century. Envisaged as a "jewel" in the heart of the rainforest, the Teatro Amazonas, completed in 1895, represents the pinnacle of a bygone Manaus, a 'Paris of the Tropics,' once elevated by the prosperity of the rubber industry and purported by an oligarchic elite of rubber barons. Known to some by its otherworldly appearance in Warner Herzog's *Fitzcarraldo* (1982), the Teatro Amazonas is a building wrapped in a web-work of intrigue that spans its very conception, and has followed Manaus's rapid transformation since the collapse of the rubber industry in the 1920s.

As a building designed and built to influence physical, social and environmental change through the imposition of foreign ideals, a space is made for an intimate and deconstructive investigation that breaks down this elaborate architectural gesture for its transformative effects. In this sense, this paper aims to decipher the presence of the Teatro Amazonas in Manaus, theoretically unfolding its distinction from its milieu, back into the city itself, at a social, political experiential and retrospective level. More broadly the intention is to explore how the conception of such a disparate and theatrical architecture can resonate beyond its representation, and bear implications upon the experienced conditions of cities.

An Afterimage of a Performance

Located in the heart of the state of Amazonas, where the confluence of the Rio Negro and Solimões form the Amazon River, resides the city of Manaus, which is densely occupied by a rising population of 2 million inhabitants. As the capital of Amazonas, which encompasses 20% of Brazil's vast 8.5 million km^2, Manaus is the home to 50% of Amazonas's population. From the affluence of the rubber boom in the late 19th century to the establishment of the Free Trade Zone in the late 1960s, Manaus has endured a ten-fold surge in the population over the past fifty years. This has incurred a period of rapid 'non planned' urbanization, where the population has spiraled to such an extent that is has exceeded the government's ability to successfully adapt: "from an environmental perspective, the net result [of urbanisation] is that the rivers that flow through the city receive an unknown amount of domestic sewage pollution that has impacted the ecology of the streams...."[2]

Thus by its 'non-planned' nature, rapid urbanisation defied the established containment, rigidity and indulgent autonomy of early twentieth century Manaus, as James Casey maintains, "the current water treatment facilities, were built when there were a mere 100,000 people living here."[3] Thus, an image of Manaus today is conjured, whereby; over 2 million people inhabit a city built to sustain the population of the early twentieth century. Today, only 35% of the population have direct access to treated drinking water, and 17% of households are connected to the sewer network.[4] The remainder of households discharge their waste directly into the tributaries and urban streams, which arterially flow throughout the city. The dichotomous and confronting experiences of Manaus- at one moment submerged in a Belle Époque daydream, and the next moment exposed to the quotidian conditions of the local community- resides both at the core and inspiration of this research.

Still today, despite a complete collapse of the cities rubber industry, a rapid surge in population and deficiencies in basic urban amenities, such as potable water and sanitation, the memory of Manaus, the 'Paris of the Tropic,' lingers as a distant memory heralded by the persistence of the Teatro Amazonas. The overall aim of this paper is to expound the enduring memory of Manaus as an urban narrative, fabricated by Eduardo Ribeiro, the Governor of the State of Amazonas, his transformative governmental policies and the pivotal architectural performance of the Teatro Amazonas.

A Belle Époque Drama

On July 23 1896, Eduardo Ribeiro declared, "I found a small village and turned it into a modern city" as he resigned from administration. Indeed it was not until the rubber boom of the late 19th century that Manaus came into economic and enigmatic prominence, and was in fact only a Portuguese fort in 1669. The development of the vulcanisation of rubber combined with a surge in the production of automobiles and rubber tires [5] significantly increased the demand for the production of rubber, which is a resource native to the Amazon rainforest. This increase in demand saw small villages transform, almost overnight, into bustling hubs of rubber production, and Manaus as a burgeoning heart of the rubber trade.[6] Manaus was deemed the 'gilded epitome of rubber excess,' which defined a cultural decadence displayed by an elite who wore the latest, yet climatically inappropriate, fashions from Paris and shipped their laundry to Portugal. The overwhelming prosperity and

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The Igarape Dos Educandos, looking from the edge of the historical extents of early twentieth century Manaus, towards the sprawling 'non-planned' city (Manaus, Brazil, 2017)

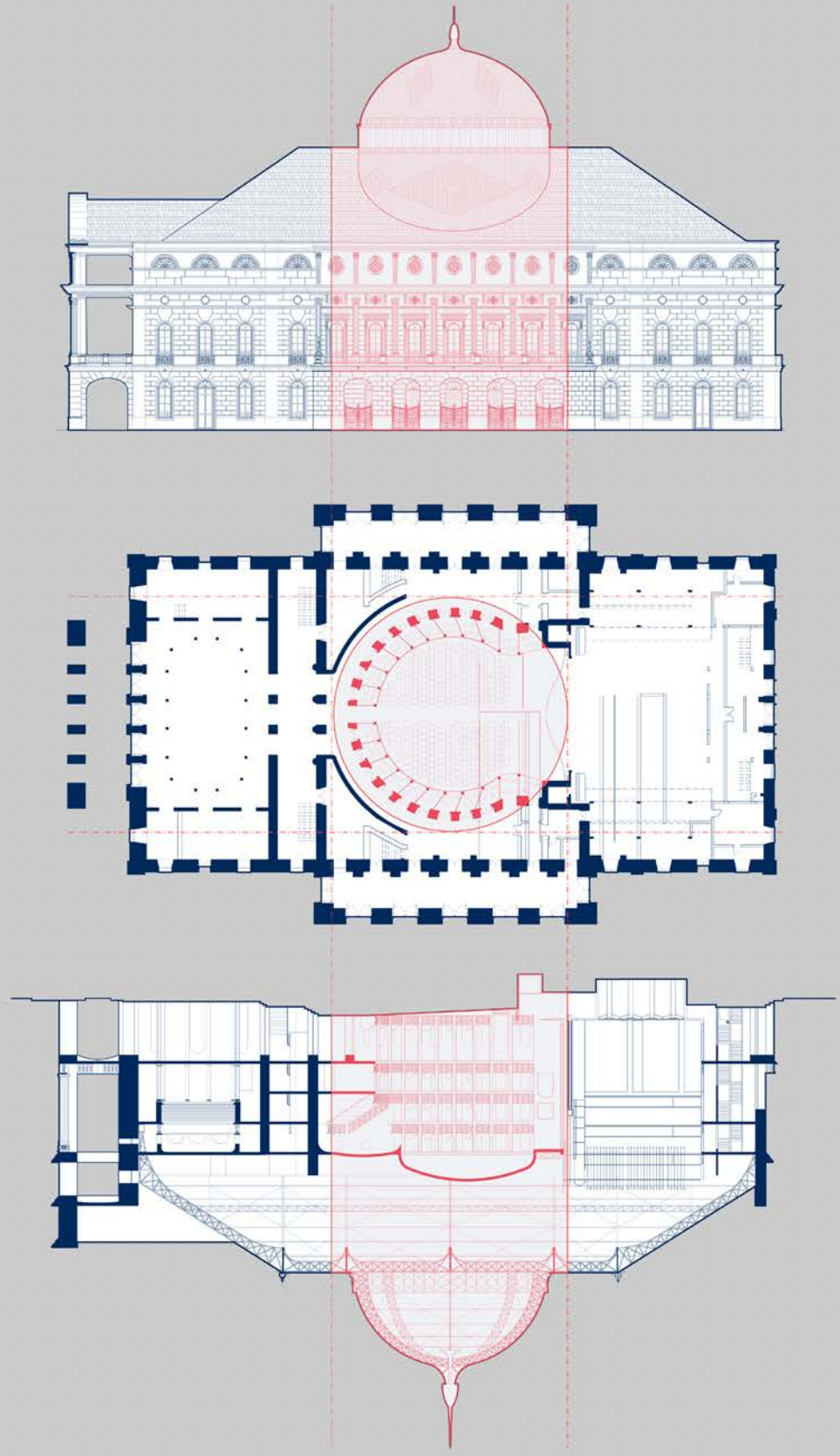


Figure 01

RESEARCH CORE

Baroque Horseshoe Auditorium

Monumental Dome

growth of Manaus at the end of the 19th century defined an epicurean trajectory that manifested in policies to align Manaus with European dictates of modernity and beauty:

> "A new town was designed, with cobbles, gazebos in the squares, obedient to the French style and... subordinate to the English model of parks and gardens, with their unfailing fountains of cast iron."[7]

From building magnificent monumental buildings to being the first city in South America to be powered by an electrical grid, including street lamps, a telecommunication system and trams, Ribeiro proposed the *Beautification Plan of the City of Manaus.* Cultural influences of European architecture, landscape and style were celebrated and orthogonally stamped onto the unfamiliar volatile, 'vast and alluring jungle.' It was an intricate plan, which attempted to create a modern city by actively representing Manaus as one. In effect, the city was groomed and curated into a performance that was crowned and activated by its leading role, the Teatro Amazonas.

A Dramatic Architectural Protagonist

As a building of monumental character, the Teatro Amazonas persists as an embodied memory of Manaus, constituting its own understanding of the city, its history, its being and memory.[8] Envisaged as a "jewel" in the heart of the Amazon Rainforest, the Teatro Amazonas emerged as an architectural protagonist to the illustrious 'Paris of the Tropics' at the turn of the 20th Century. As a pivotal instrument in Eduardo Ribeiro's beautification plan, which aimed to transform Manaus into a modern city by representing it as one, the design of the Teatro Amazonas is innately theatrical:

> "Theatricality was indeed one of the cardinal sins with which modernists had charged nineteenth century culture, especially its architecture, decked out with quilting made up of fragments drawn from the great styles of the past. And how can theatricality be defended' Theatrical behavior suggests superficial role playing-"Don't be so theatrical!"-a dishonest concealment of reality, more especially of our own selves, behind masks and disguises. Authenticity would seem to preclude theatricality."[9]

"Could we not say, in conclusion, that by opening us to what is different, history opens us to the possible, whereas fiction, by opening us to the unreal, leads us to what is essential in reality."

Paul Ricoeur,
The Narrative Function

Indeed, the Teatro Amazonas is a Belle Époque fantasy- an elaborate "quilting," which included a stylistic array of eclectic materials, components, typologies and spaces. "Fragments drawn from the great styles of the past," were imported from Europe and endured a nine hundred mile journey along the Amazon River to reach Manaus. This included: stone from Portugal, Carrara marble stairs from Italy, Murano chandeliers from Venice, cast-iron architectural elements from Glasgow, cast-iron dome structures from Belgium, dome tiles from Alsace and chandeliers from Paris. Only the timber floors, which in their contrasting light and dark hues symbolically represent the meeting of the Rio Solimões and the Rio Negro, are made from native trees. But even these were sent abroad to be machined and processed before returning to Manaus. However, the composition of the Teatro Amazonas not only assembled materials and components from abroad, but also imported architectural styles, archetypes and typologies that had developed through the specific histories and contexts of their origins. As Harries discusses, this theatrical behavior which draws from fragmented pieces can be seen as a precursor to an architecture of "superficial role playing" and the "dishonest concealment of reality."

In *The Architecture of the City*, Aldo Rossi outlines his 'theory of permanences,' based on understandings that an urban artefact, or monument, endures both symbolically and physically. Further asserting that the persistence of a monument is a, "result of its capacity to constitute the city, its history and art, its being and memory."[10] Rossi defines and distinguishes between two types of permanence: 'propelling' permanence as a "form of a past that we still experience," and 'pathological' permanence as "something that is isolated and aberrant."[11]

While the Teatro Amazonas does indeed physically and metaphorically represent a past city, it thus bears traits of 'pathological permanence,' due to its isolation and aberrance from the physical and political realities of Manaus, both historically and today. However, so too can its be defined through 'propelling permanence,' as a monument that theatrically imbued the city, and its inhabitants, with an elaborate narrative of Manaus as transformed into a modern Belle Époque city, a myth that the theatre still propels today. According to Glauco Campello, "the passage between one historical period and another was not solved in our times within the city."[12] In this regard, the theatre can be seen to linger today as the cornerstone to an ideal, which whilst never fully

"But the question of the fragment in architecture is very important since it may be that only ruins express a fact completely. Photographs of cities during war, sections of apartments, broken toys... This ability to use pieces of mechanisms whose overall sense is partly lost... a system, made solely of reassembled fragments."

Aldo Rossi
A Scientific Autobiography

actualized, proliferated an elaborate performance:

> "Could we not say, in conclusion, that by opening us to what is different, history opens us to the possible, whereas fiction, by opening us to the unreal, leads us to what is essential in reality."[13]

In this extract from "The Narrative Function," Paul Ricoeur sheds a possible light on the adopted methodology of this paper. By scrutinizing the original historical and contextual meaning of the architectural materials, elements, structures and spaces, which have been inherited by the Teatro Amazonas, we hope to unveil the fabrication of Manaus's identity. Developing this interpretation of Manaus will subsequently function to further expound the inherent struggles and truths that are concealed behind the projected image of the city.

As can be seen in figure 01 (page 6), this paper proposes to extract a theoretical core sample from the Teatro Amazonas and, from the tiles atop the dome to the subterranean natural ventilation system, surgically dissect the components of the theatre. These components will be further scrutinized for their historical and contextual endowment, before being reunited with the unique historical spectacle of Manaus:

> "But the question of the fragment in architecture is very important since it may be that only ruins express a fact completely. Photographs of cities during war, sections of apartments, broken toys... This ability to use pieces of mechanisms whose overall sense is partly lost... a system, made solely of reassembled fragments."[14]


J.M.DE MACEDO

2

Manaus Manufactured

> "The drama, in its highest development, brings about an insufferable humanisation [Vermenschliching], and it is the task of the actor to pull it down, to make it bearable by wearing the prescribed role loose, fraying it apart so that is blows loosely around himself. The drama is hovering in the air, but not as a roof that is carried by a storm, but as a whole building, the foundation of which is ripped out of the earth with a force that still today comes close to madness."[1]

In this extract from his diaries, Franz Kafka associates the adept actor as maintaining a suitable distance from their fictional role, filtering it through themselves for their specific performance with its historical context, scenery and other actors. A skilful actor does not wear their role mimetically, but project their own interpretation on the various characteristics, pulling them down from the author's original drama and making them bearable for the spectator's consumption. The audience not only views the author's original character, but also the performing actor who is torn between his interpretation and the original role. It is through this process of "humanisation" that the actor aspires to function as a medium through which the audience is united with the drama in a seamless illusion of continuous representation.

However, what if Kafka's spectacular metaphor were taken literally, and a drama, such as the iconic Teatro Amazonas, rather than "hovering in the air," was mimetically transplanted onto the volatile city of Manaus and the Amazonian rainforest. The act of unraveling the essentially qualities of the drama, "fraying" them apart "so that it blows loosely around," would be confined to the Teatro Amazonas's conceptual design, which was influenced by an intersection of belle époque eclecticism, colonial tradition and modernity, rather than contextual performance. Here, spaces, materials and elements have been physically and ideologically 'pulled' and 'frayed apart' from their individual contexts and uncannily woven together as a means to enforce a prescribed and fixed image of Manaus. Whilst the architecture of theatre has evolved throughout the centuries to internally facilitate the act of representation, the performance of the Teatro Amazonas can be interpreted as simultaneously directed outwards, attempting to transform Manaus into a prescribed vision, a "drama."

In-fact, the history of Manaus and the Teatro Amazonas

"Large improvements are needed in Manaus for your welfare and progressive development, it could be said, without exaggeration, that everything has to be changed."

Eduardo Gonçalves Ribeiro
Governor of the State of Amazonas (1890-1896)

The sprawling ZF-2 rainforest reserve, 45 metres above the forest floor (Presidente Figueiredo, Amazonas, 2017)

is one that is built upon the act of representation itself. The theatre was conceived by Eduardo Ribeiro the Governor of the state of Amazonas, as the keystone to a governmental beautification plan that attempted to transform a small village amidst the rainforest into a modern city.[2] On July 10 1893, Ribeiro introduced the concept of the *Beautification Plan of the City of Manaus* at the 2nd Session of the Amazonas state Legislature Congress. Conceived amid the tide of the economic prosperity produced by the boom of the rubber industry, the objective of the plan was twofold- an opportunity for the new elite to demonstrate and flaunt their wealth, but also a tantalizing image to encourage the immigration of workers to Manaus and foreign investment. Brazilian historian, Otoni Moreira de Mesquita, writes:

> "The city beautification, from the public works remained as the main activity, consuming large State investments and justified, in part, as a project to attract capital, hand-to-work and occupation of large territory. Establishing a working population was idealized by both Ribeiro and Ramalho Junior and was justified as a declared effort to attract immigration. Among the various investments undertaken in this direction, it contained urban improvements and especially the beautification project of the capital."[3]

Thus, it was a dual motived plan, on the one side, making significant public improvements to the cities infrastructure, and on the other side, curating and installing a manufactured image of Manaus- tethered to European modernity rather than its contextual milieu. "Large improvements are needed in Manaus for your welfare and progressive development," Ribeiro stated, "it could be said, without exaggeration, that everything has to be changed."[4] Thus, the vision of beautifying Manaus was vast, encompassing the entire central limits. A third of the city was raised and the ground leveled, in order to sculpt the city to reflect an orthogonal self-contained urban grid, devoid of the unruly Amazonian topography. An advanced network of public works were planned to rival those of many modern European cities of the time. This included the installation of electric street lighting, drinking water supplies, a sewage system, public transportation and a telephone network.[5] These public works were to be punctuated by a series of monumental buildings, such as the Government Palace, Palace of Justice, Benjamin Constant Institute, Palace of

Press and the Teatro Amazonas, built stretching from the harbour to the heart of the city, and the streets linking them were lined with ornamented facades. On paper, the city of Manaus did indeed rival the modernity, amenity and beauty of any developed European city, yet with the added spectacle of being situated a nine hundred mile journey into the dense Amazon rainforest, as Bradford Burns describes:

> "That prosperity and bustling activity never failed to impress visitors who made the nine-hundred-mile long journey up the Amazon River to see the city. Invariably they were surprised, even amazed, at what they saw. There was reason to be enthusiastic. Situated (or as some thought, imprisoned) in the midst of a vast and alluring jungle, Manaus loudly boasted of all the amenities of any European city of similar size or even larger. An excellent system of waterworks, an efficient garbage collection and disposal system, electricity, telephone service, handsome public buildings, and comfortable private residences attested to the modernity of the city... This capital of 50,000 inhabitants was bound together by a steel band of fifteen miles of electrical railway, whose streetcars came and went from the praga."[6]

Here, Burns recounts the marvel of visiting Manaus and whilst he does not undermine the amenity or modernity of Manaus, he underpins such achievements as a part of the overwhelming spectacle of Manaus, a "European city," that is "imprisoned in the midst of a vast and alluring jungle." Yet, beneath this vision of modernity- the trams were reported to break down regularly, street lighting was scarce, weeds claimed the central streets and suburbs, waste management was deficient, drinking water lacked proper treatment and none of these services reach beyond the outer limits of the city.[7] Attention was rather placed on constructing the externality outlined in the beautification plan, as evident in the monumental buildings and the surrounding scenery of ornamented facades. These experienced conditions highlight that the urban developments towards that of developed cities was instantly superseded by the elaborate veneer of beautification, as asserted by Castro:

> "This boiling facts and search for a civilized profile leads to a need for urban change, the valuation of the city as a showcase of

"Situated (or as some thought, imprisoned) in the midst of a vast and alluring jungle, Manaus loudly boasted of all the amenities of any European city of similar size or even larger."

Bradford Burns
Manaus 1910: Portrait of a Boom Town

The Teatro Amazonas, situated within the heart of a transformed present day city (Manaus, Brazil, 2017)*

“Convergence and symmetry, these principles were applied to the city only after having been, one might say, vulgerised by two intermediaries: the theatre and the art of the garden. The theatre ties geometry and urbanism.”

Pierre Lavedan
Histoire d’urbanisme

Praça São Sebastião, the public square of the Teatro Amazonas (Manaus, Brazil, 2017)*

> civilization... Requiring modification of urban areas, encourages the emergence of new forms that allow comfort or favoring the view of the dominant classes. It would, therefore, suits both the consequent implementation of the social life of a Europe belle epoque as imports, the tropics, the organization's own formal architecture."[8]

Thus, despite an idealized plan that stretched from beautiful streets, buildings and parks supported by modern urban and infrastructural promises, Ribeiro's Manaus rather focused on the former, constructing a meticulously crafted urban stage set, supported by the allure of a grand belle époque theatre. Manaus became a strategic showcase through which to exhibit and confirm the oligarchic status of the rubber barons. Musing on the writing of author Caio Prado in "The Shadow of Rubber," Orange Matos Feitosa writes:

> "The investments in modernization in the capital, with the Amazonas Theatre and the Theatre of Peace, respectively in Manaus and Belém, have become the protagonists of this transformation; and evaluated in an exaggerated way by authors such as Caio Prado... The ultimate symbol that this will be fortunate and more easily dissipated is the Teatro Municipal de Manaus, a monument where grandeur joins tasteless, [...]. Of course, nothing will be left of the broken house of cards that founded this whole fictitious prosperity and superficiality. In a few years [...] the wealth of the Amazon will be overthrown in smoke. Sobrarão only ruins [...]."[9]

Thus, within this greater image of Manaus, the Teatro Amazonas can begin to be considered the keystone, or even the mimetic "protagonist." Whilst buildings such as the Palace of Justice and the Benjamin Constant Institute were important in the overwhelming beautified image of Manaus, the Teatro Amazonas became the symbolic figure underpinning the entire visage. As the theatre is described as "tasteless" and with "grandeur" it is simultaneously elevated as a spectacle- an elaborate palimpsest of elements that are bound together by an idealised city. "Before the stoppage of work on the Palace Government, which should be the main building held that decade," Mesquita maintains, the "Teatro Amazonas, for its location and monumentality, took paper by becoming the architectural emblem of that historical period, and less

than a century, rose the symbol of the city condition."[10]

To continue Kafka's analogy of the "drama," the Teatro Amazonas can be considered a drama that is not made bearable by representation through its context, but rather has attempted to enforce its own unfamiliar representation onto the highly volatile and unique environment of Manaus. Whilst theatre is perceived as a highly introverted program, within which fictional worlds and visions are performed and experienced, here the Teatro Amazonas is conceived also for its outward representational affect on the city, culture and society. Its enigmatic presence became the pivotal focus of the urban representation, as further suggested by Burns:

> "Walking away from the modern docks which could accommodate the largest ocean-going vessels of the day, the newly arrived visitor entered the neat, tree-filled Praga do Commercio with its inevitable fountain, this one with imaginatively painted cherubs. On the opposite side of the praga, the city stretched out over low rolling hills. Four of those hills elevated the most important buildings to positions of prominence. Slightly to the left and in front of the visitor, the large cathedral, of austere Jesuit architectural style, stood on a small rise. Farther to the left on a second hill was the white, neo-classic governor's mansion. The hill directly in front of the viewer supported government buildings and was crowned with the magnificent Amazonas Theater, one of the splendid opera houses of the day."[11]

As Burn's describes the first sights and impressions of Manaus, the very meticulous composition of the city becomes apparent. Limited to transport via the Amazon River, the dock formed the first point of approach, and thus the first composed vision of Manaus. This viewpoint not only sets the scene by elevating Manaus's monuments, but also places emphasis on the Teatro Amazonas as the navigational point of the city, the 'crown.' The dock as the starting point and the Teatro Amazonas as a tantalizing destination, prescribes a passage through the city, a journey that showcased Manaus as outlined in the beautification plan. It denotes a passage up the richly ornamented Eduardo Ribeiro Avenue encountering the Alfândega, parks, the Cathedral of Our Lady of Conception, the Palace of Justice and an axial view of the Benjamin Constant Institute before finally arriving at the Teatro Amazonas and its square, the Praça São Sebastião. In *Histoire d'urbanisme*, Pierre Lavedan discusses the role of theatre in baroque urban design:

> "Convergence and symmetry, these principles were applied to the city only after having been, one might say, vulgerised by two intermediaries: the theatre and the art of the garden. The theatre ties geometry and urbanism. Theatrical décor would have its effect on urban décor, while scenography was born from the treatises on perspective."[12]

In this regard, Manaus can begin to be considered as inherently embedded with a prescribed composition that functions akin to theatre, with a scenography of curated views, sequences, and surfaces of facades, and populated with a décor of monuments, modern amenities and infrastructure. Manaus is not a baroque city, yet, as discussed previously, this understanding of the baroque city bears relevance in Manaus's inheritance of it properties from belle époque eclecticism and Brazilian colonial traditions. Whilst, not as spatially limited as the perspectival illusions of Serlio Sebastian and Nicola Sabbatini, the beautification plan of Manaus sculpted the city through theatrical notions of perspective, scenography and movement. Here, a scenography of two-dimensional planes is rather translated into a sequence of ornamented facades within a meticulously crafted urban experience that is strategically punctuated by monuments, parks and modern infrastructures. According to Theatrologist, Marvin Carlson, "Eventually, as the new rulers of the Renaissance consolidated their power, they began to impose their own demands upon the urban text, re-forging it gradually into the baroque city, a more proper stage."[13] With this in mind, Manaus can be interpreted to inherit qualities of the stage, populated with a scenography that supports the performance of the protagonist, the Teatro Amazonas.

Thus, Eduardo Ribeiro Avenue can be seen to have constituted a sequence of moments and aesthetic encounters, meticulously composed to support the projected image of Manaus, and ultimately the Teatro Amazonas's lofty role in representing it. Other than

monuments, parks and ornamented facades, this avenue was even characterised by the tram-line and Manaus's first sewage system, which only linked the monuments and diverted their waste outside the central limits of the city. "The set," Bertolt Brecht writes, "needs to spring from the rehearsal of groupings, so in effect it must be a fellow actor,"[14] and indeed the theatrical setting of Manaus was theatrically activated, supporting the Teatro Amazonas.

Thus, the notion of the theatrical event, outlined earlier with Kafkaesque allegory, could no longer solely reside within the introverted program of the Teatro Amazonas. Ribeiro's *Beautification Plan of the City of Manaus* was a gesture that rejected the environmental specificities and volatilities of the Amazonian rainforest for trending European, particularly French, understandings of modernity, beauty and hygiene. That is- a gesture that aimed at transforming Manaus into a modern city despite the volatile and unfamiliar terrain of the Amazonian rainforest. Manaus rather emerged as a spectacular showcase, championed by the Teatro Amazonas, a theatrical gesture pieced together with disparate fragments, endowed with their own history, urban monumentality and contextual significance.

Following this understanding of the Teatro Amazonas and its role in Manaus's representation, this paper will take a theoretical core sample through the heart of the building. From the tiles of the dome to the seating of the auditorium, the composition, architectural elements and typologies of the Teatro Amazonas will be scrutinized for their role in supporting Manaus's lofty aspiration.


J.M. DE MACEDO

3

The Dome:

/ The Domical Shape,

/ The Vault Beneath the Shape

/ Alsatian Tiles

> "One of the most common was the mark of a portico with pediment and columns on the axis of the main facade, this element usually projected to a greater or lesser degree, the rest of the building and contained huge columns or columns settled above the ground floor, on basement arcade. Widespread was also the party of launching, the facades, sections (or even all) of the peristyle of the temple Greek and Latin, were used both segments endowed with pediment and those of deprived and often came to play in full, or near, the external configuration of that building. Another common solution was the use of the dome crowning the composition, often designed with inspiration as the dome of the Roman Pantheon or Renaissance models."[1]

Adorned with 36,000 vibrant Alsatian tiles and widely visible from central Manaus, the dome constitutes the most striking, yet almost aberrant element to the eclectic composition of the Teatro Amazonas. However, as asserted by Sousa above, it can also be situated within a larger contextual formula introduce to Brazil in the 19th Century. The style is naturally eclectic and relies on the familiar imagery of architectural elements drawn from prominent European cities and buildings. Belted by a ring of stained glass, this monumental element does not draw any natural light into the building, nor does it have any internal impact upon the spaces or functions of the theater itself. The dome was not even included in the initial design drawings proposed by the Portuguese Office of Engineering and Architecture (Gabinete Português de Engenharia e Arquitectura), which has also stirred debate as to whether it was later added to the original design by Eduardo Ribeiro and Celestial Sacardim, the constructing architect, for its exterior effects and spectacular beautifying presence on the city of Manaus.

The Domical Shape

Nonetheless, whether spatially incorporated or disparate, an afterthought or initially designed, unique or archetypal, the dome is a historically charged architectural element, which constitutes an instrumental component in constructing a Belle Époque image of Manaus. Ever since the 19th Century, it has been widely supposed that the architectural element of the dome originates from a highly environmental and functional system to

span space through the structural possibilities of brick or masonry.[2] However, a precise definition of the dome is actually rather illusive. The dome bears an extensive architectural lineage that demonstrates a vast and comprehensive evolution through countless adaptions and appropriations to varying architectural styles, materials, construction methodologies, social contexts and spatial applications. In fact, "the hemispherical dome shape, which is today so commonly associated with the dome," according to professor Baldwin Smith, "undoubtedly acquired its geometric curve largely from the theoretical interests of the Greek mathematicians and the practical considerations of Roman mechanics."[3] The modern idealised dome that unites materials, geometry and structure, can thus be considered to stem from objective inquiry, rather than the evolution of historic or social significance. In this sense, in order to surmise the social and cultural implications of the dome, its origins, and thus the dome atop the Teatro Amazonas, a distinction must be made between the development of the dome shape and the structural evolution of domical vaulting. As Smith further writes:

> "To the naive eye of men uninterested in construction, the dome, it must be realized, was first of all a shape and then an idea. As a shape (which antedated the beginnings of masonry construction), It was the memorable feature of an ancient, ancestral house. It is still a shape visualized and described by such terms as *hemisphere, beehive, onion, melon, and bulbous.* In ancient times it was thought of as a *tholos, pine cone, omphalos, helmet, tegurium, kubba, kalube, maphalia, vihdra, parasol, amalaka tree, cosmic egg, and heavenly bowl.* While the modern terms are purely descriptive, the ancient imagery both preserved some memory of the origin of the domical shape and conveyed something of the ancestral beliefs and supernatural meanings associated with its form."[4]

Thus, the dome can be seen to originate from an idealised shape endowed with cultural and social meaning, rather than a utilitarian form of roofing. As an architectural element, the dome, whilst having no specific pinpointed origin, can be traced to the humble origin of "an ancient, ancestral house." The modern word "dome" itself, derives from the Greek and Latin word *domus*, or in Middle and Late Latin *doma*, which translated to "house" or "roof,"

"To the naive eye of men uninterested in construction, the dome, it must be realized, was first of all a shape and then an idea."

Baldwin Smith
The Dome

Dome of the Tour des Sorcières adorned with Alsatian tiles (Thann, France, 2017)

“Thus Great domes followed Roman dominion and Christian expansion, until the Renaissance, when the dome began to be everywhere in Europe the foremost symbol of the unity of religion”

James Mitchell
The Noble Dome

The reinforced concrete dome of the Basilica of the Sacred Heart, built in the early Twentieth Century (Brussels, Belgium, 2017)

implying its origins as a home or shelter. Ancient cultures of Italy, Syria, India and Islam describe houses, tents and primitive shelters constructed from animal skin, wood, thatch, clay and laid out in a circular plan, which were defined by the domical shape and ideas.[5] These primitive dwellings possessed an, "expressive value of a symbol of transcendent power, having been the abode of ancestral chieftains, and divinities, owing to its primitive associations, the domical form would have been accepted as a symbol of kingly and cosmic authority – the eternal house of the Great Ones."[6] In fact, the primitive nature of such dwellings and societies predates the tools that would have been required to build orthogonally:

> "The curvilinear plan of a house is universally an instinctive primitive shape, because it requires no preconceptions... starting at one point, with pliable materials, which don't require tools, and returning to the same place after a space has been enclosed.... Simple as the rectangular form may seem, it has never been a natural shape in which men instinctively built their first houses. The idea of a structure with straight walls at right angles did not arise until builders began to work with rigid materials which required tools."[7]

The domical shape can, therefore, be seen to originate from the humble form of primitive dwellings, and subsequently their innate spiritual symbolism. Entrenched with the signification of "transcendent power," in time, the domical shape evolved to inform the religious symbolism and architectural expression of Early Christianity and Islam. "The circle, having no beginning and no end," asserts Theresa Grupico, "reflected perfection, the eternal, and also the heavens. The square, having four sides like the four points of a compass, reflected the earth. The architectural form of circular dome over square base thus physically articulated the relationship between the human and divine realms..."[8] It is with the slow evolution of societies, spirituality and architecture that the dome can be tracked from its humble origins to its monumental stature, as outlined by James Mitchell in "The Noble Dome,":

> "Inside a house, the unity of family and clan was strengthened, and ancestors were venerated, so that not only the house but hearth and threshold became sacred. From that point it was only a step to a house for

> God, since all houses were also his. But the monumental dome had no place in the ancient near east or in Greece. In this form it appeared first in Rome in the second century A.D., was carried well toward perfection at Byzantium in the sixth, and at last attained at Rome in the sixteenth. Thus Great domes followed Roman dominion and Christian expansion, until the Renaissance, when the dome began to be everywhere in Europe the foremost symbol of the unity of religion."[9]

Here, Mitchell aligns the importance of the dome shape as it evolves from humble origins as something inherently spiritual. However, does so by making a clear distinction between the dome shape of primitive ancestral "houses" and monumental domes. The growth of Roman dominion and Christianity, thus simultaneously marks the domes transition from humble spiritual houses to a consciously applied urban symbol that imbues "unity of religion." In this regard, the role of the dome atop the Teatro Amazonas can begin to be deciphered in relation to its supporting role in projecting the belle époque vision of Manaus. The dome is seemingly stripped of its religious connotation and merely exploited for the exterior affect of unity. However, by unity, this no longer refers to the unity of the church, but rather Manaus's theoretical association with the European cities it aspires to be, as Mitchell writes:

> "What I see is a vestige of a byzantine dome, rather like an artificial flower, attractive in itself, but without roots to make it authentic. These domes... put up a brave, sometime even a beautiful, front, but they do not visibly connect with the history or spirit of the place"[10]

While Mitchell describes the domes of a judicial building in Indiana, this statement resonates with the dome of the Teatro Amazonas. The Teatro Amazonas, much like the dome Mitchell describes, bears the remarkable traits of any dome in Europe, but simultaneously lacks an innate connection with the "history or spirit of the place," from which domes derive. Hence, the dome can be seen to anchor the Teatro Amazonas, and thus Manaus, to these ideals, which are foreign to the dense Amazonian rainforest, yet steeped in the styles and culture "everywhere in Europe."[11] As the only monumental dome planned in the skyline, it thus plays an instrumental

"What I see is a vestige of a byzantine dome, rather like an artificial flower, attractive in itself, but without roots to make it authentic. These domes... put up a brave, sometime even a beautiful, front, but they do not visibly connect with the history or spirit of the place"

James Mitchell
The Noble Dome

The Teatro Amazonas from Praça São Sebastião (Manaus, Brazil, 2017)*

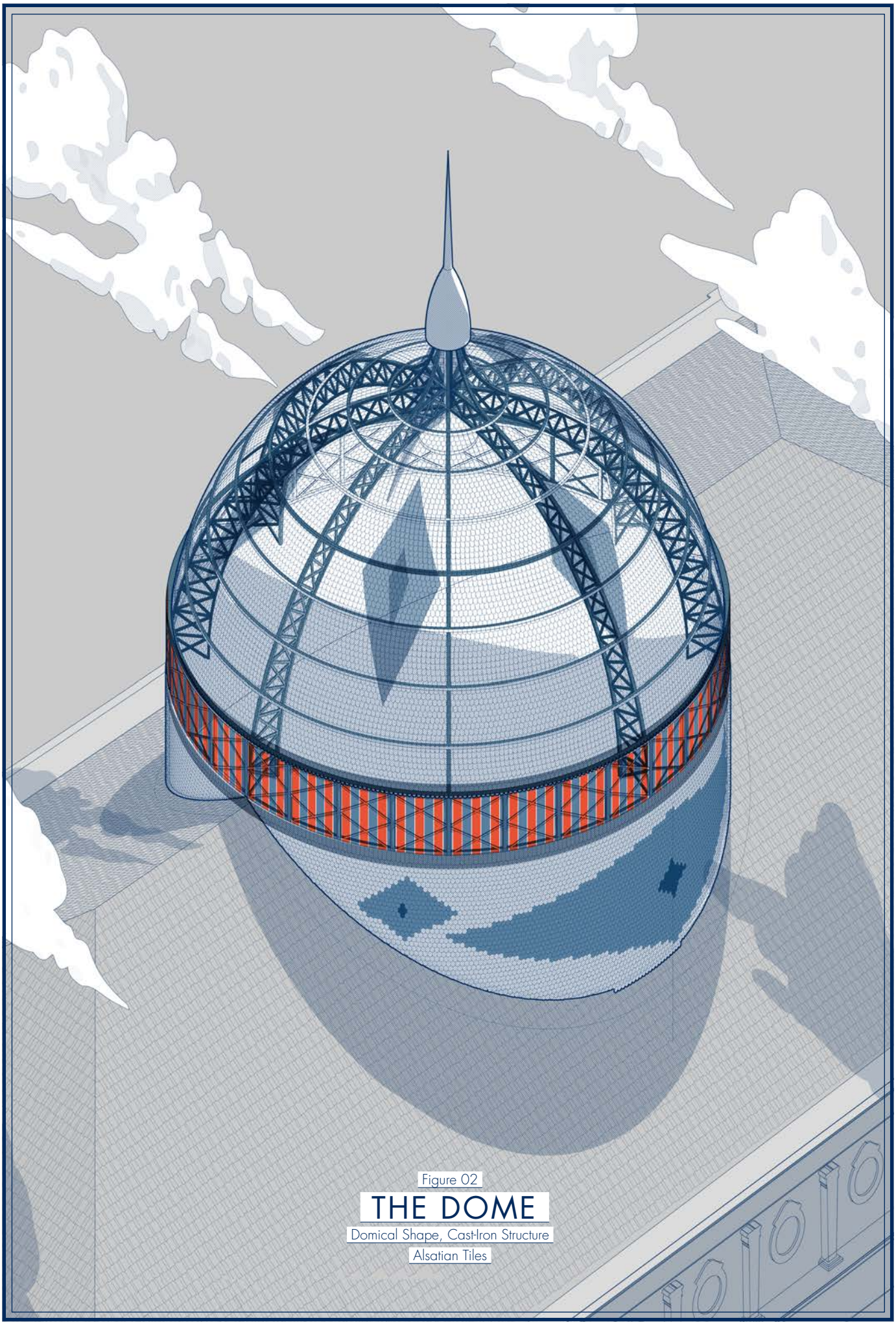


Figure 02

THE DOME

Domical Shape, Cast-Iron Structure

Alsatian Tiles

role in projecting Ribeiro's image of Manaus. As has already been discussed, the image of the city relied on a theatrical urban choreography in relation to the Teatro Amazonas, which can be informed by Marvin Carlson's discussion of the dome in scenic design:

> "Before long the vision of the abstract ideal city of these artists began to be applied to idealized depictions of the city of Florence itself. The scenic design created by Baldassare Lanci for the 1569 production of Vedova in the recently opened Salone dei Cinquecento of the Ducal Palace is a striking example of this development. Brunelleschi's great dome for the Florence cathedral is here used to provide a terminal element for an imaginary street... a setting of this kind surely worked to change that audience's perception of its urban setting."[12]

While Carlson discusses Baldassare Lanci's scenography for a performance, rather than a historical urban situation, it resonates with manufacturing the experience of an "abstract ideal city" within an urban setting, or backdrop. Here a dome is referred to as a "terminal element," which corresponds to the interpretation of the Teatro Amazonas's role as lofty urban destination- a point from which the remainder of the city has been intricately choreographed and curated. Thus, Manaus can be interpreted as moving towards the dome, leading the individual to a point that is intrinsically linked to the great modern cities of Europe through their imagination. Carlson further expounds the profound power of such idealized representations, by suggesting that the audience's "perception of its urban setting," will be subsequently influenced by these depictions, further proliferating and concretising the illusion of the city with the audience's imagination.

The Vault Beneath the Shape

While the dome shape of the Teatro Amazonas is tied to a rich and intricate history of symbolism and history, the vaulting structure on the other hand derives from the emergence and innovation of 19th Century Belgium cast-iron. Composed of eight curved truss frames arrayed around a central spire and bound together by six iron rings, the dome of the Teatro Amazonas was manufactured by the *Compagnie Centrale Construction* in Haine-Saint Perre, Belgium during the late 19th century. Founded in 1871 by Pierre-Joseph Hiard, the *Compagnie Centrale Construction* was established as a manufacturer of railroads throughout Belgium. However, by 1881, the company had expanded into structural systems for buildings in Belgium and abroad.

The 19th century marks a period of significant architectural and structural developments through the innovation of iron structures and covering systems. The first world exhibition, *The Great Exhibition of the Works of all Nations,* which took place in 1851 at Hyde Park, London, was housed within the enigmatic Crystal Palace. Designed by Joseph Paxton, as intricate system of cast-iron columns, wrought-iron girders and wrought-iron arches,[13] it was an impressive demonstration of the structural possibilities of iron on a global stage. However, while iron was innovative for the time, it can be asserted that it conflicted with architectural expression of the time:

> "The visual appearance of iron buildings, which were regarded as defective in that their thin iron columns and trussed roofs did not offer enough sense of durability and visual strength to give them aesthetic value."[14]

Indeed the visual appearance of iron building's, such as the Crystal Palace, initially emerged as spectacles to the contextual societies of the mid 19th century. Contextual architectural aesthetics, bound to historical developments in brick, masonry and timber structures, functioned to label early iron structures as visually and 'aesthetically defective.' Yet, such structures, on the other hand, physically demonstrated the new structural and architectural possibilities of iron, both as a means to span significant distances and increase natural lighting within structures.

Considering the disparity between aesthetic intentions and profound structural possibilities, it is interesting to note the significant rise in the use of iron in utilitarian structures, such as bridges and train stations. In the late 19th century the *Compagnie Centrale Construction* developed and manufactured the structures of multiple

Approaching Manaus by boat, one is greeted by the monumental dome of the Teatro Amazonas, (Manaus, Brazil, 2017)*


MARINHA DO BRASIL

buildings including the Chilean National Museum of Fine Arts of Santiago (1880) and the Antwerp Central Station (1895-1989). Both examples take advantage of the innovative potential of iron by developing intricate iron roof structures enclosed with glass. The three-hinged arched iron frames of the Antwerp Central Station platform hall span 64 metres and are selectively in-filled with wired glass.

Elsewhere in Brussels, the fusion of cast-iron and ornamentation enabled the rise of buildings such as Paul Saintenoy's 1899 masterpiece, now the Museum of Musical Instruments, and the Royal Greenhouses of Laeken, designed by Alphonse Balate. Built between 1874 and 1895, the Royal Greenhouses included the construction of the Winter Garden (Jardin d'hiver), a domed greenhouse, comprising an elaborate iron structure. Initially reserved for the Royal Chapel, where it acquired the name I*ron Church*, the Winter Garden was designed with an externally expressed trussed dome structure, combining a unique structural and programmatic expression. However, where the introduction and development of iron nurtured innovative utilitarian structures and magnificent buildings that were freed from the solidity and darkness of traditional materials, following Kaplan it can be asserted that:

> "The dome is perhaps the noblest for the exterior effect... size, structure and character are all indispensable.... Yet, new domes are likely to be utilitarian, made of whatever stuff most economically and efficiently covers a given space, and made by similar methods."[15]

Indeed, unlike the Winter Garden, as one peels away the domical shape of the Teatro Amazonas, the structure conforms to such utilitarian construction, "of whatever stuff most economically and efficiently covers a given space." Whilst, the Teatro Amazonas does incorporate a belt of stained glass into the base of its iron structure, the dome is not an inhabitable space and nor does it function to illuminate a space below, like renaissance archetypes. Rather it consists of an intricate skeleton of eight curved trussed arches and a web-work of supplementary elements to inflate the domical shape outside. In this sense, the cast-iron structure of the Teatro Amazonas can be seen as merely an attempt to efficiently support the signification of the dome. Mesquita maintains that:

> "Building a great work as the Teatro Amazonas

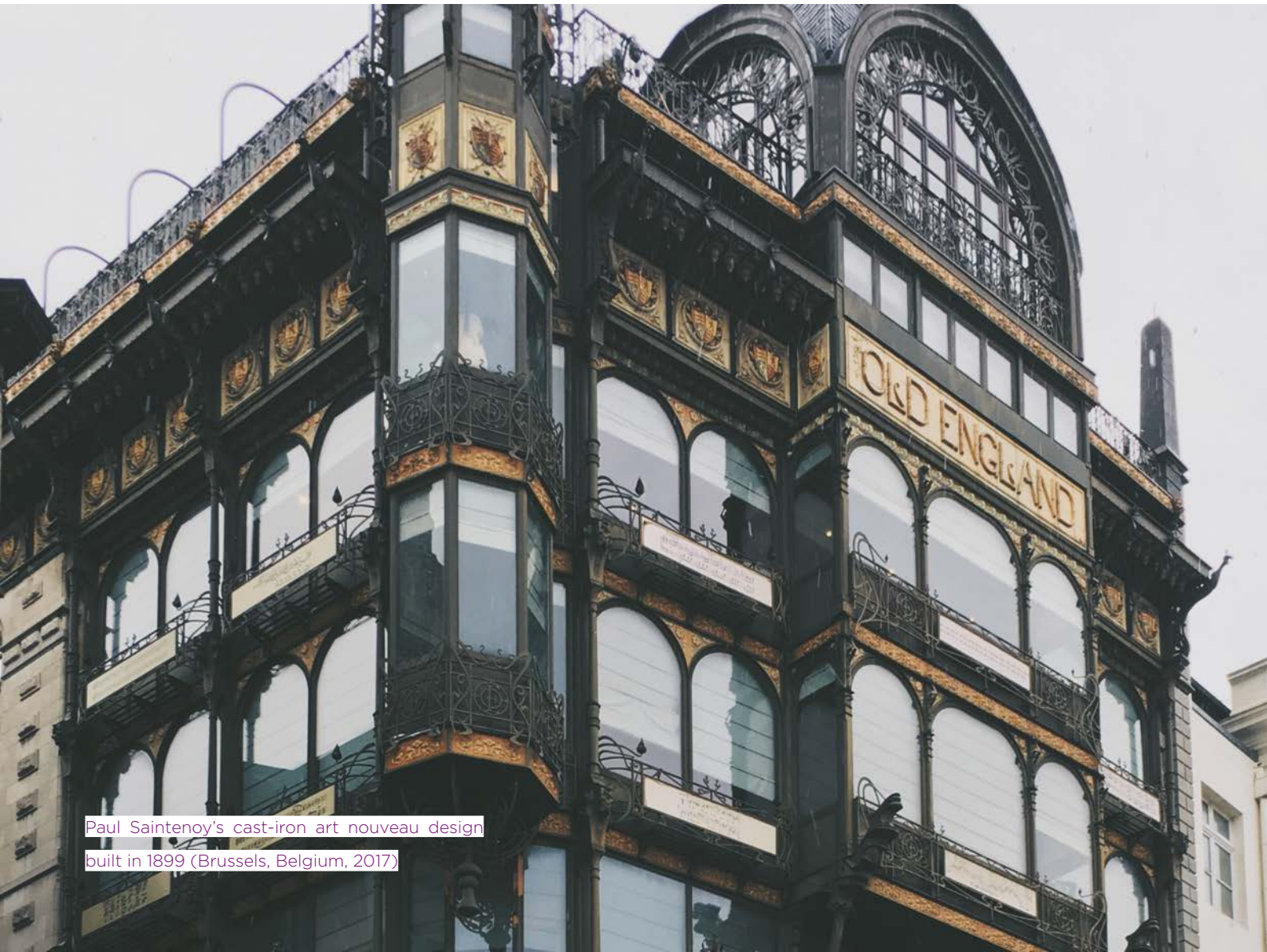
"The visual appearance of iron buildings, which were regarded as defective in that their thin iron columns and trussed roofs did not offer enough sense of durability and visual strength to give them aesthetic value."

Paul Dobraszczyk and Peter Sealy
Function and Fantasy

Cast and wrought iron structure of Antwerp Central Station platform hall (Antwerp, Belgium, 2017)

"Building a great work as the Teatro Amazonas meant both a considerable achievement as administrator for the opening of a stage to display the local society... To justify the use of iron structures, Ribeiro argued that this material, in addition to not be subject to deterioration, was much lighter than wood."

Otoni Moreira De Mesquita
La Belle Vitrine



Paul Saintenoy's cast-iron art nouveau design built in 1899 (Brussels, Belgium, 2017)

> meant both a considerable achievement as administrator for the opening of a stage to display the local society. In 1894, the governor said the Amazonas theater works were slow, but it was expected that within two months the building was able to get the coverage that would be made from cast-iron. To justify the use of iron structures, Ribeiro argued that this material, in addition to not be subject to deterioration, was much lighter than wood."[16]

However this choice is not only marked by qualities of iron construction for the time, but also a "considerable achievement as administrator" to open a "stage to display the local society." Iron itself, whilst controversial in the prospect of new architectural possibilities, simultaneously marked the development of modern cities. In *Function and Fantasy* Dobraszczyk and Sealy assert that, "French architects were less likely to adopt such an anti-industrial bent; under the rigorous dictates of Beaux-Arts academicism, most chose to conceal their structural use of iron behind classical veneers"[17] So too does the design of the Teatro Amazonas conform to this French architectural trait, where the expression of new materials was overlooked, in favour of constructing archaic architectural elements through more efficient means. This both inflated and elevated the domical shape within the choreographed scenography of the city, but also concealed the technological innovation of an aspiring industrialised city. Yet, the dome was not realised as an abstract domical shape looming above Manaus, but was further designed with a powerful external appearance of 36,000 Alsatian tiles.

ALSATIAN TILES

While it is said that it was the Romans who initially introduced the tile along the Rhine, the Alsatian tile, the *biberschwaüz* (or beaver tail in Alsatian dialect), evolved to be intricately embedded within the environmental, social and cultural contexts of Alsace. Despite this contextual entanglement, 36,000 glazed Alsatian tiles were shipped to the Manaus, destined to adorn the Teatro Amazonas's monumental dome amidst the encompassing rainforest. With a domical shape and a wholly concealed innovative structure, which theatrically associated Manaus with the modernity and advancement of European cities, the external appearance of the dome is mediated through the Alsatian tile.

Identified by its flat appearance and rounded tip, the tile

The roofscape of Alsatian tiles in Colmar
(Colmar, Alsace, 2017)

developed as an essential element intricately embedded within the environmental, social and cultural contexts of Alsace. At approximately 150mm wide and 300mm long, and designed with a unique series of furrows and ridges that function to curate and direct the rain towards the heart of the next tile. The tiles were made from high quality Alsatian clays that were extracted from local quarries. The contextually specific development of the tiles is reinforced by a local proverb that suggests that the distribution of the tiles should be limited to the surrounding areas from which they were extracted: 'to use a tile from the South in the North, it may not manage to compensate for the harsh climates and frost.'[18]

Yet beyond their highly contextual specificities, they simultaneously bare cultural and religious significance in their symbolic and decorated appearances. While the tiles were made using standardized molds, at the end of the working day the makers would decorate and inscribe a tile that would be distinctive from the rest. Otherwise, bespoke tiles were commissioned to feature family markings, Christ's monogram or symbols of prosperity and then positioned as close to the top of their roof to ensure the protection of the house. Thus, not only did the Alsatian tile grow into the climatic conditions of Alsace, but they are also endowed with an innate significance to the local society.

While the *biberschwaüz* had widespread use throughout Alsace, the notion of further colouring and glazing the tiles, emerged as a means to further signify important buildings and enliven the skyline. Applied only to the outside surfaces of the tiles, glazing evolved as a further means to enliven the skyline, whilst maintaining their performance of directing rain and allowing moisture to escape from behind within the tall ventilated Alsatian attic spaces. Coloured with metal oxides, such as pyrolusite for browns and black, chromium for greens and black, cobalt for blues, antimony for yellows and ferric oxide for reds, the tiles were composed in various patterns such as diamonds, zigzags and triangles.[19]

Not only the shape of the tiles, but these patterns infiltrated the external composition of the Teatro Amzonas's crowning dome. The dome itself consists of a yellow background, with eight diamonds directed towards the tip and base of the dome, and each is centred with a smaller red diamond. Where as, the drum that connects the base of the dome to the slope of the roof is green, with six yellow diamonds that have a smaller blue diamond in their centre. The split in the form, within which the red and blue stained glass is fitted, is trimmed by a striped border that is five tiles deep. In essence the

"To use a tile from the South in the North, it may not manage to compensate for the harsh climates and frost."

Alsatian Proverb

The roofscape of Alsatian tiles in Strasbourg (Strasbourg, France, 2017)

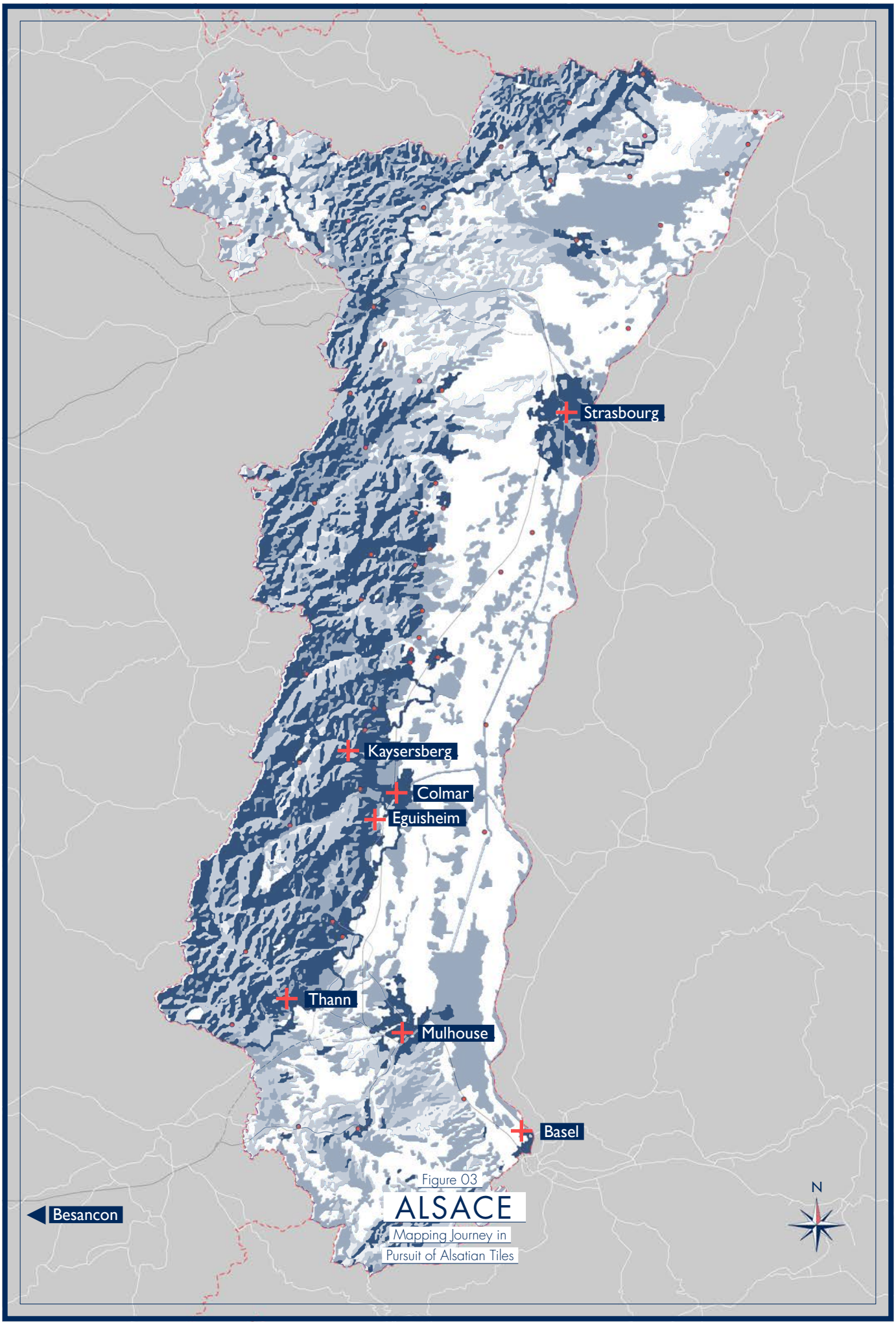
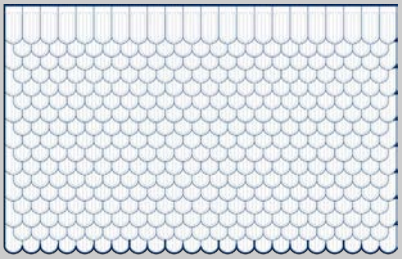


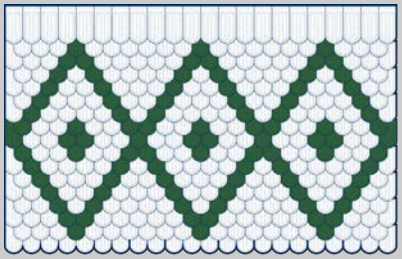
Figure 03

ALSACE

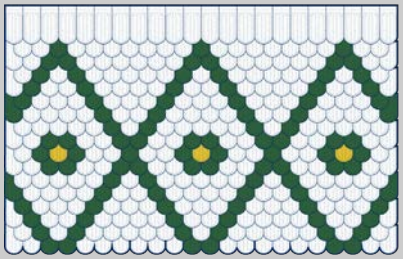
Mapping Journey in Pursuit of Alsatian Tiles



Unglazed Alsatian Tiles
Alsace



Ancienne Douane
Colmar, Alsace



Ancienne Douane
Colmar, Alsace

La Collégiale Saint Thiébaut
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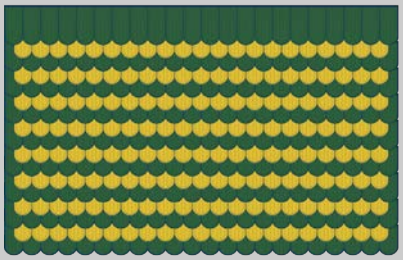
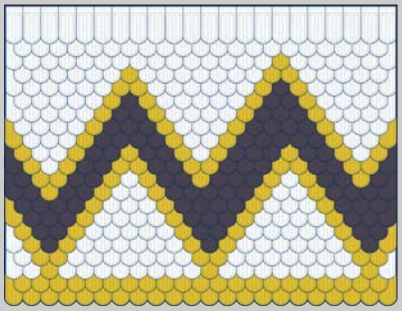
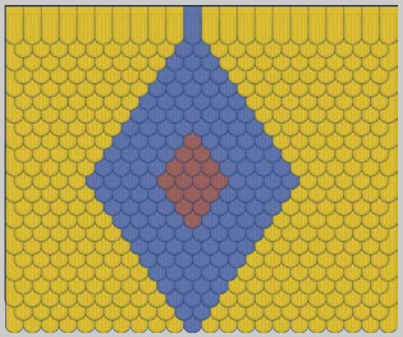


Ancienne Douane
Colmar, Alsace



Chapelle Notre Dame du Refuge
Besancon, France

Teatro Amazonas / Dome Base
Manaus, Brazil



Teatro Amazonas / Dome
Manaus, Brazil

Figure 04
ALSACE
Mapping Patterns of
Alsatian Tiles

"The principle motifs for all neo-Gothic archiects had been diamonds, zigzags, triangles, stylized flowers, crosses (occasionally) and (more commonly) national coats of arms.... was modulated by the desire to create a national style."

Dragan Damjanović
Polychrome Roof Tiles and National Style

The Ancienne Douane of Colmar, adorned with patterns of glazed Alsatian tiles (Colmar, Alsace, 2017)

dome of the Teatro Amazonas is adorned with a striking composition, which elevates the spectacle of its theatrical performance. However, the dome's omission from the initial representations of the Teatro Amazonas, paired with its aberrant addition to the overarching architectural composition of the theatre has sparked much discourse and speculation regarding its appearance, meaning and design. In particular this discourse is underlined by its resonance with Brazil's transition from Monarchical rule to a Republic.

On November 15, 1889, Marshal Deodoro da Fonseca deposed Emperor Dom Pedro II and declared Brazil a Republic. Commencing construction in 1882 and inaugurated on December 31, 1896, the construction of the Teatro Amazonas coincided with this shaky transition from Empire to Republic. Emerging 7 years after the coup d'état that deposed imperial ruling of Brazil, the Teatro Amazonas was unveiled, revealing a Belle Epoque opera house crowned with a monumental dome that is dressed with glazed Alsatian tiles that are composed with a significant likeness to the new republican flag of Brazil.

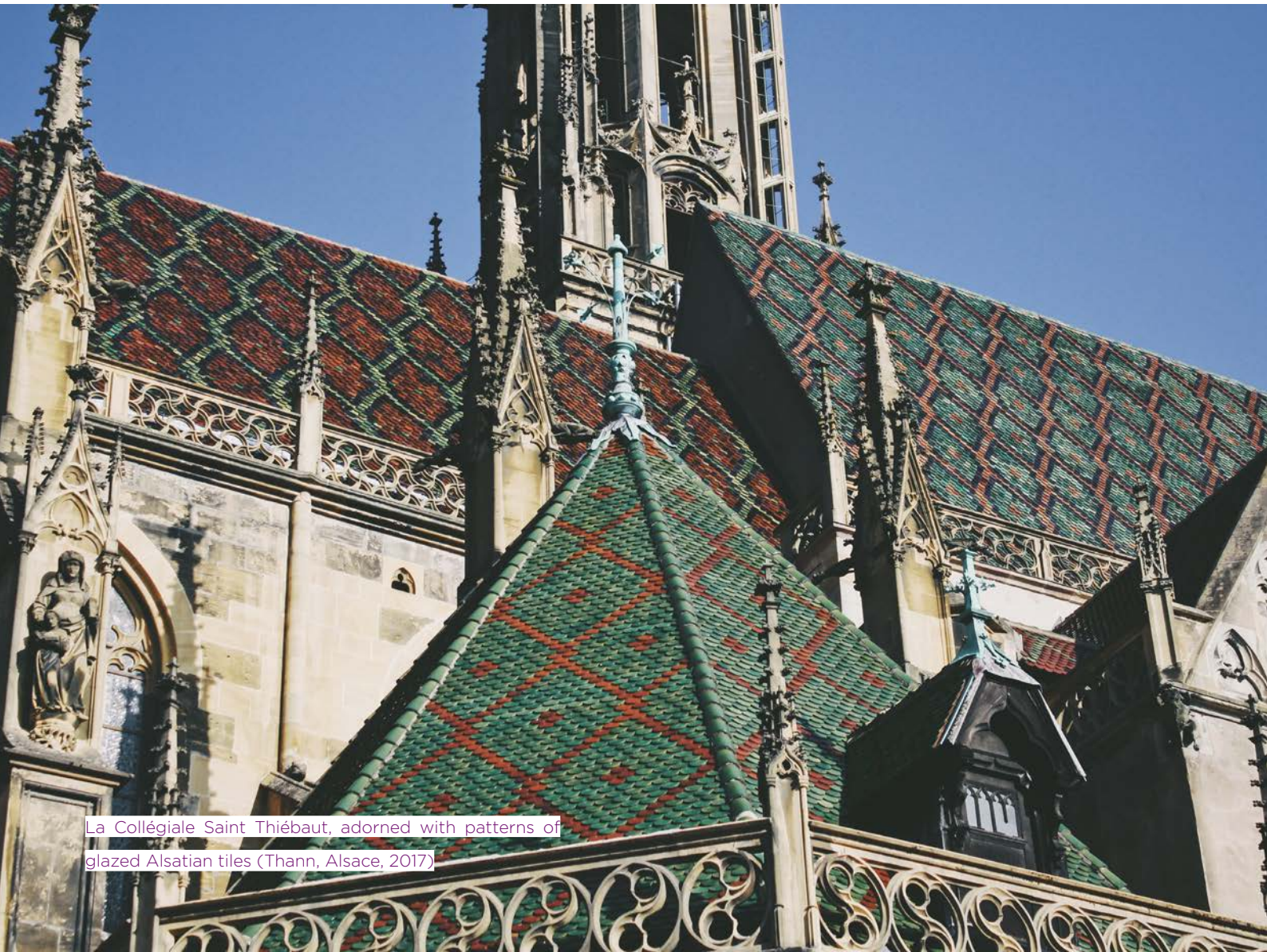
Introduced on November 19, 1889, the new republican flag of Brazil, which essentially remains today, despite minor alterations, was not significantly different from the former imperial flag. Mathematician and philosopher Raimundo Teixeira Mendes's redesign of the flag focused on replacing the imperial coat of arms with a blue disc depicting a starry sky and maintained the green background and yellow rhombus containing it. Ironically, the green and yellow remnants of the imperial flag derived from the House of Braganza of Pedro I and his wife, Empress Maria Leopoldina, from the House of the Habsburgs, respectively. The poignancy of this chromatic symbolism is enhanced by the Habsburg monarchies significant use of glazed tiling to create a vivacious skyline, emblazoned with national and religious symbols:

> "The use of glazed tiles was influenced, as elsewhere, by admiration for the medieval buildings that were covered with tiled roofs, especially in Transylvania and northern Hungary (Spiš, Sibiu). However, tiled roofs were also adopted by Hungarian architects as part of their effort to define a national style... The principle motifs for all neo-Gothic archiects had been diamonds, zigzags, triangles, stylized flowers, crosses

> (occasionally) and (more commonly) national coats of arms.... was modulated by the desire to create a national style."[20]

Just as the architects of the Habsburgs utilised glazed tiles in an effort to define a "national style," so too can the depiction of the republican flag of Brazil be seen as an attempt to redefine Manaus's post-revolutionary power structure. Much like the republican flag, which was redesigned in such a way to take ownership of the existing imperial rule, the Teatro Amazonas's depiction of flag can be interpreted as an exhibition of this transition. While such a gesture could be seen as a positive symbol to the whole of Manaus, according to Feitosa, "it should be noted that the Federation allowed autonomy to the former provinces and strengthened local oligarchies."[21] Thus, the patterned symbolism of the Teatro Amazonas's dome can begin to be seen as an outward display and exhibition of the stature of the local oligarchy of the rubber industry. For the working class of Manaus, who are effectively concealed by the spectacle of Ribeiro's beautification plan, this becomes a tireless reminder of their exploitation. This is an aspect of the tension between the idealised image of the city and the working reality that is further concentrated by the mechanism of the internal theatre space.

The patterned symbolism of the Teatro Amazonas's dome can begin to be seen as an outward display and exhibition of the stature of the local oligarchy of the rubber industry. For the working class of Manaus, who are effectively concealed by the spectacle of Ribeiro's beautification plan, this becomes a tireless reminder of their exploitation.



La Collégiale Saint Thiébaut, adorned with patterns of glazed Alsatian tiles (Thann, Alsace, 2017)

4

Auditorium:

/ The Baroque Horseshoe Opera House

/ Paris and the Palais Garnier

/ The Auditorium as an Act

The term 'theatre' can be used to refer to both the acting-out of dramatic performance, and the location where the dramatic event takes place. It is one of the only art forms where the term pertains not only to the art form itself, but also to the architectural setting in which it is enacted.[1] Whilst, so far the externality of the Teatro Amazonas has been scrutinized for its theatrical and monumental presence on the city of Manaus, the importance of theatre architecture has not yet been fully addressed. The prevailing views examine the Teatro Amazonas as a part of Eduardo Ribeiro's beautification plan, supporting and projecting the image of Manaus as a cornerstone to an elaborate vision, but refrain from recognizing the importance of the theatrical space itself within this intricate system of representation.

The Baroque Horseshoe Opera House

Designed in the mid-19th century and inaugurated in 1896, the theatrical space of the Teatro Amazonas derives from a 17th century Venetian typology, the baroque horseshoe opera house, which spread throughout Europe for hundreds of years. Eponymously, the baroque horseshoe opera house archetype was characterized by a horseshoe or "U" shaped auditorium. While this shape derives from the semicircular plan of the Roman amphitheater, the baroque auditorium owes its spatial development to early Italian renaissance theatres, such as Aleotti's Teatro Farnese built in 1618. However, where Aleotti's auditorium maintained stepped seating, like its predecessors, the baroque horseshoe auditorium developed this configuration into a vertical wall of multiple levels and individual audiences boxes. The individual audiences boxes, which seats 2-4 people, were loosely oriented towards the stage and encircled a flat central space called the parterre, or the pit. The stage was pushed behind an architectural opening, the proscenium arch, which was emphasized through elaborate ornamentation and a curtain.

The first example of the baroque horseshoe opera house was the Teattro Santi Giovanni e Paolo in Venice, built by the Grimani family in 1638 as a venue for drama. Swiss architect Carlo Fontana later remodeled this for the specificities of an opera house in 1654, and unknowingly developed a spatial paradigm, which once established, lingered with little change, other than advances in supplementary technologies, for hundreds of years.

However, where contemporary opera house and theatre design places significance on the ocular and acoustic

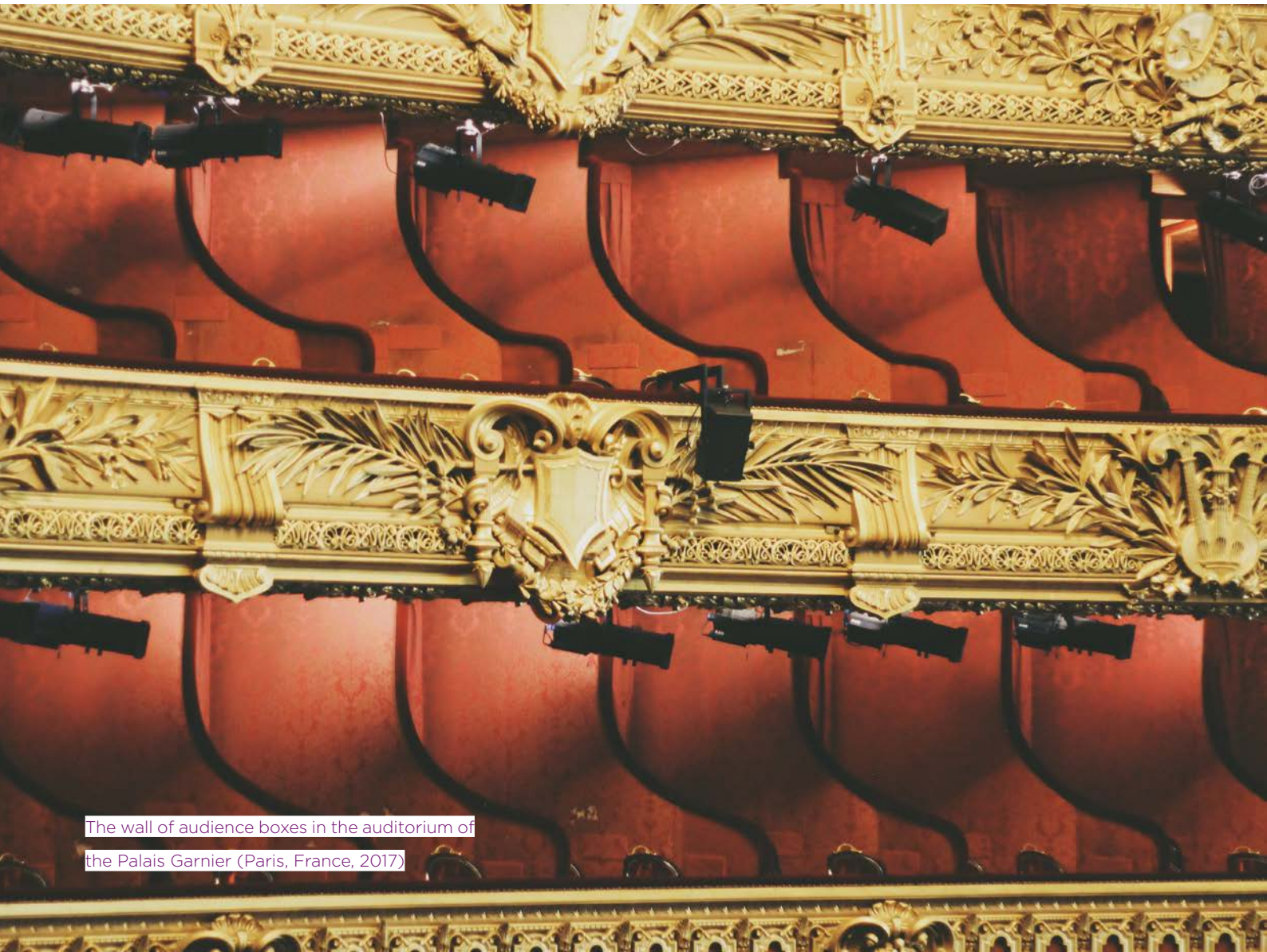
clarity for the audience, in the baroque theatre the performance became subservient to the social spectacle composed in the auditorium. With a floor plan that curves in on itself prior to meeting the proscenium arch, a lack of tiered seating and the intermediary walls of the audience boxes, the design of the auditorium suffers from poor sight-lines and acoustic range to the stage. "Upper side seats have to contend with poor viewing and hearing from the stage," [2] asserts Michael Barron, "for those sitting behind the front row in the boxes, the experience is much muted... Nineteenth century designs often relied on deep overhangs, which have their disadvantages for seeing and hearing alike."[3] However, where the baroque auditorium challenges, mutes or hinders the conventional relationship between the experiences of the stage and the auditorium, it encourages the audience to observe their fellow audience members. Sightlines across the parterre remain clear, and the demarcation of the audience into individual boxes further visually and spatially distinguishes the audience members from each other. The theatrical performance becomes subservient to social space of the auditorium, and thus the inert and inactive audience slavishly homogenised and oriented towards the spectacle of the stage, are fragmented into aware individuals. As Hannah writes:

> "The singular focused gaze in the auditorium was fractured into the many eyes of the bourgeois public; their multiple gazes wandering from the stage picture and self-regulating each other's behaviour. A point of surveillance that allowed the spectator, simultaneously the object of the gaze, to retreat into the shadows or behind the drapes."[4]

In this sense, the configuration of the baroque auditorium can be seen to architecturally individualise its audiences, rather than subduing and pacifying them. The audience boxes become highly tuned spaces to both visually observe the populated drum of the auditorium, but simultaneously transform into personal stages from which audience members theatrically control their social appearance and performance. In many ways the baroque opera house can be seen to subvert the traditional relationship of theatre, in favour of cultivating a socially charged spatiality. The proscenium arch, which also derives from Aleotti's Teatro Farnese, removed the actors and performance behind an elaborate architectural opening, further distancing the fictional action of the

"The singular focused gaze in the auditorium was fractured into the many eyes of the bourgeois public; their multiple gazes wandering from the stage picture and self-regulating each other's behaviour. A point of surveillance that allowed the spectator, simultaneously the object of the gaze, to retreat into the shadows or behind the drapes."

Dorita Hannah
Event-Space



The wall of audience boxes in the auditorium of the Palais Garnier (Paris, France, 2017)

"The most natural, the most instinctive, is without doubt, the theatrical sentiment. All that happens in the world is in sum only theater and representation... To see and to make oneself be seen, to understand and to make oneself be understood, that is the fated circle of humanity; to be actor or spectator, that is the condition of human life."

Charles Garnier
Le Théâtre

Sectional model of the Palais Garnier exhibited at the Musée d'Orsay (Paris, France, 2017)

stage from the social spectacle of the auditorium. Ideally the proscenium arch functioned as an architectural motif that merged, "singular vision into a collectivity," directing all eyes "toward one aperture."[5] However, as has been discussed, the baroque theatre fragmented the conventional collective gaze of the audience into self-aware individuals, and thus the role of the proscenium arch transforms to accommodate the social spectacle of the auditorium. In "Event-Space," Dorita Hannah attributes the proscenium arch as both a "window" and "mirror."[6]

> "The cohesive stage image, constructed from disparate and counterfeit parts, unified the audience within the auditorium, which was aware of its scenic ruse. However, the multiplicity of dispersed gazes in the spatially partitioned and distracted auditorium troubled the role of proscenium as mirror, which could no longer sustain a unified world either side of its divide."[7]

Thus, the social performance of the auditorium is mediated by the proscenium arch, which functions to theoretically deconstruct the stage of its representational power. The drama, scenery, costumes and characters, once tethered together by the performance of the acting figures, become the disparate elements of a "scenic ruse," rather than a seamless act of representation. The audience, once united in a collective theatrical gaze upon the stage, are now distracted. They not only observe other audience members in their individual boxes, but also monitor themselves under the act of observation. Devoid of the tantalizing act of representation, the stage itself can be seen to become a "mirror," forcing an unknown observational force upon the social event of the auditorium. The audience is compelled to perceive themselves through the multiple gazes of the auditorium, and perform as per their positioning within this social sphere, as exaggerated through the spatiality of the auditorium.

Paris and The Palais Garnier

Accompanying the construction of the Palais Garnier, Charles Garnier published a paper in 1871, entitled *Le Théâtre*, within which he outlines musings on the theatrical event:

> "The most natural, the most instinctive, is without doubt, the theatrical sentiment.

> All that happens in the world is in sum only theater and representation... To see and to make oneself be seen, to understand and to make oneself be understood, that is the fated circle of humanity; to be actor or spectator, that is the condition of human life."[8]

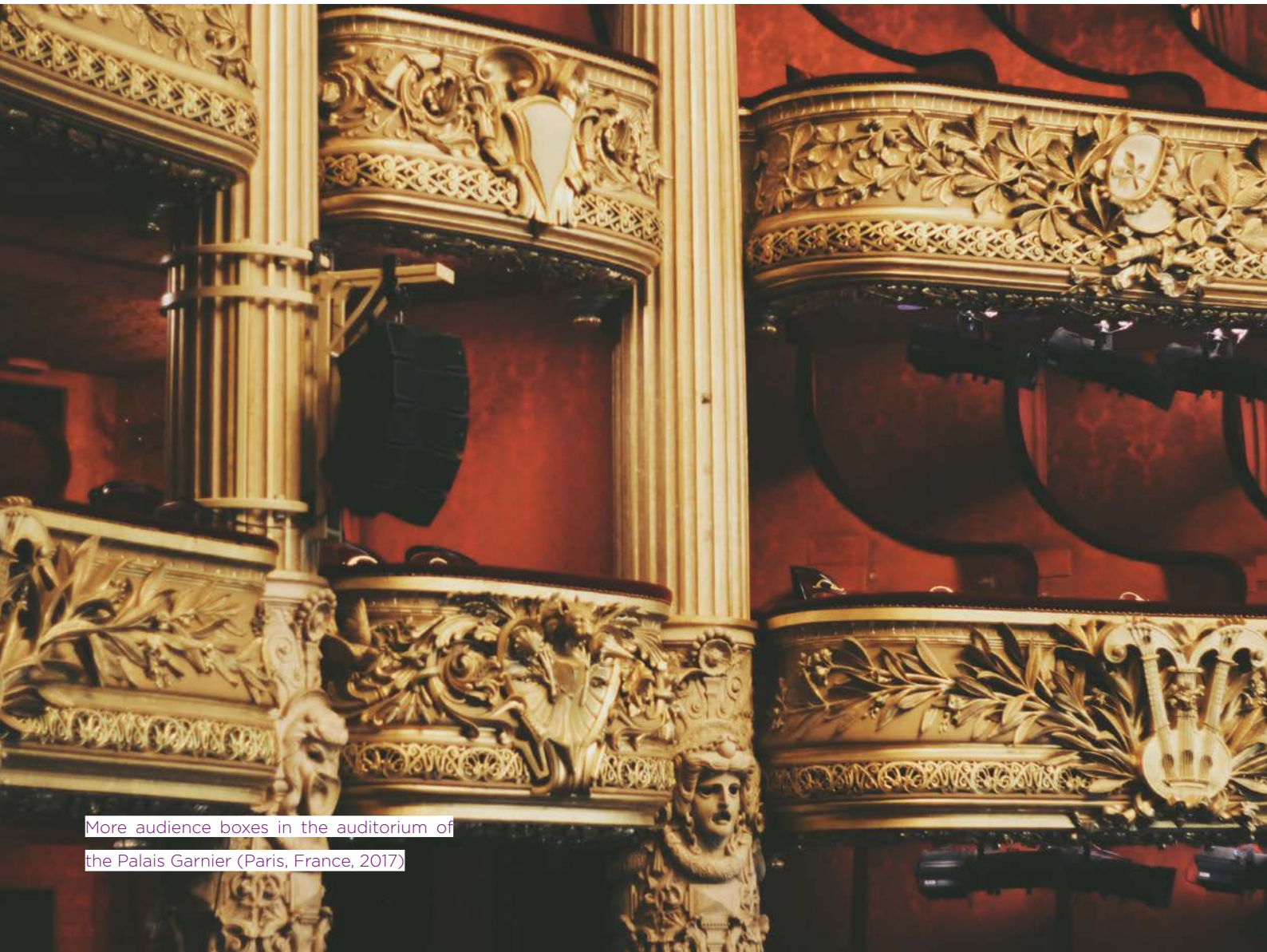
Garnier, the eponymous architect of the Palais Garnier, strips theatre of its architectural trappings and simplifies it to a "natural" event that takes place in the interaction between two individuals. He suggests that when confronted by another, the individual instinctively puts on an act, an appearance, as they begin to attempt to perceive themselves through eyes of the other. "Garnier, too, sees all the world as a stage," asserts Karsten Harries, "life as a sequence of dramatic, tragic or comical scenes."[9] Equipped with this ideological understanding of theatre and social interaction, the emergence of an archetypal baroque horseshoe opera house as his seminal work, is no surprise. As an immediate precursor to the Teatro Amazonas, and an ardent example of a baroque opera house, it is important to divulge the social resonance of the Palais Garnier beyond its walls.

Built between 1861 and 1875 the Palais Garnier began as a successful entry to an architectural design competition that was announced on December 30 1860 by the Emperor of the Second Empire, Napoleon III. It was designed as a veritable backdrop to the Napoleon's court[10] and, "conceived of as a place of pageantry... it was the stage upon which Imperial Paris could gaze at itself with satisfaction... A theater conceived of as an urban center, a centre of social life— this was a new idea, and a sign of the times."[11] Here, Walter Benjamin suggests that the social mechanism of the baroque archetype is used as a means to display Imperial Paris on a social stage. Yet, the Second Empire collapsed by 1870 and was replaced by the governmental system of the Third Republic. In the loss of the Second Empire, the Palais Garnier rather came to encourage and reinforce the shifting social structure of a post-revolutionary Paris. However, this was performed within the carefully orchestrated, fitted and gilded void left behind by Imperial rule. Bergdoll writes:

> "For Garnier the fundamental and unchanging role of the architect was to accommodate society's pleasures in assuming roles and savouring spectacles of seeing and being seen. If the avant-garde of the early twentieth century vilified the Opéra – Le Corbusier chief

"For Garnier the fundamental and unchanging role of the architect was to accommodate society's pleasures in assuming roles and savouring spectacles of seeing and being seen."

Barry Bergdoll



More audience boxes in the auditorium of the Palais Garnier (Paris, France, 2017)

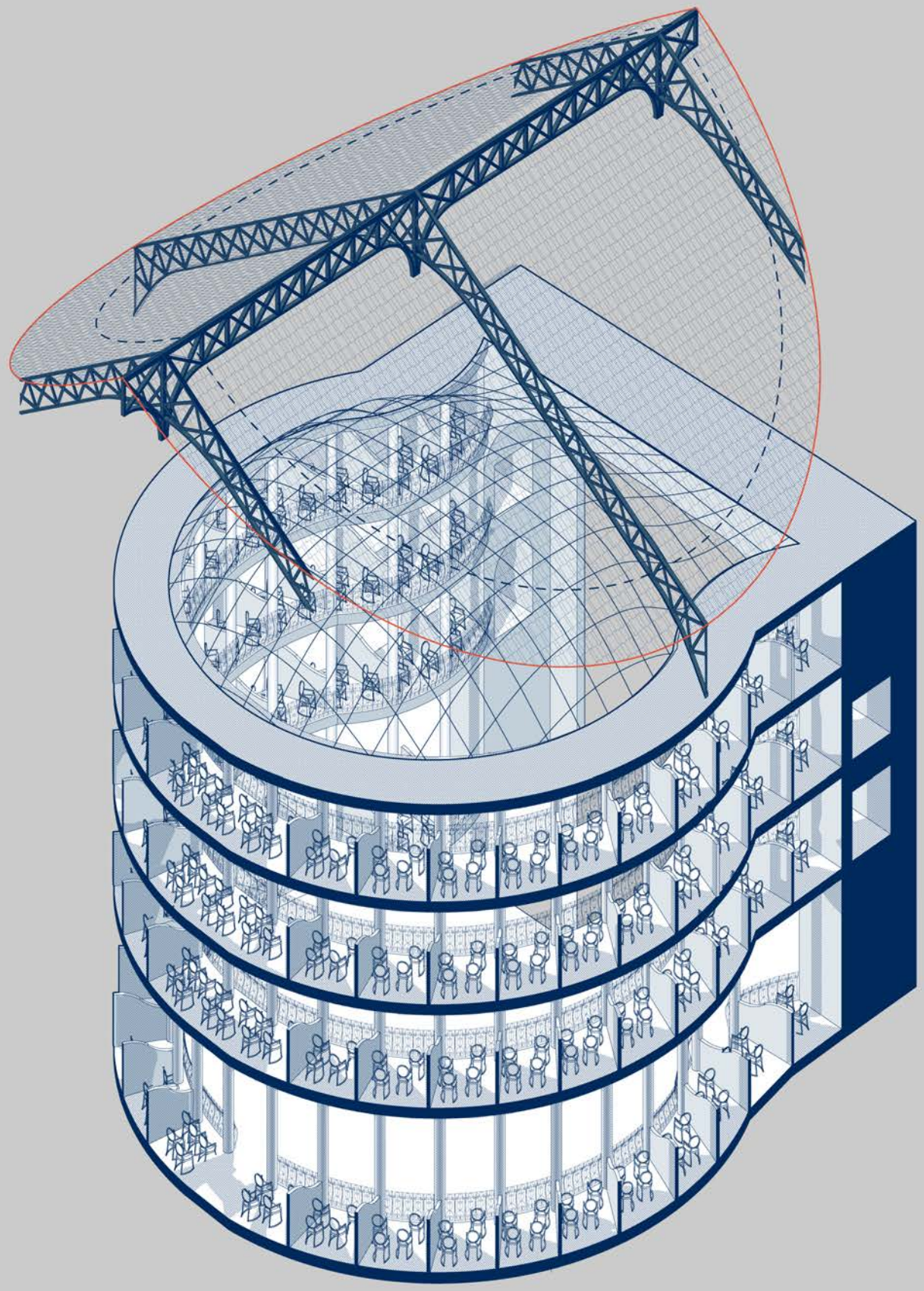


Figure 05

THE AUDITORIUM

Baroque Horseshoe Auditorium
& Cast-Iron Elements

> among them – it was because Garnier had catered to the status quo rather than using his art as an opening wedge for a better world."[12]

Thus, the Palais Garnier, situated pivotally within the transition from imperial rule to a post-revolutionary, modern and industrialized city, can be seen to exhibit the spatial characteristics of the baroque auditorium. However in accommodating "society's pleasures in assuming roles and savouring spectacles of seeing and being seen," the Palais Garnier merely functions as a means to display the ascendance of a bourgeois, rather than, "opening a wedge for a better world."

Unquestionably in possession of the spatial, architectural and theatrical characteristics of the baroque horseshoe opera house archetype, the Teatro Amazonas had a similar influence within the transition of Manaus from a small village in the Amazon rainforest to the image of a modern city. It is interesting to note that the Palais Garnier's spatial exhibition and reflection of the shifting power structures of an influential bourgeois bears a particular parallel with that of the Teatro Amazonas. Much like the Palais Garnier, which was conceived from Imperial origins and emerged in a post-revolutionary republic, so too was the Teatro Amazonas conceived during the Empire of Brazil and was completed after Brazil was declared a republic in 1889. Where the Palais Garnier was instigated by Imperial Paris to flaunt and exhibit its rule, the Teatro Amazonas was proposed and funded by the oligarchy of Manaus's rubber industry. While Paris was undergoing revolutionary change in ruling and societal systems, on the other hand, Manaus was merely undertaking the construction of an exaggerated urban narrative to reflect the lofty ambitions of its elite. Manaus's elaborately constructed visage not only fabricated a city, but simultaneously concealed one, as Orange Matos Feitosa writes:

> "We should not forget that the modernization of the city was built on the ruins of the dead in slaughtered rubber, especially for marsh fever, smallpox, tuberculosis and beriberi; and the sweat of urban workers. The process of modernization did not involve the city in full."[13]

Feitosa unearths an aspect of Manaus's modernization that is publically omitted, consciously or not, from Riberio's beautification plan. However, while disease and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Manaus's working class were omitted from the grandiose plan, they were addressed in their concealment behind Manaus's performances as a modern European city. Thus, the Teatro Amazonas's role in bearing the representation of Manaus's transformation is twofold. Firstly, the Teatro Amazonas appears as a spectacular monument that draws attention away from Manaus's working demographic by signifying the overwhelming wealth of an elite, particularly a wealth that the workers have been exploited to obtain. Secondly, the design of the Teatro Amazonas's auditorium, under the influence of the characteristics of the baroque opera house, demonstrates theatrical measures to further exhibit social structures and suppress struggles within Manaus. Hannah maintains that the baroque opera house:

> "Acknowledges architecture's role in producing and sustaining the glory of those for whom it is built- the patrons, artist and audience. However, the term also invites an exposition on how the space evolved as an adaptive mechanism and performative device for creating effects that reflected the status and accomplishments of its inhabitants; governing, disciplining and exhibiting the shifting power structures within post revolutionary society. The observer within the space, who negotiates between attraction and distraction, is organized principally by the complexity of a gaze..."[14]

Thus, in the design of an auditorium in line with the baroque archetype, the auditorium of the Teatro Amazonas can be regarded to sustain the "Glory" of the ruling elite of Manaus, the rubber barons. The social mechanism of the auditorium not only exhibits their power, but also has the effect of sustaining and concretising it through the self-fulfilling display and discipline of the space. Seats are sought after by their prominence and presence within the auditorium, rather than their view to the stage. The locals and workers, if at all permitted in the theatre, were removed from the social territory of the auditorium. They were situated on the top level and were recessed in a portion of stepped seating called paradise.

In paradise, theatregoers are distant from the stage, maintain direct sight-lines and were not privy to individual audience boxes. In this manner, they can be regarded as pacified and homogenised by the overarching theatrical gaze, much like the conventional dictates of theatre

"The space evolved as an adaptive mechanism and performative device for creating effects that reflected the status and accomplishments of its inhabitants; governing, disciplining and exhibiting the shifting power structures within post revolutionary society."

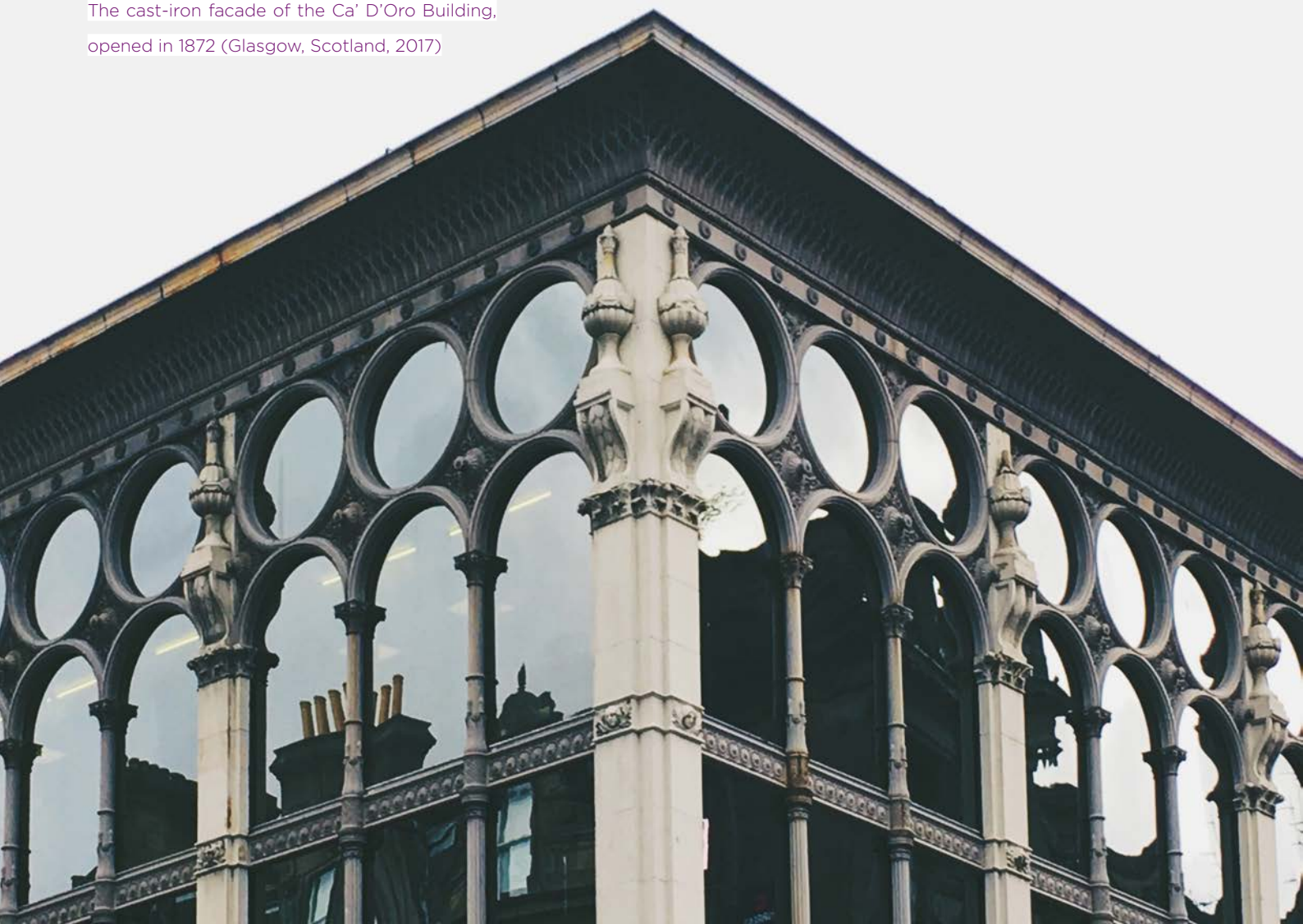
Dorita Hannah
Event-Space

Cast-iron elements from the Teatro Amazonas (Manaus, Brazil, 2017)

"...hides its quite up to date structural frame of iron beneath a splendid Neo-Baroque skin. This extravagant architecture not only functions as a theater; it also re-presents a theater. It puts on an act."

Karsten Harries
Theatricality and Re-Presentation

The cast-iron facade of the Ca' D'Oro Building, opened in 1872 (Glasgow, Scotland, 2017)



architecture. Yet, it is simultaneously a space, which according to theatre architecture critic, Louis Pelletier that "enables the ability to hide within the walls, to spy on the action anticipated in the voyeuristic space of the auditorium."[15] Thus, paradise allows these theatregoers; typically the lower classes of Manaus's society, to view, yet not participate in the social domain of Manaus. They are stripped of any voice in the idealised city- a city within which they have no positioning, other than the instruments of its construction.

THE AUDITORIUM AS AN ACT

Beyond the Teatro Amazonas's archetypical characteristics of the baroque theatre, the specificities of its elaborate design further purported Manaus's theatrical representation. Surrounded by thick rubber tiles that muffled the noise of carriages and also equipped with an intricate natural ventilation system that touched every seat, the auditorium was designed to relieve its occupants from the relentless noise and heat of living in the Amazon region. The occupants were rather contained within a composition of idealised principles of Riberiro's Manaus. The underside of the Eiffel Tower looms above the auditorium, painted onto the curved soffit, instantly transporting the audience to other modern and beautiful cities, such as Paris. The Teatro Amazonas, much like the Palais Garnier, "puts on an act":

> "How theatrical in comparison is Charles Garnier's Paris Opera (1861-75), which, like so many buildings of the time hides its quite up to date structural frame of iron beneath a splendid Neo-Baroque skin. This extravagant architecture not only functions as a theater; it also re-presents a theater. It puts on an act."[15]

The inherent discord between the architectural style and innovative building materials of the time, such as iron, is a trait shared between the Palais Garnier and the Teatro Amazonas. While we have already discussed Ribeiro's rational behind the use of iron as a building material in the dome and roof structures, as it was lighter and not subject to the same deterioration and warping of wood,[16] this refrains from justifying the extensive use of cast-iron in the auditorium. Unlike the dome and roof where iron was seen as a structurally efficient and innovative modern solution, the use of cast-iron in the auditorium, rather attempted to recreate the monumental interiors of baroque theatres, commonly built using wood or stone elements. Where Harries describes the Palais Garnier as hiding the up to date structural iron frame behind

its "splendid Neo-Baroque skin," the Teatro Amazonas rather employed perfectly shaped and replicable cast-iron elements, with a Neo-Baroque aesthetic molded into their very structure.

The cast-iron columns, balustrades and ornamentation of the auditorium, were designed and manufactured by George Smith's *Sun Foundry* in Glasgow, Scotland. Following technological developments in the iron smelting industry, the Scottish cast-iron industry thrived through the late 18th and early 19th centuries.[17] With the rise of Walter MacFarlane's *Saracen Foundry* from 1850, and the emergence of the Sun and Lion foundries by former Saracen staff members,[18] Glasgow became a hub of cast-iron innovation in Europe. The city itself boasts remarkable architectural examples such as Gardner's Warehouse, Ca'Doro Building and The Briggait, which at the time demonstrated the exciting structural implications of cast-iron on architectural design.

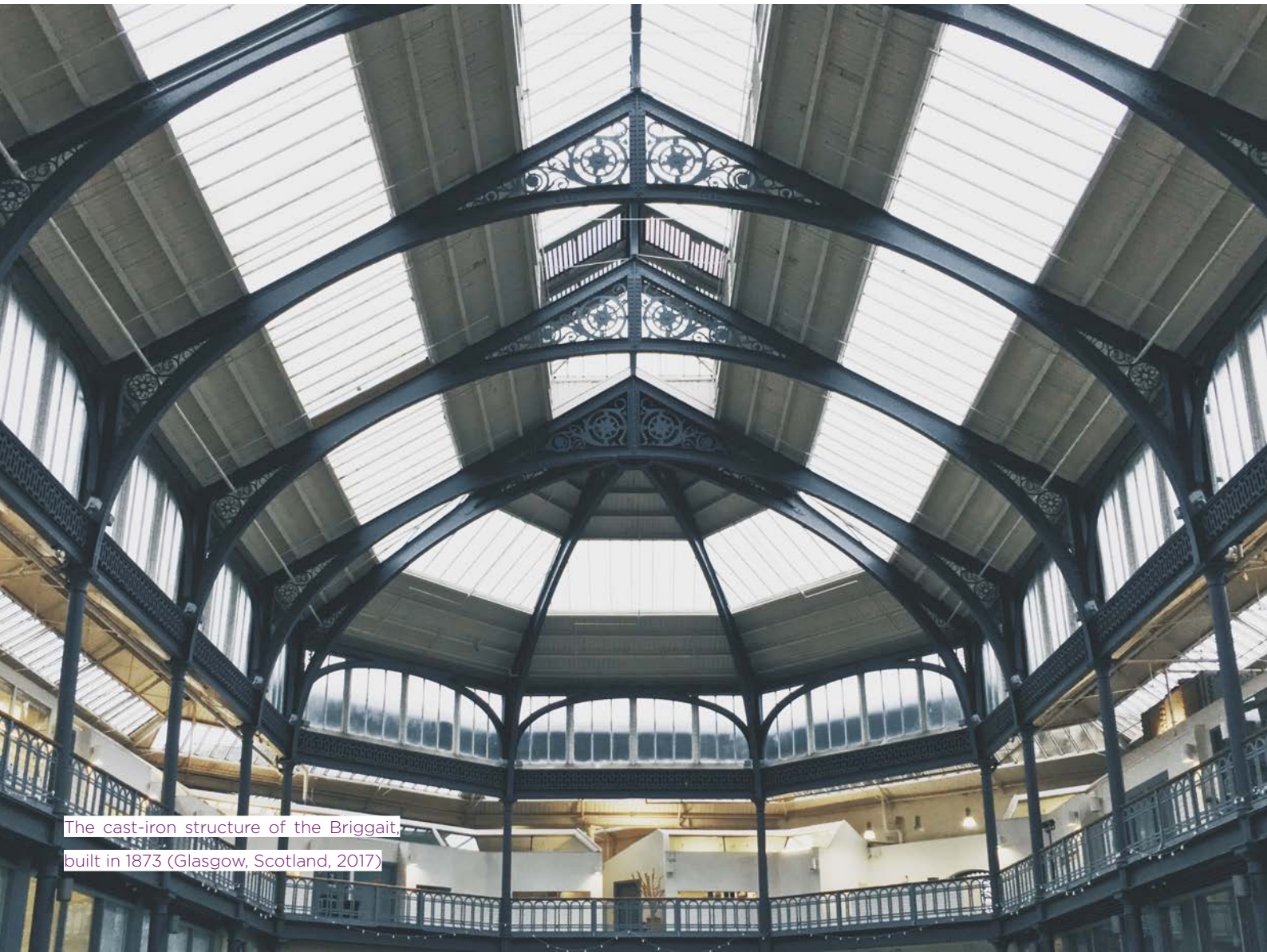
The use of cast-iron merged the structural possibilities of iron, which could withstand heavier loads and span further than traditional materials, with a lingering architectural taste for intricate ornamentation and details. The development of patterns, the specific form a casting will take, allowed for the duplication of highly decorated structures and elements with a significant degree of efficiency and accuracy. As Costa writes:

> "[...]não é de se estranhar o sucesso de uma empresa como a Saracen Foundry, de Walter MacFarlane & Cº., que se propunha vender utensílios sanitários – inovação civilizadora – componentes arquitetônicos e até edifícios sofisticados, em estilo europeu, através de catálogos."
>
> "[...] it is not surprising the success of a company such as Saracen Foundry, by Walter MacFarlane & Cº. which was intended to sell sanitary ware – innovation civilization - architectural components and even buildings, in European style, through catalogues."[19]

In this manner, catalogues of cast-iron patterns, can be regarded to represent the ease and appeal of the building material. The iron foundries of Scotland, particularly Glasgow, gained such repute that their catalogues and portfolios of architectural works, were translated into multiple languages, and exported across Europe, Asia and even Brazil. The *Saracen Foundry* (MacFarlane & Co. Ltd),

"For most nineteenth century architects, history in architecture meant ornament, the latter being the primary means by which a building was invested with historical associations and meanings... iron both intensified and further problematized the relationship between historical meaning and structural truth in architecture"

Dobraszczyk and Sealy
Function and Fantasy



The cast-iron structure of the Briggait, built in 1873 (Glasgow, Scotland, 2017)

The cast-iron facade of the former Gardner's Warehouse, opened in 1856 (Glasgow, Scotland, 2017)

the contextual rival to the *Sun Foundry*, manufactured and supplied the comprehensive cast-iron structure for the Teatro José de Alencar in Fortaleza and the market pavilions of the Mercado Adolpho Lisboa in Manaus, both of which feature in their portfolio of architectural works, published in Portugese.[20] The appeal of cast-iron in Brazil, in particular Manaus, can be linked to an overarching pursuit of modernity, aimed at moving their cities towards the examples offered by more developed European cities. This is represented by the literal importation of mass-produced prefabricated structures-structures which are endowed with the historical and contextual meaning in their design, yet are produced as decontextualised imitations of their architectural predecessors.

> "For most nineteenth century architects, history in architecture meant ornament, the latter being the primary means by which a building was invested with historical associations and meanings. This way of thinking did not receive any sustained questioning until the very end of the nineteenth century. Meanwhile, truth in architecture was increasingly equated with structure, or the function of a building... into this contradictory nineteenth-century culture of building, iron both intensified and further problematized the relationship between historical meaning and structural truth in architecture, for not only was iron a new constructive material that revolutionized the structural possibilities of architectural form, demanding a new kind of "truth" to materials, but also had no historical precedent in terms of architectural ornament, and therefore problematic in terms of its perceived lack of associative meaning."[21]

The ornamentation effectively mimicked in the production of the columns, balustrades and elements, therefore, lack the historical meaning that has developed historically. However, in cast iron, such ornamentation with its historical and crafted endowment is rather mimicked and copied to appease the architectural palates of the 19th century. Again, the Teatro Amazonas uses the specific innovation and development of cities, such as Glasgow, yet lacks the associative meanings of its forms and articulations. These elements can be seen as yet another veneer, applied in attempt to convince a city of its own modernity, rather than contextually create one.

5

Conclusion

While this paper intimately critiques and structures itself around the importation and re-assemblage of materials, structures, spaces and architectural elements from disparate contexts, it does so through the engaging, and highly exaggerated, case study of the Teatro Amazonas. The aim has been to develop a profound and in-depth understanding of the very implications that the re-appropriation of established characteristics has on the performance of architectural design, but also more importantly its presence within socially complicated urban environments. The programmatic function of the theatre, whilst inherently introverted, is widely disregarded for its highly influential impact beyond the walls that function to visually, acoustically and experientially filter out the remainder of the city. As Charles Garnier would attest, the act of theatrical representation is a powerful occurrence that can be seen to extend beyond the architectural trappings of a theatre. Analysing Aldo Rossi's temporary, yet timeless, Teatro Del Mundo, Daniele Vitale writes:

> "The very name, theatre, therefore alludes to more than meaning and more than one possibility: of a locus inside which it is possible to create theatre, but also a building that articulates and specifies the other spectacle that is presented by the city."1

Indeed the Teatro Amazonas can be regarded as more than an opulent theatre that was bizarrely situated within the Amazon rainforest during the short-lived affluent spark of an isolated society. Rather it can be interpreted as an elaborate composition that was invested with a role to represent a city that never actually transpired.

The innate meanings, histories and symbolism of these elements that are drawn from their individual origins, were assembled and elevated for the theatrical purpose of exhibiting and enforcing a vision of Manaus as transformed into a modern city. Employing the domical shape, invested with a rich lineage of symbolism, the dome was imbued with unifying properties. Draped in a borrowed symbolic language of Alsatian tiles, this dome purported the prominence of an elite, which was inflated by the compliant concealment of the structural innovation. Further drawing from the baroque opera house typology, which historically enforced the rule of an ascendant bourgeois in the void of imperial rule, the auditorium emerged as a social performance that consolidated the power of the rubber barons, whilst coercing the removal of the local and working classes from Manaus's representation. This was undertaken in a space that exploited the efficiency and replicative properties of contextually cutting edge materials to

Once reserved for Manaus's elite, today the Teatro Amazonas supports Manaus's tourism industry (Manaus, Brazil 2017)

The volatile flood plain separating the extents of central historical Manaus and the non-planned city (Manaus, Brazil 2017)

imitate past styles, yet disguised their production behind familiar veneers. Thus, in cahoots with the urban scenography of Ribeiro's beautification plan, the Teatro Amazonas, can be seen to represent an idealised city, in the absence of one transpiring in its own right.

Yet, the tale of Manaus as the 'gilded epitome of rubber excess' or the 'Paris of the tropics,' was a short-lived performance. 1910 represents the economic climax of the Rubber Boom- the historical point at which the prosperity that fueled the representation of Manaus subsided and eventually ceased. The city and the Teatro Amazonas both fell into decades of disrepair and irrelevance, until the 1964 coup d'état, which established the dictatorship of the Brazilian military government. The Teatro Amazonas was effectively re-animated and groomed for its representative power. Where at the turn of the twentieth century it functioned to facilitate Manaus's transcendence from its surrounding locale, in the late twentieth century its distinction from its context became a protested symbol of economic recovery. In 1990 residents protested the theatre's reopening, after closing in 1924 due to Manaus's economic crisis, objecting that "the people paid for this opening but are left outside," and further that "the tickets are 2,000 cruzeiros... a sum equal to two weeks' wages."[2] The theatre was used as a political puppet that attempted the revival of Ribeiro's visage of Manaus, encouraging tourism, rather than allowing its relevance to transfer to a transformed demographic.

Even today, the city remains tirelessly represented, through the theatre, as a Belle Époque beauty romantically nestled in the heart of the mysterious Amazonian rainforest. Fuelled by tourism, rather than rubber, a number of governmental plans such as the *Manaus Belle Époque Program* (2000) and the *San Sebastian Revitalisation Program* (2003) have been initiated to restore and preserve the Teatro Amazonas and its Belle Époque context. However, conversely such policies continue to ignore the tangible needs of the city endured by the local community. Preservation, according to Rossi, is:

> "...counter to the real dynamic of the city; so-called contextual preservation is related to the city in time like the embalmed corpse of a saint to the image of his historical personality... we are well outside the realm of that past we still experience"[3]

Thus, in a city tirelessly torn between the experienced shortcomings of its history, namely non-planned urbanisation, potable water shortages and sanitation; and a preserved fabrication of an illustrious memory, what role can representation play going forward?

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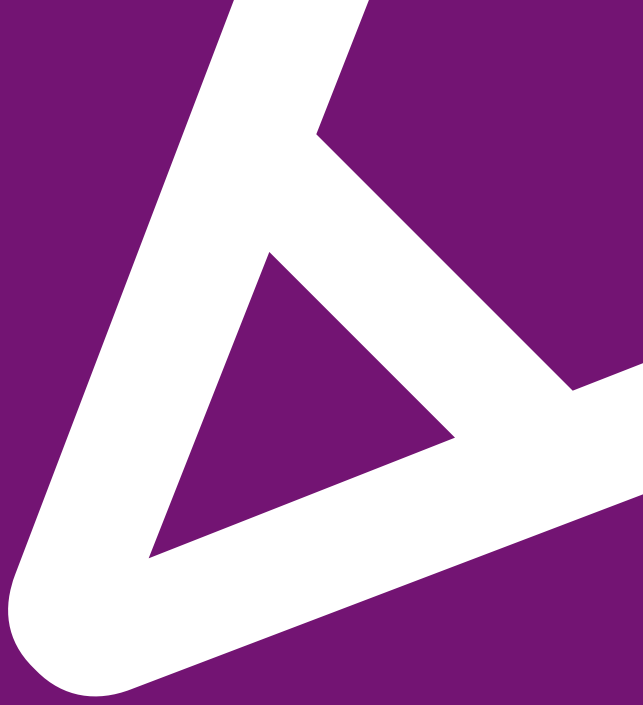

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