A History of the Arab Component in Ibero-American Architecture

FERNANDO LUIS MARTÍNEZ NESPRAL

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Contents

Foreword: Tracing the Architectural Tapestry of Ibero-America

The face of Ibero-America is a blending of different cultural influences, a tapestry woven from threads of diverse histories, migrations, and encounters. The components of this tapestry are Indigenous, European, African, and Asian. But so is the face of every other place on earth. The specificity of Ibero-America is that it is very much a defective fabric in which some fibers are invisible while others are not. The result is a distorted image; the Eurocentric framework of the last 4 centuries brings some threads to the foreground and pushes others to the back, overlooking anything that is not "Western". We cannot understand the Ibero-America of today and its built environment if any of those threads are excluded. To bring those excluded components to life is the task of our generation. The indigenous, the African, and the Asian contributions to the built environment towards the built environment of Ibero-America need to be discussed and debated alongside the fundamental European component.

Fernando Martínez Nespral's groundbreaking work, "A History of the Arab Component in Ibero-American Architecture," invites us to explore this intricate web of connections, shedding light on the enduring legacy of Arab spatial elements in the architectural landscape of Ibero-America.

As the author states in the very first pages of this book, every architect on the planet is supposed to know the difference between Bramante and Brunelleschi, often ignoring architectural manifestations of the very land where they stand in a similar period of the 1450s. As Enrique Dussel demonstrated 3 decades ago, the diagram of influences and counter-influences is degrees of magnitude more complex than the Greek-Roman-Gothic-Renaissance fiction that was imposed on us.

In this meticulously researched and thoughtfully crafted book, Martínez Nespral unveils layers of history, revealing how the Arab presence has left an indelible mark on Iberian architecture and, by extension, on the architectural traditions of Ibero-America. From the ornate tiles adorning colonial facades to the intricate latticework gracing inner courtyards, from the soothing sound of fountains to the warmth of clay and wood, the Arab influence permeates every corner of the built environment, shaping not only physical structures but also cultural perceptions and social dynamics.

At the heart of Martínez Nespral's exploration lies a profound engagement with issues of racism and coloniality, challenging us to confront the

complexities of power dynamics and cultural hierarchies embedded within architectural narratives. By interrogating the ways in which Arab architectural heritage has been marginalized or appropriated, he invites us to reckon with the legacy of colonialism and its enduring impact on our understanding of space, identity, and belonging.

Drawing on insights from linguistics, Martínez Nespral offers a novel approach to identifying the origins of building components, unraveling the vernacular traces (here understood as its Latin root: common language) that link Ibero-American architecture to its Arab roots. Martinez Nespral demonstrates how language serves as a key to unlocking the hidden histories encoded within architectural forms, inviting us to rethink conventional narratives of cultural diffusion and exchange.

Central to Martínez Nespral's argument is a critique of traditional periodization, which often flattens the complexity of historical processes and overlooks the dynamic interactions between cultures. By embracing a more fluid and nuanced understanding of time, he opens up new vistas of interpretation, inviting us to see the past not as a linear progression but as a tapestry of overlapping influences and convergences.

Throughout the book, the author delves into the history of specific architectural elements, from the intricate patterns of tiles to the geometric beauty of lattices, from the privacy of courtyards to the aesthetic philosophy of horror vacui. Each chapter is a journey into the depths of history, uncovering the stories embedded within these seemingly mundane features and revealing the ways in which they embody the interplay of cultural forces and human creativity.

Yet, for all its emphasis on the Arab component, Martínez Nespral is careful to avoid simplistic reductionism. He acknowledges that not everything can be explained by the Arab influence alone, recognizing the complex tapestry of influences that have shaped Ibero-American architecture over the centuries. He argues persuasively that little can be explained without taking into account the profound impact of Arab spatial elements, which have left an indelible imprint on the region's built environment and cultural imagination.

In offering this panoramic view of Ibero-American architecture, Martínez Nespral invites us to engage with the past in all its complexity, to peel back the layers of history, and uncover the hidden connections that bind us to distant lands and ancient traditions. His book is not only a scholarly achievement but also a testament to the power of architecture to illuminate the human experience, bridging the divides of time and space to reveal the shared heritage that unites us all.

As we embark on this journey through this *Eastern face of the South*, let us heed Martínez Nespral's call to embrace a more inclusive and expansive vision of architectural history, one that celebrates the diversity of cultural influences and recognizes the enduring legacy of Arab contributions to the shaping of Ibero-America's built environment. In doing so, we not only enrich our understanding of the past but also lay the foundation for a more inclusive and equitable future.

Fernando Martínez Nespral's "A History of the Arab Component in Ibero-American Architecture" stands as a landmark contribution to our understanding of the region's architectural heritage, inviting us to see the world through new eyes and to embrace the rich tapestry of cultures that have shaped our shared landscape. It is a book that will resonate with scholars and enthusiasts alike, inspiring us to explore the hidden corners of history and celebrate the diversity that lies at the heart of Ibero-America's architectural identity.

Fernando Lara
Philadelphia, March of 2024

Acknowledgments

لَا يَشْكُرُ اللهَ لَا يَشْكُرُ النَّاسَ مَنْ

> Whoever does not show gratitude to people does not show gratitude to God
>
> HADITH SUNAN ABŪ 'DĀWŪD (4811)

This book is the outcome of nearly forty years of work,[1] and therefore, there are many people to whom I am deeply indebted.

First and foremost, I wish to thank my wife, Vicky, who was also my first English teacher and the mother of our four children, Rocío, Mercedes, Francisco, and Juan, for forty years of companionship and support.

Among my academic colleagues, I wish to begin with Hamurabi Noufouri, who first introduced me to this field when I was a student in 1986, and with whom I have sustained a relationship of friendship and collaboration for decades. I am also grateful to my *tocayo*,[2] Fernando Luiz Lara, who encouraged me to write this book and generously contributed a warm and insightful foreword.

I have also had the honor and good fortune of learning from major scholars such as Ramón Gutiérrez and Rafael López Guzmán, the leading authorities in the study of Ibero-American architecture and Mudéjar architecture, respectively.

I would also like to extend my gratitude to the members of the GAHTC (Global Architectural History Teaching Collaborative), an initiative led by Mark Jarzombek and Vikram Prakash, who welcomed my work with great interest and offered a stimulating space for dialogue and scholarly exchange

1 Accordingly, while the themes and ideas addressed here have, in part, been explored in previous lectures, courses, and publications, their present articulation has been conceived and arranged as an integrated whole specifically for this volume.

2 Among Ibero-Americans, the term *tocayo* refers to two people who share the same given name and are therefore assumed to possess a kind of kinship. If ever there were an appropriate example of the term, it would be our case, for we share not only both names (Fernando and Luis-z), but also the profession, the generation, and a common perspective on architecture and history.

with colleagues from around the world. My special thanks go as well to the friends of the group *Nuestro Norte es el Sur*,[3] with whom I share a vocation for the study of Architectural History in the Americas.

At the institutional level, I owe much to the University of Buenos Aires, which for forty years has provided me with an exceptional environment for intellectual and professional growth. There, I have had the privilege of engaging with thousands of students and colleagues, from whom I learned far more than I could ever have taught.

Finally, I extend my gratitude to the editors of this series, who from the outset expressed their interest in this work and, together with the publishing house, made its publication possible. Above all, I am grateful to the readers, who I hope will find in these pages an incentive to continue advancing in the knowledge of this subject.

Buenos Aires, September 2025

3 A group we founded with Ana María León in 2018, which has remained active and has continued to grow ever since.

Figures

Introduction and Theoretical Framework: a Component instead of an Influence

1 Colonial and Racist Problems, Decolonial Solutions

The colonial perspective on Ibero-American histories has systematically obscured any components that are not clearly dependent on the West, or at least has undervalued them.

The impact of Western phenomena, such as the Renaissance, the Enlightenment, or European migrations to Ibero-America, has been widely studied, but proportionately much less is known about other key factors unrelated to the West, such as the remnants of native knowledge after the conquest and colonization, and the Asian migrations,[1] or the Afro component[2] in Ibero-American societies.

Decolonial studies have reported this phenomenon for at least half a century,[3] with disparate consequences. Although formerly forgotten topics today are relevant for researchers, this change has not effectively reached educational systems[4] and mass media, so, unfortunately, its effects on society are still meager.

In our field of study, architectural history is a subject where the colonial perspective is surprisingly hegemonic. More than 20 years ago, Jarzombek showed clearly the need for a renovation: "… architectural history will have to work

1 The culture of the Pacific coast of Ibero-America cannot be understood without the widely extended presence of Asian culture. Examples of this are the Galeon de Manila (Manila's Galeon) a ship that regularly connected Acapulco in Mexico with the Spanish colony of Manila in South Asia introducing in Ibero-America several Asian products (Ivory sculptures, mother pearl, woods, and furniture, silk among others). Also, in the Andean region of South America, the presence of East Asian immigrants is fundamental, as in the North, on the West coast of the United States.

2 The impact of the Afro culture is indispensable to understand the Ibero-American Caribbean, Brazil, and several current countries. The presence of black slaves was a constant in Ibero-American colonial societies and impacted several aspects of the culture of the region as the music, food, religion, and even in the language.

3 In this sense Edward Said is an inescapable reference, especially his book "Orientalism" written in 1978, that we will mention throughout this book. There are also many key authors such as Sophie Bessis, and in Ibero-America Aníbal Quijano, Enrique Dussel, Walter Mignolo, or Arturo Escobar, inter alia.

4 The syllabi of History, Philosophy, and Art courses in Ibero-American schools are surprisingly Eurocentric, so the kids know a lot about European authors meanwhile the local history remains forgotten or undervalued.

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hard to redesign its own territorial understanding."[5] In the current century, Jarzombek together with Vikram Prakash launched the GAHTC project (Global Architectural History Teaching Collaborative) based on the goal of promoting a movement in the Academic community devoted to building a net where different teachers from all over the world are able to share knowledge and create an interconnected, transregional and transnational approach to Architectural History in order to transform the traditional syllabi.[6]

And recently, Kathleen James-Chakraborty explained also that racism was one of the bases of established Architectural history perspective: "Edward Said's book Orientalism and the early work in subaltern studies both challenged the supposedly dispassionate character of Western scholarship on North Africa and Asia by demonstrating the degree to which it had been skewed by racial and class bias"[7] Unfortunately, this racist point of view denounced by James-Chakraborty is still in force in most of the academia.

An example of this is the brutally racist periodizations and styles[8] defined by Sir Banister Fletcher at the end of the 19th[9] century, at the peak of the British Empire, remains the main structure of manuals and university courses focused on survey and requirements made by agencies that control educational content. "The limits of the canon, however, are revealed by the (in)famous 'Tree of Architecture', presented by Sir Banister Fletcher in his 1903 edition of A History of Architecture on the Comparative Method, first published in 1896 by himself and his father of the same name. The tree of architecture constructs a history based on a system of ancestry in which the northern European styles in the 18th century (Greece – Rome – Gothic – Renaissance) form the trunk, while all other major manifestations are placed on top branches. The lower branches,

5 Jarzombek, M. (1999) "The Disciplinary Dislocations of (Architectural) History." *Journal of the Society of Architectural Historians* 58, 3 (September 1999): 488–493.

6 GAHTC became undoubtedly a key source for anyone interested in Architectural History nowadays. I am personally involved in this initiative since 2017 and found there a space for developing my research topics in a global impact platform.

7 James-Chakraborty, K. (2021) Postcolonial Thought and the Emergence of Global Architectural Histories. Oxford Research Encyclopedia of Literature. Available on https://oxfordre.com/literature/view/10.1093/acrefore/9780190201098.001.0001/acrefore-9780190201098-e-1282?rskey=M3Tsx3&result=1. Accessed 11/13/2022. https://doi.org/10.1093/acrefore/9780190201098.013.1282.

8 The idea of "historical" and "non historical" styles that is on the basis of Fletcher's book is a brutal example of his racist conception.

9 Fletcher, Banister (1896) *A History of Architecture on the Comparative Method*. London: Athlone Press.

placed strategically below Greek architecture to represent the *non-historical styles*: The Persian, Mexican, Egyptian, Assyrian, Indian, and Chinese."[10]

Following this structure, architectural history students throughout the world are trained to distinguish among subtle regional differences in European Renaissance, Baroque or Modernism, as well as works and specific features of each main artist. For example, it is impossible to become an architect in any School of the world without a precise knowledge of the differences between Brunelleschi, Bramante, or Alberti or being able to define the characteristics of Northern, Central, and Southern Italian Baroque.[11] But, simultaneously, only superficial analyses are made about the "echoes" of these styles and artists in "minor" works "inspired" by the former but created in each student's area.[12] This idea of any non-European architecture understood as echoes or secondary examples inspired or "influenced" by the "Great", and "International" masters (always European or American) it's a pillar of the colonial and racist Architectural History. In this way, Ibero-American, African, or Asian architects and works are condemned to be considered as "local" examples that eventually deserve to be studied in each country, meanwhile Euro-American cases are "international" that everyone must know.[13] Following the traditional and colonial approach, Architectural trends and currents always were originated in Europe or America, and then southern cases emerged later as consequences or sequels. Recent research demonstrated that this is totally false. Styles and trends were created by an interconnected network of Southern and Northern architects[14] who collaborate, and the influences were not only in one

10 Lara, Fernando Luiz and Hernández, Felipe (2022) Introduction to Spatial concepts for decolonizing the Americas, Newcastle upon Tyne: Cambridge Scholars Publishing. p. 3.

11 The same happens in the case of the differences between German and French modernist architects like Mies van der Rohe or Le Corbusier.

12 As an example, in my school at the Universidad de Buenos Aires, the requirements for survey courses are literally based on Fletcher's tree with the addition of a short regional section at the end of each course (Pre-Columbian, Colonial or Modern) This "additive" system works in most of Ibero-American universities and other parts of the world. I have discussed the idea of how this "addition" of local contents does not modify the colonial bases of the survey in Martínez Nespral, F. (2019) "¿Misteriosas?, ¿Para quién? Hacia una decolonización de la enseñanza-aprendizaje de la Historia de la Arquitectura" In *Arquitecturas del Sur* # 56, Universidad del Bio Bio, Chili.

13 As an example, the famous MoMA exhibition about "International Style" included only European or American works and architects; meanwhile, the similar exhibitions about other architectures were defined by a specific local name, as "Brazil builds" or "Ibero-American Architecture since 1945."

14 The work of Ruth Verde Zein about brutalism, understood as a global connected process, demonstrated this. See: Verde Zein, R. (2014) *Brutalist connections. A refreshed approach to debates & buildings*. São Paulo: Altamira.

direction (from North to South) but, on the contrary, were bidirectional or even multidirectional.[15]

In this sense, the training in the history of all non-Western architecture, including the architecture of native groups from different regions, is frequently missing or superficially mentioned, or only present in eventual optional monographic courses or courses on in ancient history courses, since the distance with the studied phenomenon is like a buffer that ensures a disconnection with our present, as imposed by colonial perspective. As an example, Islamic Architectural History is included in Medieval courses based on certain examples as the Alhambra, built during the Middle Ages, but many other Islamic masterworks are contemporary to the Renaissance, Baroque, or Modernist periods.[16] In this way, Islamic Architecture is "medievalized" by Architectural History courses, then five hundred years of Islamic Architecture from the Middle Ages to nowadays were ignored, forgotten, or undervalued.

Consider this, for instance: almost everybody knows something about the pyramids, the sphinx, and the architecture built in Egypt in the Pharaonic period, five thousand years ago; some teachers and researchers (not the common people) know about Egyptian architecture built a thousand years ago, during the Fatimi caliphate, but much fewer people outside of Egypt and a small circle of Arab Architecture specialists know anything about the architectural ideas of more than a hundred million modern Egyptians'.

If the answer to this brutal disparity is that what Egyptians do today is less important than they did in the past, this is basically a brutal and racist argument. In this way, teaching only pharaonic Egyptian architecture in survey courses implies supporting and spreading a racist perspective of Egyptian society. We cannot be silent accomplices to racism. One of the main goals of this book is to argue for the construction of a non-racist approach to Architectural History.

15 The Study of Federica Ciarcià about the influences that Le Corbusier received from Ibero-America during his trip is a good example in this sense. See: Ciarcià, F. (2023) *Le Corbusier e L'Argentina: Voyage D'Occident*, Roma: Aracne.

16 Like the Taj Mahal built between 1632 to 1654 simultaneously to the Baroque works of Bernini and Borromini or the works of the Egyptian architect Hassan Fathy's made in the twentieth century for mentioning only two examples.

Efforts to revert this entrenched[17] trend are quite new but visible in current publications.[18] This book, which compiles and summarizes my studies on this topic over the last four decades, intends to be another element to collectively work out a decolonized[19] architectural history.

2 Against a False Notion of Distance: a Linguistic Approach

Focusing on the topic of this book, we resume the recently explained argument about distance magnification as a colonial strategy to create a false notion of remoteness that avoids any possibility of conceiving both cultures as connected cases. Following this colonial approach, the Arab culture is shown as something very distant from Ibero-America; not only geographically distant but also, and above all, culturally.

As per popularly known ideas, "they" are mainly Muslims and "we" are mostly Christians, "they" speak Arabic and "we" speak Spanish or Portuguese, "they" live in deserts and ride camels, meanwhile "we" live in plains or jungles and ride horses. I emphasized the words "we" and "they" because the idea itself is false and not fair; if not, how do we consider the Muslim people born in Ibero-America? As part of our "we," or must we condemn them to be foreign in their own countries? If we follow this malicious path, it is very difficult to make connections between both cultures; at first sight, everything related to Arab culture looks like something distant, exotic, and even opposite to Ibero-American culture. A good example of a popular approach to both cultures can be seen

17 There is a number of initiatives I take part in, such as the aforementioned GAHTC (Global Architectural History Teaching Collaborative), the group "Our North is the South" that I cofounded with Ana María León (Graduate School of Design Harvard University) and the different activities promoted by our friend and colleague Fernando Luiz Lara (University of Texas at Austin) in the project "Decolonizing the Spatial History of the Americas" and the research net "Bella" (Built environments and Landscapes of las Americas).

18 Two recent examples are the books Loredo Cansino, Reina Isabel and Lara, Fernando Luiz (eds.) (2020) *Apuntes sobre decolonización, arquitectura y ciudad en las américas*. Mexico: Colofón (Spanish text) and Lara, Fernando Luiz and Hernández, F. (eds.) (2021) Decolonizing the spatial history of the Americas. Center 24, Austin: University of Texas.

19 Edward Said clearly explained more than forty years ago in "Orientalism" how the colonial cultural mechanism is previous to colonization and supports it ideologically: "To say simply that Orientalism was a rationalization of colonial rule is to ignore the extent to which colonial rule was justified in advance by Orientalism, rather than after the fact." (Said, 1978, p. 39) Consequently, any decolonizing initiative starts with breaking colonial cultural ideas.

in movies. Taking only Disney productions, "Aladdin" shows an exotic background full of deserts, camels, and bulb domes, while "Coco" or "Encanto" presents a different kind of exotism and constructs a totally diverse environment only comparable to examples of exotic or non-civilized societies. But, despite both cultures being presented as different, if we can see beyond the imposed idea of distance, we can find similarities in the architecture, urban spaces, and houses of Aladdin, Coco, and Encanto, because all of them are based on mud walls, patios, and tiles, among other connections.

In spite of this, we have all seen several times across Ibero-American cities examples of patios, tiles, lattices, ponds, and several other architectural elements that can be easily connected with Arab Architecture. But as the colonially imposed distance between both cultures is considered evident, something that is unquestionably true, these connections between both cultures are necessarily seen as exceptions, old "remainders" of a distant and exotic influence, something unconcerned or only remotely, sporadically, or marginally related to "our" culture.

In this regard, an indicator of the impact of this approach based on the distance is that many studies that make connections between both cultures use terms like "footprint" [huella] or "shadow" [sombra]. A footprint is basically the imprint of an object, animal, or person that was there in the past but is currently gone, is the remains of something that is not part of the present but only of the past. Meanwhile, a shadow is the projection of a distant object; the object that generates the shadow is not in the place where the shadow is. In this sense, both terms, footprint and shadow, created the idea that we are talking about past or distant elements. Examples of this are cases as the excellent book by Luce López Baralt (López Baralt, L. (1985) *Huellas del Islam en la literatura española: De Juan Ruiz a Juan Goytisolo*. Madrid: Libros Hiperión) or the also very interesting book by Hernán Taboada (Taboada, H. (2004) *La sombra del islam en la conquista de América*. Mexico: Fondo de Cultura Económica). I even used the same terms when I wrote a paper entitled "Islamic footprints in Ibero-American Architecture" to be presented at the Annual CAA 2017 Conference. My position is that the use of those terms avoids the idea of a real connection between both cultures and promotes the idea of exceptional exotic relationships. For this reason, is that I propose to think of the case from a different perspective and use other terms like the word "component" used in the title of this book that support this interconnected approach.

It is not necessary to do much further research to know that the perception of a huge distance from the Arab culture is based on a series of stereotypes and simplifications: not all Arabs are Muslims, not all Muslims are Arabs,

not all Arabs or Muslims live in deserts or ride camels. And obviously, not all Ibero-Americans meet the stereotypes used to define us. On the other hand, Arabs and Ibero-Americans are connected by the Arabic component of Iberian cultures (Spain and Portugal) that conquest and colonized this continent.

Languages give us a truly clear example to allow us to deconstruct these exotic stereotypes. Many[20] of us speak Spanish or Portuguese, and although both languages come from Latin, the second linguistic source for them is Arabic. The main difference between these languages and other Romance languages is precisely their Arabic component. So, several Spanish or Portuguese words that sound different from the same concept in other Romance languages, such as French or Italian, came precisely from an Arabic source.[21] This point was widely discussed by linguistic studies, and several authors have remarked on the importance of Arabic as a component in the Spanish language:

"El elemento árabe es precisamente un rasgo que singulariza al español (junto con las demás lenguas romances hispánicas y con algunos dialectos del sur de Italia) del resto de los idiomas, románicos o no, de Europa occidental." (The Arabic element is precisely a feature that distinguishes Spanish (along with the other Hispanic Romance languages and with some southern Italian dialects) from the rest of the languages, Romance or not, of Western Europe.)[22]

We can see this in Spanish or Portuguese dictionaries, where the letter "A" is much more frequent than in other languages and can even need a whole volume devoted only to words starting with an "A". This is because Arabisms, i.e., Spanish or Portuguese words with an Arabic origin, were adapted from these languages by including the Arabic article "al", and this, naturally, does not appear in other languages. There are a lot of examples, but we can mention some of the most frequent in architecture, "Alfombra" from "al-Ḥumrah" (rug), "Alberca" from "al-Birka" (pool or pond), or "Alcoba" from "al-Qubba" (bedroom), all of them with Arabic origin and starting with an "A" for the original Arab article.

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20 I explicitly state that "many" people speak Spanish or Portuguese, because I don't intend to hide the existence of Ibero-Americans who speak other languages, especially those who speak native languages such as *Nahua, Quechua, or Guaraní*.

21 As an example, Spanish and Italian languages had several similarities, but some of the most important differences between both are related with the Arab component of Spanish that is absent in Italian. An example is the particular sound and the use of the letter "J" that is absent in Italian meanwhile in Spanish sounds in the same way that the trans littered H of the Arabic (and sounds totally different than the J in English or French).

22 Patronato de la Alhambra. La influencia árabe en la lengua española. Available online in: https://www.alhambra-patronato.es/arabe_lengua_espanola. Accessed 11/20/2022.

Since language is the vehicle of culture,[23] in "our" own Ibero-American languages, the Arabic worldview is present through Arabisms. Words are transmitted from one language to another, charged with the worldview of the culture that originated them. Thus, it is not a distant or exotic "influence", but, rather, the opposite; there is an Arabic "component" within "our" own culture.[24] Homi K. Bhabha explained how the imaginary "other" could be be part of the also imaginary "us": El "otro" nunca está fuera o más allá de nosotros; surge con fuerza dentro del discurso cultural cuando pensamos que hablamos, de la manera más íntima y natural, "entre nosotros". (The "other" is never outside or beyond us; It emerges strongly within the cultural discourse when we think that we speak, in the most intimate and natural way, "with each other.")[25]

3 If It's Not Foreign, It's Not an Influence

That is why I question the idea of an "influence" as one of my main arguments in this book. An influence[26] is exercised by an external agent; the influencer[27] does it from outside. But, as already explained, the Arab culture is not external at all, but it is deeply incorporated into Ibero-American culture.

Since this Arab presence is an inner feature, I suggest the word "component", which defines an integral part that cannot be replaced without modifying the whole thing it makes a part of. If I have some personal features, like the color of my hair or eyes, it is not because of the influence of my parents or family; it is because I have the genes of my family, which are an inseparable part of me.

The idea of "Arab influences" in Ibero-American culture is, consequently, not only a mistake that leads to inaccurate and incomplete interpretations but

23 The basis of this idea is in: Wittgenstein, Ludwig (1922) Tractatus logico-philosophicus.

24 Edward Said, in his prologue to the Spanish edition of "Orientalism" stated that the Islamic was an "essential part" of the Spanish culture: "… It is vital to insist in that what gives its wealth and complexity to Islamic images in Spain is the fact that it is an essential part of Spanish culture, not an external and distant force …" (Said, 2004, p. 10). As the Iberian style is an integral part of Ibero-American culture, this Islamic essential feature spread to the Americas.

25 Bhabha, Homi K. (2010 – [1990]) Nación y narración. Buenos Aires: Siglo XXI, p. 16.

26 The word "influence" is defined by the Cambridge Dictionary as "The power to have an effect on people or things, or a person or thing that is able to do this" See: www.dictionary.cambridge.org.

27 The current use of the word "Influencer" in social media is a good example of this problem. An influencer is usually a famous or rich person that influences common people habits. The influencer is not a common person, lives in a different way and common people influenced try to emulate the influencer live.

also an Orientalist[28] colonial resource used to create or increase a distance that discourages the appropriation of a non-Occidental feature of regional culture. I consider this is clearly a component, not an influence. More than 40 years ago, Said explained Orientalism as a mechanism by which the West perceives the East as an "other". So, to talk about the Arab "influence" in Ibero-America is a way to "Orientalize" our own continent, considering as "other" cultural components that are part of "us".

Another definition that supports my idea is the use of the term "Arab," even in the book title. This word mainly defines a language, and although it is also related to a geographic area and certain nationalities, it basically has a linguistic sense.

This implies that the term "Arab" does not have religious connotations, as it may happen with terms such as "Islamic" or, even more clearly, "Muslim." As explained before, not all Arabs are Muslims, and not all Muslims speak Arabic as their native language.[29] As an example, in two of the most important Islamic countries, Turkey and Iran, Arabic is not the first language.

Other words, such as "Mudejar"[30] or "Moorish style" are stylistic art-related names, conceived in the West with an Orientalist view, associating these artistic shapes with a religion or a single community that, eventually, can work as an "influence" in the neighboring Christian societies. But this is totally inaccurate, because on the basis of this idea is the complete separation and contrast between both communities, and this is simply not true because in Medieval Iberia, both lived together, trading, fighting, and even getting married.[31]

Mudejar is the Spanish version of an Arabic word that denominates Muslims who lived under Christian rule in the Middle Ages in the Iberian Peninsula. It started to be used to define an artistic style at the end of the 19th[32] century, and, in spite of being widely spread, it has been questioned for being more

28 As we had previously stated on the basis of Said's work, the Orientalist cultural idea is not a consequence of colonial political systems, but, on the contrary, it is older than them and justifies and supports those systems.

29 Since the al-Qur'ān is written in Arabic and prayers are made in this language, all Muslims should be familiar to a certain extent with this language, which does not imply that it always is their unique, first or main language.

30 The term was introduced by José Amador de los Ríos in his speech of incorporation to the Real Academia de Bellas Artes of San Fernando in Madrid. Amador de los Ríos, J. (1872) *El estilo mudéjar en arquitectura*. Madrid: Imprenta de Manuel Tello.

31 As was usual in Medieval societies, royal marriages have a political component, so, several Christian kings of Spain had a Muslim mother, and simultaneously other Muslim rulers had a Christian one.

32 Amador de los Ríos, J. (1872) *El estilo mudéjar en arquitectura*. Madrid: Imprenta de Manuel Tello.

connected with Nationalistic ideas in force at its inception than with the relevant historical period.[33]

But, as I have already explained, this component of Ibero-American culture is primarily expressed through language. Architectural ideas were born and are kept alive mostly by words and their role in the definition of regional culture. That is why I chose a linguistic category as "Arabic".

Besides, although the design criteria mentioned in this book, i.e. privacy and the importance of water in buildings can undoubtedly have inspiration on the Islamic religion, as the Iberian Peninsula was both Arabized and mostly Islamized in the Middle Ages, they had reached most peninsular people, beyond Muslims, and was taken to Ibero-America in the Modern Age by the then-Christian Spaniards and Portuguese.[34]

Based on this, I consider it more appropriate not to analyze this through more indirect and restrictive religious connections or modern Western and colonial stylistic criteria, but to use the term "Arabic", which directly refers to a language, as an ideological and cultural element to understand the phenomenon studied in this book.

There are hundreds of architectonic Arabisms,[35] since medieval Christian-Iberian societies, mostly focused on war and religion, adopted the Hispanic-Arabic construction know-how as if it were their own.

Here we can see two key factors that are the basis of this book. First, as the Arabic component of Ibero-American Architecture is a component reflected by a linguistic origin, those Arab components can be considered as Architectural materializations of Spanish-Arabic words. And secondly, as those components are deeply rooted in Iberian and Ibero-American societies, they are considered

33 In this regard, the recent works made by colleague María Judith Feliciano have been very important; for example, Feliciano, M. J. (2016) "The Invention of Mudejar Art and the Viceregal Aesthetic Paradox: Notes on the Reception of Iberian Ornament in New Spain," in Gülru Necipoğlu and Alina Payne (publishers), *Histories of Ornament: From Global to Local* Princeton and Oxford: Princeton University Press.

34 This idea of how Islamic features were introduced into Ibero-America by Christian conquerors shows the intercultural facet of this kind of processes as a key factor opposed to false ideas of cultural purity.

35 Being aware of the importance of this linguistic event, we wrote, together with Hamurabi Noufouri, a dictionary of Arabisms related to architecture, entitled "Dictionario del Alarife", about thirty years ago. See: Noufouri, H. and Martínez Nespral, F. (1994) *El diccionario del alarife*. Buenos Aires: Fundación Los Cedros. We included in that book more than four hundred Spanish words with an Arabic origin selecting only the ones related to Architecture and Urbanism. I will mention this idea of a linguistic origin of the Arab component in Ibero-American societies several times across this book.

by Iberian and Ibero-American people as their own features. So, a Christian medieval warrior, who fights against Muslims in war, can, at the same time, spread Arab Architectural elements because, from his own perspective, those elements are part of their own culture. I will return to this point later because it is indispensable to understand the core of this book.

As time went by, and as globalized modernization advanced, some of these terms and the architectonic ideas defined by them became obsolete, but it is still impossible to describe a Viceregal Ibero-American building (15th–19th century) without using Arabisms. As an example, if you visit any Ibero-American Viceregal building you surely will see *azulejos* (tiles), *alfombras* (rugs), *albercas* (ponds), or *jemesías* (lattices). All of them are arabisms, and without them, any explanation of the building will be undoubtedly inaccurate.

So, it is impossible to fully understand Ibero-American Viceregal architecture without considering its Arabic component. The first chapter of this book will analyze the historiography, so there will not be more details about this topic at this point.

But I think that this Arab connection is precisely a "component" of Ibero-American architecture, a number of ideas and criteria about how inhabited spaces should be. These are features incorporated into the regional culture rather than precise influences or footprints of a distant phenomenon. So, although they have changed their appearance over time, they can be recognized in their essence from previous periods. I will explain this idea in the next section.

4 Beyond Styles, Continuities Are Based on Architectural Design Ideas

This leads to another key point of my main thesis: architectural history, based on criteria from the history of art, follows styles that are identified on the basis of certain elements or archetypical shapes, so the existence of certain elements or pieces[36] prove that a work of art belongs to a certain style, whereas its absence excludes it from that category.

36 A clear example of this is the identification of styles based on capitals or columns, then a Doric capital is the identification element for the Doric style and the same happened with Ionic and Corinthian ones. But this work in some examples and not in others. For example, Romans combined the three styles in the same building as happened in the Coliseum. So, this building is Doric? Ionic? or Corinthian?

I think this classification is superficial in its architectonic application; it is inaccurate because it just analyzes certain features, and facades above all, but does not focus on key ideas that define the conception of a building.

I propose a structure based on identifying design ideas, which I call "design criteria." These ideas are previous and independent of the stylistic forms related to users' needs and preferences.[37] They are the basis of important guidelines that originate any kind of project, regardless of the stylistic forms applied to buildings.

For example, the appreciation of privacy in domestic spaces is a criterion that leads to a number of different architectural solutions, such as lattices, hallways, or courtyards, which can be built with different shapes and styles in different time periods and contexts.[38]

Design criteria such as the importance of privacy will appear in Viceregal works of art, even more in those of the first centuries after the Iberian conquest of the Americas, by means of shapes easily related to an Arabic origin. At that time, connections with the early Middle Ages,[39] when the Arabization of the Iberian Peninsula spread, were closer and more direct.

But while these ideas on how to make buildings were visibly present within society, there were later works, designed with stylistic features from different periods, apparently unrelated to the Arab culture, but including Arabic-originated "design criteria" essentially present.

For example, under Baroque or Academicist styles, there were buildings conceived on the basis of privacy rules of Arabic origin, combined with shapes or ornaments related to the Baroque or Academicist styles in each case. We will explain this topic in the 4th chapter of this book when we talk about lattices and balconies.

Most regions of Ibero-America remained as Spanish or Portuguese colonies until the first decades of the 19th century, after which the republican period began. In that epoch, the newly independent countries started to see the European powers of those times (England, Germany, and France) as models for the future development of the young nations. As part of that process,

37 Across history, people needed particular conditions in a building as space, privacy, comfort, beauty, modernity, tradition, but a particular architectural style is not a central part of their requirements. Even, most Architectural Styles were named by Historiography decades or centuries after those buildings were designed and constructed.

38 There are examples of lattices and other kinds of privacy screens in several periods and different artistic styles from the Ancient World to contemporary architecture.

39 We can see examples of medieval lattices in Iberia, even nowadays in buildings like the Alhambra, but in the 16th, century was much more frequent and later disappeared or were replaced due to new trends.

several local governments promoted immigration to occupy the vast territories obtained after the genocide of the native people who inhabited it before.[40]

During this period, several Ibero-American countries received a high number of Arab[41] immigrants in 19th and 20th centuries. They left their mark in our cities in buildings that were similar to those in their birthplaces.[42]

At the same time, at the end of the 19th century and the beginning of the 20th the Moorish or Arab Revival architectural styles came to Ibero-America from Europe, this time as an exotic influence.

Both architectural styles, the migrants' and the Orientalist exoticism, do not involve processes directly connected with the abovementioned design criteria and components, but have left a print in a regional architecture that is interesting for a book like this, aimed at a long-term analysis, and contributed to bringing buildings related to Arab architecture to Ibero-American cities.

Later, during the 20th century, several Ibero-American architects wanted to recover shapes, materials, and ideas from the Viceregal period, because they believed there had been intelligent solutions, strongly connected with materials, climates, and local traditions. These authors replicated Arabic design criteria many centuries afterward. This trend has not ceased and is in force even in contemporary cases.

So, in this book, I propose to deal in each chapter with three periods: the Viceregal one, the 19th century, and the modern and contemporary ones, exploring the Arab presence in Ibero-American architecture based on different design criteria.

5 Structure and Goals of This Book

This book is organized into 10 chapters, where there will be an analysis of a number of architectonic ideas or "design criteria" in which the Arab component in Ibero-American culture is present from the inception, and that, with variants in their formal expressions, can be recognized in different time

40 A complete development of this process for the Argentine case can be found in Martínez Nespral, Fernando (2021) "The desert as an idea. A decolonial reading of Argentine territorial development". *Essempi di Architettura, International Research Center*, Roma. Vol 8 no. 1, pp. 39–47.

41 Most of them were from Syria and Lebanon, but some also came from Morocco or Turkey, among other Islamic countries.

42 There are a lot of examples in different countries, particularly in the North and West of Argentina, the South of Brazil, and the Caribbean region, among others.

periods and cases. This idea will be further explained in Chapter 2, so it is just introduced here.

Chapters 3 to 8 will talk about a number of Ibero-America's architectural topics and problems that must be explained on the basis of the Arabic component. Each section will be dedicated to a specific topic, identified by means of an architectural element such as tiles, lattices, and ponds, a building technique, or compositive patterns.

Chapter 9 develops a case study, deeply analyzed, demonstrating the idea proposed in this book: Ibero-American Architecture can not be understood out of its Arab component.

With Chapter 10, I conclude this book with a thematic shift, turning to what might be considered a "return journey" of these design criteria, traced through the works of several Ibero-American architects in the Middle East.

In each chapter, we will start from the frame problem, its causes, and connections with the Arab component, and we will give examples from different regions within Ibero-America in different time periods, from Viceregal works to contemporary architecture. The result is a long line meandering, connecting the origins of each idea with its multiple continuities and transformations up to the present.

After analyzing these cases, we will come to a conclusion and an epilogue, focused on debating the space, the implications, the need, and eventually the role that I consider this topic should have in this area within its two relevant frameworks, the history of Ibero-American and Islamicate architecture.

In a nutshell, this book aims to analyze 500 years of Ibero-American architectural history (from colonization to the present), focused on a specific topic, the Arabic design criteria, to help spread knowledge about a component that belongs to Ibero-American culture, which is sometimes totally ignored and is often undervalued as an exotic influence. Through this framework, I intend to further advance in a contribution to the plural process of writing a decolonized history of architecture in the Americas, which I think should be the goal of the current generation of Architectural Historians.

There is an interesting precedent to this book, specifically devoted to American architecture with an Islamic inspiration. It is called: "Domes, arches, and minarets: A History of Islamic-inspired buildings in America" by Phil Pasquini.[43]

We share the idea of a long-term concept since Pasquini's book includes works from the Viceregal period up to the present. The form of the title of

43 Pasquini, P. (2012) *Domes, arches, and minarets: A History of Islamic-inspired buildings in America*. Novato, CA: Flypaper Press.

Pasquini's book, representing three shapes recognizable in different periods, is a clear reflection of his approach.

However, there are three main differences between the book by Pasquini and this book. The first and most obvious is the covered area since I analyze Ibero-America, meanwhile, Pasquini does it with the USA, including territories that had been initially conquered and colonized by Spaniards and then became a part of the USA.

The type of work is also different. Pasquini's work is an excellent and complete photographic survey; although it has some brief introductory paragraphs, it is mostly visual work. On the contrary, this book intends to be a theoretical essay where images, although essential to support and illustrate written ideas, are a complement.

Finally, there is a conceptual difference. As Pasquini writes about the USA, Islamic references are mostly exotist.[44] It is a fantastic collection of weird influences from a distant culture, even classifiable as kitsch[45] in some examples. Much to the contrary, as expressed above, this book analyzes components that belong to Ibero-American culture and states that these features are not at all exotic.

In any case, I am interested in "comparing" my book with Pasquini's and helping its dissemination. I think it can be interesting, especially for readers in the United States, to make a comparative reading of both books, to think about common and different ideas and architectural shapes, and their conceptual frameworks.

For more than three decades, I have been surprised by the discovery of new Architectural Arabisms, and many other features of Ibero-American architecture that are related to its Arab component. I have thought about their origins, multiple connections, old or contemporary reinterpretations, and the role of regional historiography in those buildings.

This "surprise" relates to a debate about the way we observe the history of Ibero-American architecture because the "surprise" and "discovery" of these topics is caused by their previous hiding, a colonial and Western-central approach that must be set aside to "discover" topics like these and many others that are similarly essential for a fairer deeper understanding of the history

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44 The only non-exotic cases in Pasquini's book are precisely those from colonial times, located in currently American territories, but originally colonized by Spaniards as Texas, New Mexico, California or Florida; that's why those works could be clearly included in this book because were built in a period in which there were part of Ibero-America.

45 Even in this sense, Pasquini's book is very interesting because shows a no frequently studied part of the architecture in the United States.

of our built environment. To work on this topic is a continuous discovery of things that have always been there, but we cannot see previously because of the limits of the colonial perspective. This is one of the main goals of this book, I want to reveal unsuspected connections between objects and buildings that we can find easily, the surprise that I propose is not based on the discovery of new works or architects, but on the revelation of connections between those works and the Arab culture that led us to see and explain them in a different way.

This book compiles the essence of these ideas and is aimed at divulging them, but it mostly intends to invite readers, particularly students, teachers, researchers, and people interested in Ibero-American Architecture to develop and increase this search because I am sure that there are much more relations to be discovered between Ibero-America and the Arab culture in the field of Architecture if a new generation will be involved in this topic.

CHAPTER 1

Critical Presentation of the Historiography on the Arab Component in Ibero-American Architecture

1 Mudejar Components During the Viceregal[1] Period: a Well-Known History

The topics analyzed in this book have been haphazardly studied by the historiography.[2] Some aspects have been frequently researched for a very long period, while others have been much less considered.

Currently, there is no book that deals with this problem in a period as long as the one analyzed here, besides Phil Pasquini's,[3] as I mentioned in the introduction. Moreover, his book studies another region, with a different approach, more photographic, and so different from the theoretical perspective that is the basis of this book.

As we will see in this chapter in connection with Ibero-America, the existing bibliography related to aspects that connect regional culture with the Arab one tends to focus on certain specific periods or regions.

It mostly focuses on the study of viceregal buildings, where the Iberian-Arabic architectural elements are clearly recognized since they are remarkably similar to peninsular models. Also, historiography focused on the regions that were the most important for the Iberian colonizers due to colonial extraction processes, and then, were places for the biggest cities and featured buildings in which the Arab component is remarkably seen.

This type of architecture, which features aspects from the Islamization and Iberian Arabization periods, but was built in areas ruled by Christians, is very

1 The lands colonized under Iberian dominion were administratively organized as viceroyalties, a designation that has consequently become the conventional term for referring to the colonial period.

2 A complete and recent historiography of Mudejar Architecture can be found in: Mamani Fuentes, F. (2022) "Historiografías entrecruzadas. La construcción del término arquitectura mudéjar en América". In: Prieto Ustio, Ester (ed.). *La construcción de imaginarios. Historia y cultura visual en Iberoamérica* (*1521–2021*). Ariadna Ediciones: Santiago de Chile.

3 Pasquini, P. (2012) *Domes, arches, and minarets. A history of Islamic inspired buildings in America*, Novato, CA: Flypaper Press.

 | DOI:10.1163/9789004756557_003

frequent in Spain and Portugal, where there are many examples of this type of elements, from the Middle Ages up to the 18th century.[4]

By the end of the 19th century, the Spanish art historian José Amador de los Ríos, in his speech of incorporation to the Real Academia de Bellas Artes of San Fernando (Royal Academy of Fine Arts) in Madrid, defined this type of architecture as "Mudejar".[5]

Mudéjar is a Castilian word derived from the Arabic *mudajjan*, which, according to the Spanish Royal Academy, means "tamed"[6] and is related to certain kinds of people, Arabized and Muslim inhabitants of the Iberian Peninsula that continued living and working in their city or territory after it had been conquered by the Northern Christian reigns. So, we are talking about an old and defeated Muslim community living under the rule of the new Christian conquerors.

By using the word "mudéjar," Amador de los Ríos introduced a comparison and made a parallelism. So, Mudejar Architecture is a neologism that describes a certain kind of buildings that he imagines as similar to the mudejar communities. Those buildings that he calls "Mudejar" would be the same as people, remnants of an Arabic-Islamic past that would have continued as an exception and for a short time after the Christian conquest.

The conception of the name itself implies that Mudejar architecture means for Amador de los Ríos a footprint of the Islamic past still visible in the Christian present. In this way, Mudejar architecture understood as a parallelism of Mudejar communities represents an unusual continuity of a finished society, something necessarily foreign, almost dead, and destined to disappear in a short time as happened with Mudejar people years after the end of the conquest were forced to convert to Christianity and finally, at the beginning of the seventeenth century, expelled from Spain.

The idea that I propose in this book is totally opposed, as I explained previously, from my position, the Arab presence in Iberian and Ibero-American cultures is not foreign, is not dead, has not disappeared, and, on the contrary, is still visible and active in several aspects of Ibero-American societies.

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4 I wrote my doctoral dissertation to show how Iberian-Arab features in architecture and ways of living were discovered to their amazement by foreign people visiting Spain, at least up to the end of the 17th century. See: Martínez Nespral, F (2007) *Un juego de espejos. Rasgos mudéjares de la arquitectura y el habitar en la España de los Austrias – Siglos XVI–XVII*. Buenos Aires: Nobuko.

5 Amador de los Ríos, J. (1872) *El estilo mudéjar en arquitectura*. Madrid: Manuel Tello Publishers.

6 Mudéjar, meaning given by the Royal Spanish Academy, available in: https://dle.rae.es/mud%C3%A9jar. Searched on November 1, 2021.

Moreover, the application of the name "Mudejar" by Amador de los Ríos cannot be separated from the historical context of the second half of the 19th century, when it was conceived, during the formation of modern "nation-states" and national identities for each of these states.

That's why several authors have debated about its use, especially María J. Feliciano.[7] But, considering that the term "Mudejar" has been used for more than 150 years, both advantages and disadvantages created by its origin should be considered. Moreover, the mistakes and problems that the word Mudejar implies are in the present widely spread, and many people understand that it defines an aspect of Iberian or Ibero-American cultures related to the Arab culture.

In this book, as explained in the Introduction, I have used the term "Arab" because, undoubtedly and beyond any religious or political considerations, the architectural features analyzed here were created during the Arabization of the Iberian Peninsula, and simultaneously, the word Arab let me go beyond religion and racial issues. As an example, a Synagogue or a Church can be designed to include Arab components in spite of being temples for Jewish or Christian, and not for Muslim people.

Many authors, from Amador de los Ríos up to contemporary ones, have studied this type of architecture in the peninsula, calling it "Mudejar," and a Mudejarist school has been created, known by the "International Symposia on Mudejarism", which has been organized by the Mudejar Studies Center in Teruel, Aragón, since 1975.

The records of the fourteen symposiums that are currently available give a lot of information about this topic, mainly about the Iberian Peninsula, but also include the Ibero-American Mudejar.[8]

Nowadays, the main expert in Mudejar architecture is Grenadian Professor Rafael López Guzmán, author of several other books, like "Mudejar Architecture"[9] manual, which is for sure the general reference book on this topic.

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7 This author has written many works about this particular topic. We will mention: Feliciano, M. J. (2016) "The Invention of Mudejar Art and the Viceregal Aesthetic Paradox: Notes on the Reception of Iberian Ornament in New Spain," in Gülru Necipoğlu and Alina Payne (eds.), *Histories of Ornament: From Global to Local* (Princeton and Oxford: Princeton University Press, 2016).

8 I took part in one of them. See: Martínez Nespral, F. (2008) "Relatos y dibujos de viajeros como fuentes alternativas para el estudio, intervención y restauración de los monumentos mudéjares" *In Actas del XI Simposio Internacional de Mudejarismo.* Teruel: Centro de Estudios Mudéjares.

9 López Guzmán, R. (2000) Arquitectura Mudéjar, Madrid: Cátedra.

In Ibero-America, there is an early work, now a classic, called "Mudejar art in America" by Manuel Toussaint.[10] This work is specifically focused on this topic and, because of that, could be considered the first source for this book. Toussaint published his book in 1946 and has as goal to "demonstrate" that mudejar "flourished" in the Americas "Este ensayo sólo tiende a demostrar, y a nuestro modo de ver, lograrlo ampliamente, la tesis de que el arte mudejar floreció vigoroso en América …" (This essay only tends to demonstrate, and in our view, amply achieve, the thesis that Mudejar art flourished vigorously in the Americas …)[11] As we can see clearly, in the middle of the 20th century, even the existence of Mudejar art on the continent needed to be demonstrated.

We can see from Toussaint's book how the existence of Mudejar art needed to be demonstrated less than one century ago. But the buildings are there from the 16th century, so the need for a demonstration proves the previous hiding, misevaluation, or misinterpretation of this kind of architecture.

But beyond this "demonstration," Toussaint's book was based on two ideas that nowadays are refuted. Firstly, the conception of Mudejar as an exotic consequence of the Iberian Middle Ages only visible during the Early Renaissance: "El arte mudejar es la version más subyugadora de la España anterior al Renacimiento … (Mudejar art is the most captivating version of Spain before the Renaissance)"[12] and, secondly, the relationship between Mudejar art and Muslims (or crypto-Muslims) "La Conquista de América se verificó en los momentos en que los moriscos y mudéjares comenzaban a sufrir persecuciones en España; de ahí que muchos de los soldados de los ejércitos conquistadores fueran moros conversos o moriscos" (The Conquest of America took place at the time when the Moors and Mudejars began to suffer persecution in Spain; hence many of the soldiers of the conquering armies were converted Moors or Moriscos).[13]

I will discuss both ideas in this book, in my thesis, the Arab component is not exotic, is present even nowadays, and is not based only on Muslim immigration but on the Iberian and Ibero-American society's adoption of Arab-originated features as part of its own culture.

Beyond my contemporary objections, Toussaint's book is undoubtedly a fundamental source, particularly important due to its role as the founder of Mudejar studies in this continent.

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10 Toussaint, M. (1946) *Arte mudéjar en América*, México: Porrúa.
11 Toussaint, M. (1946) *Arte mudéjar en América*, México: Porrúa, p. 4.
12 Toussaint, M. (1946) *Arte mudéjar en América*, México: Porrúa, p. 3.
13 Toussaint, M. (1946) *Arte mudéjar en América*, México: Porrúa, p. 3.

Besides, the generation of historians dedicated to Ibero-American Viceregal architecture who were contemporary to Toussaint, such as Diego Angulo Iñiguez, Enrique Marco Dorta, Mario J. Buschiazzo,[14] and many others, analyzed the Mudejar style in chapters or sections of their general books on Viceregal architecture, but did not write specific books on the topic.

More recently, the Argentinian architectural historian Ramón Gutiérrez wrote about the Mudejar style in a part of his manual "Arquitectura y urbanismo en Iberoamérica,"[15] in many articles where he addresses certain aspects of this topic.[16]

At the end of the 20th century, within the commemorations for the 5th centenary of America's "discovery" by Europeans, UNESCO launched the ACALAPI Project (Contribution of the Arab Culture to Iberian-American cultures through Spain and Portugal), which was coordinated by María Rosa de Madariaga.

In connection with this Project, an exhibition was made, and a book was published, called "El mudéjar iberoamericano. Del Islam al nuevo mundo"[17] that includes a number of articles written by the abovementioned authors, such as López Guzmán and Gutiérrez, plus many other architectural historians from all over the Americas. In this book, an entire generation of scholars[18] presented their ideas about Mudejar art fifty years after Toussaint's book and created the basis of modern Mudejar studies. Here, a high number of works were included in a very complete survey and theoretical approaches clearly established de Islamic origin of Ibero-American mudejar features.

A detailed study with many authors and works cited can be found in "Los estudios sobre arte mudéjar en América" by Rafael López Guzmán,[19] a study presented in one of the abovementioned International Symposiums of Mudejarism in which López Guzmán enumerated and analyzed a very complete survey of texts dealing with this topic.

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14 It is remarkable that these authors wrote a big work such as "Hispano-American Art History" as a joint Project between Spain, México, and Argentina as from 1945.

15 Gutiérrez, R (1983) *Arquitectura y urbanismo en Iberoamérica*, Madrid: Cátedra.

16 We can mention, inter alia: Gutiérrez, R. (1999) "La transferencia de la casa de patio a Iberoamérica. Reflexiones preliminares" presented in the Coloquium "La casa de patio mediterránea" organized by Universidad de la Rábida, Seville.

17 AAVV (1995) *El mudéjar iberoamericano. Del Islam al nuevo mundo*. Madrid: Lundwerg.

18 The book includes chapters by Alfredo Morales, Enrique Nuere, Gonzalo Borrás Gualis and other Spanish specialist, and also some Ibero-Americans as Pedro Querejazu, Alberto Nicolini and Juan Benavidez.

19 López Guzmán, R. (2005) "Los estudios sobre arte mudéjar en América" in *30 años de mudejarismo. Memoria y futuro (1975–2005): Actas del X Simposio Internacional de Mudejarismo*. Teruel: Centro de Estudios Mudéjares.

Currently, authors such as the abovementioned María Judith Feliciano and Thomas Cummins have continued studying Mudejar art[20] with a critical and renewed vision that has provided new elements of interpretation. Since these contemporary works, some preliminary ideas of historiography, like the connections between the Mudejar population and Mudejar art, were shelved, and a new era of studies focused on the local appropriation of Mudejar art was opened.

Back in 1994, Hamurabi Noufouri and I published a dictionary of architectonic Arabisms in Spanish. We were convinced then, and I still argue in this book that the linguistic approach is a key factor to understanding how the Arabic features are internal components of Ibero-American culture instead of exotic and foreign influences. In this way, this dictionary, more than a simple compilation of Spanish words of Arabic origin it is in my opinion, a demonstration of the relevance of this Arab component. Following Wittgenstein,[21] the limits (and the characteristics) of our languages mean the limits of our world visions: "The limit of my language means the limits of my world".[22] So, if Arabic is part of our languages, the Arabic worldview is also part of our cultures, and Arab Architectural features are part of our architecture. In this sense, the word "our" constitutes the center of my argument in this book.

This massive production, written by several authors over more than a hundred years, is focused on the features of Ibero-American Viceregal architecture that prolong Ibero-Arab construction traditions and ornaments.

The most relevant features are the following: coffered ceilings, different types of ceilings, and among them those with jointed rafters, which made up the so-called "white carpentry", a number of technical concepts about construction with Arab-origin wood, which was widely spread in the Iberian Peninsula and Ibero-America throughout the Modern Age.[23]

One of the facets with more future in the field is the history of construction techniques focusing on the Arab component. In this topic, stand out the recent works by the Chilean Francisco Mamani Fuentes who focused on the carpentry construction knowledge of the Andean Region.

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20 Feliciano, M. J. y Cummins, T (2017) "Mudejar Americano: Iberian Aesthetic Transmission in the New World" In: Finbarr Barry Floodand y Gülru Necipoglu: *A Companion to Islamic Art and Architecture*. Hoboken, NJ.: John Wiley & Sons, Inc.

21 Wittgenstein, Ludwig (1922) Tractatus logico-philosophicus.

22 Wittgenstein, Ludwig ([1974]1922) Tractatus logico-philosophicus. London and New York: Routledge, p. 68.

23 To these effects, "Breve compendio de la carpintería de lo blanco y tratado de alarifes" by Diego López de Arenas, originally published in Sevilla en 1633 and printed many times, was very important.

Particularly about roofs, ceilings, and carpentry, the works by Francisco Mamani Fuentes present some of the most interesting and contemporary visions of it.[24]

Another topic that we will develop in this book is related to "Ajaracas," a Castilian word derived from the Arabic word *aššaráka* that means a "tie" and refers to the geometrical star-shaped decoration items that are traditional in the Arab culture, with some examples present in Ibero-America.

The basic idea of the studies about the Viceregal period is always that Iberic-Arabic shapes or techniques arrived in the Americas after the conquest and colonization by Spaniards and Portuguese by the end of the 15th century.

The first question in this regard is: How did these shapes and techniques arrive in the Americas? Which processes permitted this cultural transmission? Historiography has traditionally answered these questions by emphasizing the role of Iberian crypto-Muslims who were forced to convert to Christianity,[25] came to the Americas. But there was no need to have the presence of Muslim workers because, as I previously explained, Spanish and Portuguese Christian constructors were trained in Islamic construction know how very recent and highly rooted in Iberian cultures.

In this regard, recent already mentioned investigations by Cummins and Feliciano[26] show that the number of crypto-Muslims in American colonies should have been very reduced, due to strict controls and a few inquisitorial trials against suspicious individuals accused of being "new Christians"; this was the name given to recently converted Jews or Muslims.

Beyond this, Cummins and Feliciano add a key factor by saying: "*By such reasoning, one might suppose that the many French who lived in or visited the Americas were responsible for the Gothic features in the cathedrals of Santo*

24 See: Mamani Fuentes, F. (2022) "La carpintería de armar en el virreinato del Perú" in the proceedings of the IV International Iberoamerican Conference of Construction History.

25 Since 1502 in the Crown of Castile and 1525 in the Crown of Aragon, Muslims that lived in the Iberian Peninsula were forced to convert to Christianity. There is much bibliography in this regard, such as the classical book by Domínguez Ortiz and Vincent (1993). See Domínguez Ortiz, A. y Vincent, B. (1993) *Historia de los moriscos. Vida y tragedia de una minoría*. Madrid: Alianza, and those written in the USA by Francisco Márquez Villanueva. Márquez Villanueva, F. (1991) El problema morisco (desde otras laderas) Madrid: Ediciones Libertarias.

26 Feliciano, M. J. y Cummins, T (2017) "Mudejar Americano: Iberian Aesthetic Transmission in the New World" In: Finbarr Barry Floodand y Gülru Necipoglu: A Companion to Islamic Art and Architecture, John Wiley & Sons, Inc.: Hoboken, NJ.

Domingo, Mexico City, Lima, Bogotá, or Cuzco because this style originated in France."[27]

This evidences a substantive issue; Arabic architectural shapes were profoundly accepted and assimilated by Iberian Christians, who lived in cities that had many of this kind of buildings, and they had appropriated these aesthetics and techniques.

That's why it was unnecessary that Crypto Muslims arrived here; any Iberian conqueror who would have wanted to replicate the Spanish or Portuguese church of his town of birth in the American colonies probably would have replicated a building originally built as a mosque[28] or that, even if it was built as a church, would have had Arabic features and style, already appropriated by society.

This idea is grounded, because in Ibero-America, Arabic shapes and techniques were replicated until the end of the 18th century, when the presence of remote descendants from ancient crypto Muslims was unsuspected and even absurd. We will see that some Arabic techniques remained in use in Ibero-American popular construction up to the arrival of Modernism, at the beginning of the 20th century; meanwhile, other techniques, shapes, or materials are still in use nowadays.

In regard to decolonial ideas, the conception that Arabic shapes and techniques could be explained by the presence of Crypto Muslims is based on a racist point of view that attributes Arab cultural features only to Muslims or, more specifically, disconnects them from the West and westerners. Our research proves the opposite; arguments like this are what I want to refute.

On a decolonial note, we must say that many works with Arab features have been classified by art historians, attributing them to other European styles, mainly Baroque, because of the period when these buildings were constructed or because some ornamental features related to Baroque trends, but these ornamentations coexisted with Arab design criteria and Arab construction techniques. This "Baroquization" (that implies a European connection) of Arab-related buildings supposes a colonial action to hide their Arabic components and remark their connections with the West. Other of the goals of this

27 Feliciano, M. J. y Cummins, T (2017) "Mudejar Americano: Iberian Aesthetic Transmission in the New World" In: Finbarr Barry Floodand y Gülru Necipoglu: A Companion to Islamic Art and Architecture, John Wiley & Sons, Inc.: Hoboken, NJ. p. 1024.

28 We have to take into account that, even nowadays, several Christian churches across the Iberian Peninsula are located in structures originally built as mosques. But in the 16th or 17th centuries, during the Iberian conquest of the Americas, the number of reconverted mosques was sensibly high because several of them were replaced by modern churches in the eighteenth or nineteenth centuries.

book is to contribute to the deconstruction of this colonial idea and promote seeing our Arab-related features as they really are.

2 Independent Period Connections: Migration and Exotic Neo-Arabisms

The Independence of former Spanish or Portuguese colonies in Ibero-America occurred during the early 19th century. After that, several new nations ruled by local native elites were created in Ibero-America.[29]

These new governments were strongly inspired by the Independence of the United States and the French Revolution and intended to make commercial, diplomatic, and cultural connections with Western Europe, something that had been banned during the colonial period.[30]

So, the main European powers of those times, mainly England and France, influenced these new countries either directly, by means of occupation, or indirectly, by introducing them into the new world economic order subsequent to the Industrial Revolution, as providers of raw materials and consumers of European manufactured products.[31]

The consequence was that, from the second half of the 19th century up to the beginning of the 20th century, the new Ibero-American nations became avid consumers of European inventions related to science, technology, industry, and art.

Besides, the ruling class, by expelling and killing native people, had taken ownership of a huge territory, much more than the lands occupied and colonized by the Europeans,[32] and had become rich landowners dedicated to exportation, who invested most of their fortunes in luxurious European products, such as architecture.[33]

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29 Descendants from ancient European conquerors and colonizers that were born in Americas.

30 Spanish colonies in Ibero-American shall trade only with Spain and the only Europeans that were able to travel to the American colonies were the Spaniards. The only exception was the people related to religious orders.

31 My country, Argentina was a clear example of this new world order and its consequences in Ibero-America, we became free from Spain only to construct a new colonial relationship with England and France. Even nowadays, two centuries later, the system is still valid in several aspects.

32 This happened in a process very similar to the American expansion over native lands after the independence from England.

33 I developed this topic focused on my country in: Martínez Nespral, Fernando (2021) "The desert as an idea. A decolonial reading of Argentine territorial development". *Essempi di Architettura, International Research Center*, Roma. Vol 8 no. 1, pp. 39–47.

As a consequence, there was intense construction activity in this period, with a singular receptivity of European architectural innovations.

Among these innovations, the Arab Revival style arrived. It had been on the rise in Europe since the Napoleonic campaigns and later colonization of the Mediterranean South and East coast.[34]

This style was mainly used, both in Europe and Ibero-America, for buildings or spaces for leisure and entertainment, such as game rooms, cafés, baths, and recreation or leisure pavilions,[35] compatible with the exotic take on non-Western cultures.

The interest of Ibero-American historiography in this type of work is much more recent than studies on the Viceregal period, and, although there are several recent studies, it is a field in progress. Many authors who have worked with Arab revival architecture in Ibero-America are Spaniards who had previously studied this type of work in the Iberian Peninsula.[36]

This is the case of Manuel Rodríguez Domingo, from Granada University, who first made studies on pavilions inspired by the Alhambra for international exhibitions,[37] then about the differences between Neo-Mudejar architecture and what he calls Neo-Muslim,[38] and, much more recently, about similar works in Brazil.[39] World exhibitions played a fundamental role in the spread of modern reinterpretations of "exotic" architectures. Several Neo-Arab buildings were designed for World Fairs, and much more others were inspired by those monumental showcases.

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34 Orientalist art is a topic widely studied, a classic book in this sense is: Lemaire, Gerard-Georges (2000). The Orient in Western Art, Koln: Konemann.

35 A well-known example is Brighton Royal Pavilion, but there were many more built with the same criterion.

36 The presence of Arab Revival architecture in Spain was previously and widely studied. Because in Spain the choice of this style had also a nationalist component during the 19th century when several authors considered the Islamic period as the main original feature that differentiated Spain from his European neighbors.

37 Rodríguez Domingo, J. M. (1997) "La Alhambra efímera: el pabellón de España en la exposición universal de Bruselas (1910)" In: *Revista de Arte de la Universidad de Granada*, pp. 125–139.

38 Rodríguez Domingo, J. M. (1999) "Neomudéjar versus Neomusulmán: definición y concepción del medievalismo islámico en España" In: *Espacio, tiempo y forma*. Serie VII, Historia del arte, Nº 12, pp. 265–286.

39 Rodríguez Domingo, J. M. (2012) "La asimilación neomusulmana en la arquitectura de Río de Janeiro" In: *Quiroga: Revista de Patrimonio Iberoamericano*, pp. 30–41.

Another Spaniard author is José Alberto Morais Morán, who lived in Chile for some years and has written about the Arab revival in this country.[40]

But the main contributions to the Arab Revival in Ibero-America were made by the abovementioned Rafael López Guzmán and Rodrigo Gutiérrez Viñuales, authors of many texts with examples of the whole continent, that were recently compiled in the book "Alhambras. Neo-Arab architecture in Ibero-America"[41] that includes contributions made by different authors,[42] about specific topics and the thoroughest photographic survey of this type of work in Ibero-America.

All these texts evidence the exotic aspect of this type of architecture and its arrival to the Americas as a European fashion, heavily influenced by French or English authors such as Owen Jones.[43] This is true, but there are two factors that made the impact of the Arab revival in Ibero-America different from other parts of the world, where it arrived at the same time.

Firstly, Arab shapes were not fully exotic in the Iberian Peninsula or Ibero-America, because of the presence of previous Arab features in the abovementioned architectures from the Viceregal period in the Americas and from the Middle Ages in the Iberian Peninsula. Besides, these fashions arrived in the Americas together with thousands of Arab-origin immigrants,[44] either Muslims, Christians, or Jews.

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40 Morais Morán, J. y Urbina Carrasco, M. (2018) La mezquita de Córdoba y el movimiento arquitectónico neoárabe: de norte y Centroamérica a Chile, In: Quintana, Number 18, / Morais Morán, J. (2018) Entre clasicismos y neomedievalismos: de Grecia al arte islámico en la arquitectura historicista chilena (1906–1930) In: *Norba, Revista de arte*, no. 38, pp. 67–86 / Morais Morán, J. (2018) Inciertos orientalismos en la arquitectura chilena (1862–1916) Del neoárabe al neovenecianismo. In: Holguera Cabrera, A. Prieto Ustio, E. y Uriondo Lozano, M (2018) *Coleccionismo, mecenazgo y mercado artístico: su proyección en Europa y América*, Universidad de Sevilla. / Morais, J. (2017) Los islamismos de la arquitectura chilena decimonónica y otras referencias orientales. In: *ARQ*, no. 95, pp. 62–73.

41 López Guzmán, R y Gutiérrez Viñuales, R (eds) (2016) *Alhambras. Arquitectura neoárabe en Latinoamérica*. Granada: Almed.

42 Some of them have been already mentioned, such as José Manuel Rodríguez Domingo and Ramón Gutiérrez but also William Rey Ashfield, Yolanda Guasch Marí and Ignacio Henares Cuéllar among other.

43 An excellent essay about the interest in Islamic Architecture of English authors in the nineteenth century and particularly about Owen Jones, who created a space inspired in the Lion Court of the Alhambra presented in the Crystal Palace as part of the Great Exhibition of the Works of Industry of all Nations (London 1851) can be seen in: Calatrava J. et al. (2011) *Owen Jones y la Alhambra*. Granada: Patronato de la Alhambra y Generalife.

44 Most of them from Syria and Lebanon but also from Palestine, Turkey, Morocco, and other Arab countries.

These immigrants frequently[45] adopted the exotic shapes of the Arab Revival as an identity signal that reminded them of their birthplaces.

Besides, we have mentioned that Neo-Mudejar was adopted as a national style in Spain during the 19th century. As a consequence, there were Neo-Moriscan Spanish pavilions in Universal Exhibitions, as in the case studied by Rodríguez Domingo.

This provoked those diverse buildings related to Spanish immigrant communities to adopt the Neo-Mudejar style or even the Arab Revival. Examples of this are the Spanish Casino of Iquique, Chile, and the Sociedad Española de Socorros Mutuos in Río Cuarto, Argentina, but there were many others that we will show later in this book. I have also written about this topic, as in the article I recently wrote about the Larreta house in Buenos Aires, which includes many references to the Arab Revival.[46]

3 Modern and Contemporary Continuities: a Field in Development

In this book, I intend to analyze all Arab-original architectonic references in Ibero-America from colonization up to the present, so I must check the historiography of Ibero-American modern and contemporary architecture developed from the first decades of the twentieth century to nowadays.

Previous studies about the relationship between Ibero-American modernist architecture and the Arab culture are much scarcer.

The connection between Mexican Barragán's architecture and Arabic designs is one of the most discussed cases in historiography. It is mentioned in most parts of the books about this author because those links were evident. In fact, the Arabic-inspired pool in the Salk Institute that recalls similar examples from the Alhambra, Morocco, and other Arab countries was designed by Louis Kahn in San Diego, based on an idea of Barragán, who was contracted to design the landscape of the project, and suggested the water feature and the pointed star-shaped fountain.

Besides, the book "Paraísos" (Paradises), by Juan Molina y Vedia and Rolando Schere, mentions this topic.[47] And there is an article written by Ramón

45 This is the case with Jafe family mansion in Sao Paulo, known as the "Pink Palace" or synagogues for Arabized Jewish communities such as Or Torah in Buenos Aires that we will develop later in this book.

46 Martínez Nespral, F. (2021) De la literatura a la arquitectura. Fantasía española de Larreta en Buenos Aires. In: *Quiroga. Revista de Patrimonio Iberoamericano*, Number 19, pp. 102–115.

47 Molina and Vedia, J. y Schere, R. (2001) *Luis Barragán: Paraísos*. Buenos Aires: Kliczkowski.

Gutiérrez about Granada's Alhambra and its presence in Ibero-American Modernist Architecture: "La Alhambra de Granada en la visión y la obra de los arquitectos de la modernidad americana"[48] where works by Argentinian architect Martín Noel,[49] Mexican architect Luis Barragán and Colombian architect Rogelio Salmona,[50] inter alia, are mentioned.

Also, there is a still unpublished doctoral dissertation written by Uruguayan architect María Apud, entitled: "Sincretismo en la arquitectura moderna latinoamericana. Componentes islámicos en la obra de tres arquitectos: Julio Vilamajó,[51] Luis Barragán y Rogelio Salmona" that can be consulted online.[52]

As regards unpublished doctoral dissertations, there is one presented by Caroline "Olivia" Wolf entitled "Migrant Constructions and Mahjar Monuments: Transnational Art and Architecture in Modern Argentina, 1910–1955" that includes architecture and focuses on the Arab immigrants' work in Argentina in the above-mentioned period. It is also available online.[53]

Recently, with the aforementioned Caroline "Olivia" Wolf, we edited a section of the Ibero-American and Latinx Visual Culture Journal, proposing a collection of essays about "Rethinking Interpretations of the Mudéjar and Its Revivals in Modern Ibero-America" in order to contribute to filling the gap in the studies about the presence of Arab features in modern Ibero-American architecture.[54]

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48 Gutiérrez, R (2016) La Alhambra de Granada en la visión y la obra de los arquitectos de la modernidad americana. In: López Guzmán, R. and Gutiérrez Viñuales, R. (2016) *Alhambras. Arquitectura neoárabe en Latinoamérica*. Granada: Almed, pp. 235–239.

49 Martín Noel, as most of the Spanish colonial revival architects, used several Islamic inspired elements in his works, as latticed balconies, tiles, fountains, and ponds. As an example, we can see these features in his own residence, that nowadays houses the Buenos Aires' Museum of Spanish American Art.

50 We Will talk about Salmona, particularly in the chapter 5, dedicated to ponds and the presence of water features in Ibero-American Architecture related to the Arab culture.

51 The author is Uruguayan and included in his dissertation the work of Julio Vilamajó, a Uruguayan architect who designed gardens inspired in the Alhambra and other Spanish inspired features in his modernist works as his own house in Montevideo.

52 Apud, Ana María (2016) Sincretismo en la arquitectura moderna latinoamericana: componentes islámicos en la obra de tres arquitectos: Julio Villamajó, Luis Barragán, Rogelio Salmona. Doctoral dissertation presented in Pablo Olavide University, Seville. Available in: https://rio.upo.es/xmlui/handle/10433/2883, consulted on 11/22/22.

53 Wolf, C. (2018) Migrant Constructions and Mahjar Monuments: Transnational Art and Architecture in Modern Argentina, 1910–1955. Doctoral dissetations presented in Rice University. Available in: https://scholarship.rice.edu/handle/1911/105725 consulted on 11/22/2022.

54 See: Wolf, Caroline and Martínez Nespral, Fernando (2022) "Introduction to the Dialogues on Rethinking Interpretations of the Mudéjar and Its Revivals in Modern Ibero-America" in *Ibero-American and Latinx Visual Culture*, Volume 4, issue 3, pp. 75–82.

Included in this Journal is the text written by architect Fernando Luiz Lara about CoBoGos, a type of openwork brick used to build wall lattices, used in Brazilian modern architecture.[55] Also, Sylvia Kornecki[56] wrote about the connections between the works of the aforementioned Uruguayan architect, Julio Vilamajó, and the Mudejar legacy, contributing to the previous text written by Apud.

In the same collection, Francisco Girelli[57] dealt with the Arab revival tiles in 20th-century Buenos Aires' Architecture, Reina Loredo Cansino[58] about the Juárez Theater located in Guanajuato, México, a fantastic building that combines Arab Revival and Neo-Classical features, introducing the idea of a "modernizing by Mudejar", and finally, Michael Schreffler[59] was dedicated to historiography, showing how Ibero-American Mudejar architecture was presented in Midcentury America.

The complete set of texts included in that Journal represented a significant contribution to the less studied period, the 20th century.

I also mention other examples of modern architecture in my texts, such as "Moorish Roots in Ibero-American Architecture."[60] and "Nuestro Cercano Oriente. Rasgos islámicos de la arquitectura y la ciudad en Latinoamérica"[61] or the recent "Islamic Presence in Ibero-American Architecture: Three Periods, Three Ways."[62] These are short chapters that summarize the idea that I will explain in detail in this book.

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55 See, Lara, Fernando Luiz (2022) "Cobogó and the Coloniality of the Brise-Soleil: Islamic Roots and Marginalization in Brazilian Modern Architecture" in *Ibero-American and Latinx Visual Culture*, Volume 4, issue 3, pp. 113–119.

56 See: Kornecki, Sylvia (2022) "La arquitectura de Julio Vilamajó: entre lo mudéjar y la modernidad" in *Ibero-American and Latinx Visual Culture*, Volume 4, issue 3, pp. 106–112.

57 See: Girelli, Francisco (2022) "Azulejos neo-árabes en la arquitectura de Buenos Aires (1920–1950)" in *Ibero-American and Latinx Visual Culture*, Volume 4, issue 3, pp. 98–105.

58 See. Loredo Cansino, Reina (2022) "Modernizing the Mexican Bajío through Mudéjar: Antonio Rivas Mercado in Guanajuato, Mexico" in *Ibero-American and Latinx Visual Culture*, Volume 4, issue 3, pp. 90–97.

59 See: Schreffler, Michael (2022) '"That Peculiarly Spanish Style": The Mudéjar at Mid Century' in *Ibero-American and Latinx Visual Culture*, Volume 4, issue 3, pp. 93–89.

60 Martínez Nespral, Fernando (2021) "Moorish roots in Ibero-American Architecture" In: Lara, F. y Hernández, F. (2021) *Decolonizing the Spatial History of the Américas*, Austin: University of Texas at Austin.

61 Martínez Nespral, Fernando (2020) "Nuestro Cercano Oriente. Rasgos islámicos de la arquitectura y la ciudad en Latinoamérica" En: Lara, F. y Loredo Cancino, R. (2020) *Apuntes sobre decolonización y arquitectura en las Americas*, Mexico: CONACyT.

62 See: Martínez Nespral, Fernando (2023) "Islamic Presence in Ibero-American Architecture: Three Periods, Three Ways" in Rashid, Hussein and Petersen Kristian (eds.) *The Bloomsbury Handbook of Muslims and Popular Culture*, London: Bloomsbury Academic, pp. 13–24.

And recently, I published a paper[63] about an almost unexplored topic, the work of Ibero-American modernist and contemporary architects in the Middle East and North Africa region. This subject represents a new unsuspected global connection between Ibero-America and the Arab culture, but in an opposite way. Regional historiography virtually never highlighted cases like the huge works in Algeria, Israel, or Lebanon designed by Oscar Niemeyer, the "father" of modernist Brazilian architecture, or the projects for the region made by Spanish Mexican architect Felix Candela or the multiple works of the Mexican Ricardo Legorreta, developed all over the Middle East and North Africa region, among many other cases.

Anyway, and moreover, given those recent contributions to the field, we are convinced that this is the least developed period. There are many other modern and contemporary Ibero-American architects whose work may have a connection with Arab culture. I include many different examples that we will present later in this book. Each chapter features Viceregal, neo-Arabic, and modern buildings that illustrate the developed topic.

In conclusion, as seen in historiography, the most investigated period is Viceregal-Mudejar, but there are newer works that show Neo-Arabic components and spatial features at the end of the 19th century and the beginning of the 20th century, and fewer about modern and contemporary architecture.

Besides, most studies address specific situations related to a certain time, author, building, or place, and a comprehensive book that analyzes the Arab component in Ibero-American architecture was missing. This book was written out of this need.

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63 See: Martínez Nespral, Fernando (2022) "Tacos de falafel. Arquitectos latinoamericanos trabajando en Medio Oriente, una insospechada conexión global" in *Arq.urb* #35, pp. 29–38.

CHAPTER 2

Design Criteria Versus Architecture Stylistic Periodizations, a History Based on Continuities

1 Traditional Historical Periodizations Cannot Answer Several Questions

Canonical versions of architectural history share with their equivalents in art history the idea of stylistic periodizations.[1] Some features of society, as well as certain key historical processes, laid the foundations of some artistic forms, such as architecture. When these conditions change, due to the lapse of time and mainly to key historical events, artistic forms subsequently change.

This argument is based on the idea of *zeitgeist* or spirit of time, a theory related to Hegel,[2] created in the 18th century in Germany, which intended to recognize the basic features of each time period. The idea in the concept of *zeitgeist* is that the diverse cultural expressions of each epoch are connected because all of them were inspired by the same cultural context. So, as an example, the music, the paintings, and the architecture from the Italian Baroque

1 A guiding principle about canon versions in arch Architectonical historiography could be the already mentioned Baister Flether's book that, although written at the end of 19th century, has been published up to the present and is unsuspectedly valid. See: Fletcher, B. (1895) *A History of Architecture on the Comparative Method*. London: Athlone Press and in later editions. Beyond this, much newer books as Spiro Kostof's "History of Architecture" have a structure similar to Fletcher's, focused on the Mediterranean Sea, Europe and the Americas, as from the colonization. This makes that 75% of world regions, like whole continents as Africa, Asia, and Oceania, be excluded. See: Kostof, S. (1985) *A History of Architecture: Settings and Rituals*, Oxford: Oxford University Press.

The entry "Historia de la Arquitectura" (Architectural History in Spanish) from Wikipedia seen today is organized on the basis of traditional periodization. There is a final short mention to "Otras tradiciones arquitectónicas" (Other Architetural Traditions) where the rest of the Word, not Central Europe, is included and briefly mentioned in a huge contrast with the deeper developing of any European or American architectures.

Even now, books that propose an architectural history beyond this canon are few and emerging. A key milestone in that point of view is Ching, Jarzombek and Prakash's books, that generated the GAHTC initiative (Global Architectural History Teaching Collaborative) see: Ching, F., Jarzombek, M. and Prakash, V. (2017) *A Global History of Architecture*, Hoboken: John Wiley & Sons Inc.

2 Georg Hegel, 1770–1831, was a German philosopher that notably influenced several subsequent authors.

 | DOI:10.1163/9789004756557_004

are different facets of a common epochal idea and represented a change in comparison with the Renaissance, the previous stylistic period, when different paintings, different music, and different architecture were the expressions of an also different historical epoch.

It was widely used in architecture. Perhaps the best interpreter of this idea was Sigfried Giedion, who in his book "Space, Time, and Architecture"[3] presented a heroic explanation of Modernist architecture as the most complete and coherent architectonic "translation" of the spirit of its time, characterized by the consequences of the Industrial Revolution and the impact of machines in daily life.

Through this system, units defined by temporal cuttings started to be used. They started and finished through relevant historical events or processes that gave shape to new time periods, with pertinent consequences in the arts and architecture.

The idea is in some way correct, Modernism is indeed the architectural expression of a different epoch than Baroque, but it's a half true because, beyond the obvious differences, there are continuities between both periods as the central role of Europe and the white man Christian civilization (and the consequent subordination of non-man, non-white and non-Christian people) and the colonial system among others.

In other words, any style can be understood separately from the social, political, and economic features of the cultural context in which those styles were conceived. In this sense, Renaissance, Baroque, Academicism, or Modernism, created in a word defined by the European domination and colonization of almost the entire planet can not be understood out of this colonial and domination process. The idea of "universal" styles valid worldwide with identical and symmetrical conditions is false and hides that those styles are the architectural expression of the context that generated them. Roman architecture is inseparable from Roman imperialism in the same way that Renaissance architecture is inseparable from European colonialism.

Also, the division of periods works as an obstacle to understanding de continuous transitions, main changes infrequently happen in one day, and a permanent sequence of subtle transitions represents a much more accurate idea of History. Some particular moments and facts indeed define clear changes, but simultaneously, History is characterized by surprising continuities and connections.

3 Giedion, S. (1941) *Space, Time, and Architecture: The Growth of a New Tradition*, Cambridge MA: Harvard University Press.

But, back into the canonical periodization system, the consequences of social changes are related to certain forms or stylemes (stylistic elements or features like columns, arches, and ornaments) that identify the pertinent style, so that their presence ensures the connection of a piece of work with a certain style.[4]

In this way, the 15th century was presented as the Renaissance century, characterized by Humanism, the 16th century was the Mannerist century, featured by the Protestant Reformation, and the 17th century was the Baroque, featured by the Counter-Reformation started by the Catholic Church.

All these styles are featured by the use of certain architectonic forms and have famous artists, responsible for the main architectonic works of each period.[5]

Architectural historians choose specific authors and works where stylemes that identify the style are clear and purely found and define these works as "the purest" examples of said style,[6] then, those authors became "masters", and their most important works are defined as the "masterworks"[7] that represents the peak of each style.

Out of this canon were located the different variants that are not clearly connected with stylemes chosen for the definition of the period. Those works and authors are ignored, discarded, or eventually undervalued, considering these buildings as minor works, with a secondary position in historiography.

In this way, almost all the architectural production of each epoch was ignored, and only a few "masterworks" are highlighted. We can see a good example of this problem in classical Greek architecture. Historiography remarks on the Acropolis in Athens, particularly the Parthenon, representing the architecture of the Pericles era. But the highlighting of 50 years of Pericles'

4 An example of stylistic categorization is Emily Cole's book. See: Cole, E. (2002) *The Grammar of Architecture*, Boston: Bulfinch Press.

5 In this regard, we can mention the Project for the National Galleries of History and Art, proposed by Franklin Webster Smith to the U.S. Congress in 1900. He made a famous proposal that finally was not built A museum defined by a number of rectangular buildings, of identic plan, but with different stilemas on the façade according to the canon style prevalent in the collections shown in each building, this evidences that, for the then existing conception, styles make an impact on the façade, not on the rest of the building. See: Smith, F (1900) *Petition of Franklin Webster Smith: For the Site of the Old Naval Observatory for the National Galleries of History and Art*, Washington: Government Printing Office.

6 Peter Nicholson, in his book "Five orders of Architecture" states that "Containing the Most Plain and Simple Rules for Drawing and Executing Them in the Purest Style", see: Nicholson, P. (1841) *The five orders of architecture*, London: Thomas Kelly.

7 As de Ville Savoye for Modernist Architecture, the Palazzo Te for Manierism, the Parthenon for classical Greece or the Pantheon for Imperial Rome.

life simultaneously obscures one thousand years of Greek architecture characterized by hybridizations and combinations of different elements that prevent their incorporation into a certain style.

Something similar happens with all intercultural processes that, because of their own nature, combine diverse elements and are featured by their hybridizations and contrasts, which locate them out of the "pure zone" of the established styles and then, out of history. My entire academic work and particularly this book are dedicated to an intercultural process, but almost all social processes are intercultural; the apparently pure cases (if they really exist) are an exception.

Back to the Greek example, classical Greek culture was never as it was without its contacts with Ancient Egypt, Mesopotamia, and Eastern Mediterranean basin cultures. So, it's totally false to understand any moment of Greek history as a "pure" archetype; all of them have clear references and connections with different aspects of contemporary cultures. And this problem is valid for every period, place, or culture in human history.

Besides, the system of art classification tends to create an author's architectural canon and is essentially focused on big works commissioned by high-class and powerful people, such as those that define the peak of each style; meanwhile, anonymous and popular architecture is in a secondary position since the connection between its forms and canon models is necessarily vaguer.[8] In this way, once again, we can see how the canon hides or forgets most of the cases considered as "atypical" and in these forgotten cases, we can find almost all the architecture made by no man, no rich people, and no white people.

So, if we highlight only the masters and their masterworks, we are leaving behind almost 99,99% of the real architecture built in each moment and constructing a history based on the 0,01%. Probably this 0.01% exemplifies some of the best works, but surely, hidden in the forgotten 99.99% are a lot of fantastic buildings that we will never know if we accept the canonical survey.

As the reader will easily understand, my position is radically opposite to these ideas, because of several reasons.

Firstly, because of the decolonial perspective. in the stylistic periodization system, it is explicitly tricky that canonical masterworks and styles are presented as "international", but those ideas and features are necessarily started in some local context.[9]

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8 There are many books about "Masters of Architecture", such as Susan Wright's. See: Wright, S. (1997) *The Renaissance: Masterpieces of Art & Architecture*, Twickenham: Tiger Books.

9 To this effect it is important to know books written by authors such as Fernando Luiz Lara, see: Hernández, F. y Lara, F. (eds.) (2021) *Decolonizing the Spatial History of the Americas*, Austin: Center for American Architecture.

For example, while the 17th century is defined by Baroque and the Catholic Counter-Reformation, and explained through Bernini and Borromini's works, it is omitted that this only makes sense in the context of Rome and the Papal States;[10] that is, in a very limited space, beyond which these relationships are partial or absent.

It is evident that, beyond the frontiers of the space that makes Baroque an artistic style, as it may happen with any other stylistic category, this category becomes useless, because it does not explain contexts different from the specific one the category was created for.

These categories are meaningless in Asia and Africa, or even their use in Ibero-America, colonized by Europeans but in those times, and even nowadays inhabited by descendants of the native population and other non-European immigrants, is very relative and implies time mismatch errors, overlapping, and stylistic variations.

In spite of this, these styles constitute architectural and artistic history and are intended to have an "international" feature. This is mere cultural colonialism. Styles created in colonized spaces are called "national", "regional"[11] or "local" and those created by colonizers are called "international".[12] As any Ibero-American Architect, I was trained to see the "International masters" and their "masterworks" (always European or American) and then their local "followers", whose works are interesting only for their relationship or emulation of the foreign masters. And this perspective works identically for examples of the Viceregal, the independent, or the contemporary period.

This is a key factor of my argument in this book. I argue that the idea of "national vs international" is false, all cultural expressions are local or regional,

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10 Even inside the Italian Peninsula, Baroque in the Piemonte, in the Veneto or in Sicily is very different to the Roman one, and out of Italy, French, German, Spanish or English versions of Baroque are only partially related to Bernini and Borromini and its regional features are the key factor to understand each one.

11 In this regard, a key idea is the concept of Critical regionalism created by Frampton to explain alternatives to an "international" modernity. See: Frampton, K (1983) "Towards a Critical Regionalism: Six points for an architecture of resistance", in "*Anti-Aesthetic. Essays on Postmodern Culture*." Seattle: Bay Press.

12 In the 19th century, when Eurocentric historiography expanded, Ibero-America was one of the few world places neither colonized (Because it had won its independence from Spain and Portugal) nor colonizer of areas external to its own territory (but there had been interior colonization processes in territories ancestrally inhabited by Native Americans.) By then, Africa, Oceania and Asia were mostly colonized by Europeans, and, in some cases, by the USA. This unique condition in of Ibero-America within world colonialism provoked a dualism; high ruling classes were associated with colonizers, and low classes with colonized people.

and most of them are connected through transregional or global links. In this way, we must understand the entire global architectural production as a network and its diverse examples (northern or southern) connected in reciprocal and multiple directions.

The colonial criteria, besides being unfair and undervalue architecture made by colonized people, are confusing and useless out of the colonial powers and particularly in Ibero-America, the region that we are analyzing in this text.

For example, and focusing on the topic of this book, certain Arabic ideas and techniques, such as ceilings with jointed rafters, although being a part of Mudejar architecture, and, as much, used in the peninsular Middle Ages, remained in use up to the 18th century and later[13] in Ibero-America.

So, it is frequent to see buildings with some Baroque features, like ornaments and furniture (such as church altars and altarpieces) within a space covered by these medieval ceilings, whose floor is formed by simple rectangular shapes, which are not Baroque at all.

There is a specific case in Quito churches, like San Francisco or Santo Domingo. We will detail this in chapter 6, so we will not abound on this at this point.

Historiography, on the basis of colonial concepts and the contemporality of these churches with the emblematic European Baroque works, calls them "Baroque churches", examples of the "Ibero-American Baroque".[14]

But, as analyzed before, these so-called Baroque buildings include key elements of medieval Arabic origin, and plans, construction techniques, and interior volume have few or no connections at all with Baroque features, which were created in Rome by Bernini or Borromini, and on the contrary, these works also have several features linked with the native local cultures.[15]

Some Baroque influence can be seen in furniture and any ornaments, which, in turn, are much transformed by local knowledge and preferences, such as the native people's previous experience in construction and their[16] tastes.

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13 This technique to build roofs remained in use in many regions, especially in popular architectures, up to the spread of reinforced concrete, well into the 20th century.

14 There are many books based on these categories, from classical authors as Mario Buschiazzo to more contemporary authors such as Damián Bayón and Ramón Gutiérrez. See: Bayón, D. y Marx, M. (1989) *Historia del Arte Colonial Sudamericano*, Barcelona: Polígrafa / Gutiérrez, R. (1992) *Arquitectura y Urbanismo en Iberoamérica*, Madrid: Cátedra.

15 The presence of local native knowledge in colonial buildings it's an undervalued topic even now. Construction techniques used in colonial architecture are fundamentally based on the local experience.

16 In many examples classified like "Baroque" in Ibero-America Arabic-origin features can be found. Some examples are ceilings with jointed rafters in churches of Yaguarón in Paraguay or Andahuaylillas in Peru. There is a great number of examples.

So, classifying these buildings as "Baroque" is a colonial trap that reinforces their limited connections with Western Europe and relegates their non-Western features, whether Arabic or Native American, to a second place.

For example, the church of San Pedro Apóstol in Andahuaylillas, Peru, was named "The Ibero-American Sistine Chapel[17]" based on the magnificent paintings that we can see there. But it is a building designed and constructed based on native and Mudejar techniques that defines a space totally different from the Sistine Chapel. And even the paintings are different from the European Renaissance ones. So, the comparison is not only useless but also confusing, and it works as a way to connect this Peruvian church with Rome, but not to explain and understand the building clearly.

Another problem of stylistic periodizations is that, according to their definition, they must set aside long-term processes of hybridization.[18]

A style is defined by identifying some features repeated in many works, in a certain space and time period.

Once these features have been defined and their ideal examples have become archetypes, other contemporary works are classified according to the absence, presence, number, and quality of those features. "Quality" means how similar these works are to archetypes.

There are a number of works that "purely" or "faithfully" show a higher concentration of archetypical features, and then these works and their authors become a part of the canon of the style.

At the same time, those works with fewer numbers of said features, and more variations from the archetypes, or those mixed with other elements. represent a scale of "minor" works where style is not so clearly detected.

Based on the way to address the problem, archetypical examples are scarce, since they are the "peak" of a pyramid that shows a higher concentration and precision of those features.[19]

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17 The Sistin Chapel is located inside the Vatican City, it is an old building modified several times between 1477 and 1541, including diverse mural painting by Michelangelo that became a masterwork of Western Art.

18 See: Martínez Nespral, F. y Perrotti Poggio, J. (2020) "Interculturalidad y diseño, apuntes de un desafío pedagógico", In: Proceedings *of Edumeet Conference*, Madrid: Universidad Politécnica Nacional.

19 An excellent example of this case is the aforementioned case of the Parthenon, identified as the peak of classical Greek Architecture, although it represents a very short period related to Pericles' life, meanwhile most Greek architecture, developed along previous or subsequent centuries, is identified with the ascent to that peak of perfection or descent from that milestone to a subsequent decadence.

There is a higher number of works at the basis of the pyramid, and, although they have similarities with some archetypical features, they are less precisely classified, and combined with elements from other styles.

This is an elitist and racist system that highlights a few works but undervalues the rest.[20]

It is not a coincidence that highlighted works are related to rich and powerful people who had many resources and could hire "the big masters", trained in Europe or followers of European canons. These works have a more direct connection with archetypical features.[21]

"Minor works" are attributed to "anonymous authors" (or not mentioned in historiography), where said connection is weaker, and the contracting parties belong to middle and lower classes, who hire local artisans much more in touch with regional construction logics and preferences.

Parallelism of terms such as "purity," used by both racist people and stylistic periodizations that I also consider racist, is not a coincidence, either. The same happens with elitist conceptions such as "peak" that evidence a prevalence of some works over others.

The Iberian architectural history, far from "peaks" of irradiation of canon styles[22] and, even more, architectural history of its Ibero-American colonies, with their multiple overlapping and hybridizations, are not compatible with stylistic periodization structures created to explain other cases. So, trying to understand Ibero-American architecture (or any other non-canonical case) based on colonial stylistic categories is a mistake that avoids real comprehension and obscures the entire process.

It is much more infrequent in Ibero-American architecture to find reproductions that are faithful to archetypical features of any style. Long-term

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20 Charles Davis developed the idea of Social Darwinism in his book "Building character. The racial politics of Modern Architectural Style" and there is a close relationship between our arguments. See: Davis, Charles (2019) Building character. The racial politics of Modern Architectural Style. University of Pittsburgh Press: Pittsburgh.

21 Popular architectures are almost absent in classical architectural history studies, dedicated to powerful people's big temples and palaces. The "discovery" of the value of popular architectures is relatively recent and has not influenced yet the historical survey taught in architecture schools. The first studies about popular architectures in Europe were made by nationalists of the 19th century.

A very significant milestone in recent expansions of this idea was the exhibition at the MoMA and Bernard Rudofky's book. See: Rudofsky, B. (1964) *Architecture without architects, an introduction to nonpedigreed architecture*, New York: Museum of Modern Art.

22 I worked out this topic in my doctoral dissertation. See: Martínez Nespral, F. (2007) *Un juego de espejos. Rasgos mudéjares de la arquitectura y el habitar en la España de los Austrias* (*siglos XVI–XVII*), Buenos Aires: Nobuko.

continuities are the rule, such as those of Arabic origin and their hybridizations with different forms of canonical stylistic periodizations.[23]

An example of this is balconies closed with lattices, based on Arab ideas of privacy and climate control that were created in medieval Iberia. In Ibero-America, they have been used in different forms and styles up to now. We will explain this example in Chapter 4.

Another limitation of stylistic periodizations is that they are focused on the stylemes or archetypical features mentioned before. These features are mainly visual, especially façade language elements, and, secondarily, geometrical composition sketches of plans, symmetries, axes, and main and secondary points.

This implies that two key factors to define architecture, such as ways of living and construction techniques, become secondary because they must be relatively independent from stylistic features, which does not imply that they are less important. I defend that they are essential for the spatial and material design of a building.

For example, a certain idea of how to lay out the spaces in a house, which are directly connected with others, and which are isolated or independent, may be solved in the long term with different stylistic features, according to the times, but keeping the house essence and its impact on the way of living. In a certain way, the History of Architecture is much closer related to the History of dwelling, the history of how we use buildings, than the history of the objects itself. The real problem of architecture are not the buildings but the relationship that people make with them.

Something similar happens with construction techniques and materials used (another topic undervalued for stylistic canonical history), which are usually strongly linked to local availability, so they are rooted to each place and materials used beyond superficial changes imposed by different styles.[24]

Plans structured around backyards in buildings that look to their interior and that have a secondary or mediated connection with the outside have been built in the Iberian Peninsula and Ibero-America for centuries, regardless of the different styles, which are only ornamental in these cases.

"Bays" or rectangular boxes surrounded by bearing walls, roofed by a ceiling with jointed rafters, are constantly found, regardless of the stylistic features applied to facades.

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23 An example are tiles and the simultaneous use of very similar shapes in three continents in the 16th century. See: Martínez Nespral, F. (2019) "Migraciones, interculturalidad, exilio y arquitectura. Cerámica española del siglo XVII en Túnez y América, un encuentro transatlántico", en: *Revista Area,* no. 25, Buenos Aires: FADU UBA.

24 An example of this is the already mentioned ceilings with jointed rafters, a topic expanded in chapter 6.

2 Design Criteria: a Decolonized Category to Understand Architecture beyond Periodizations

Due to these limitations, I suggest using the term "design criteria"[25] to organize the chapters of this book.

Design criteria are social ideas or principles on how architecture must be, how spaces should be inhabited, connections between interior and outside and among uses, ideas about privacy and sociability, integration with urban space and with neighbors, relationships with local climate or regional materials, construction techniques, ancestral know-how, and old or novel solutions valid in each society and explainable by the relationship with the culture that created them.

They encompass different ideas, values, and solutions that represent starting points. Those who design architecture acquired these design criteria from society before to learn and applying stylistic forms, independently of them. All of us know clear principles of how a building should be before entering an architecture school, and also if someone has never been trained as an architect, each of us has certain concepts of what is possible and what is not in architecture, what is desirable or unwanted. All of us understand that those principles are valid and based only on the framework of society, the epoch, and the context that made them possible.

The idea itself of the design criteria allows us to bypass traditional colonial and canonical visions from the historiography, because criteria, as stated, are strongly connected with requests, preferences, materials, and techniques that belong to each culture, not to forms imposed from outside.

This also allows us to interpret long-term phenomena, or any architectural work, independent of stylistic periodization. In this way, we are able to connect (As I will connect in this book) works from different periods and places, and also identify them as from different styles because all of them share a common design criterion.

Likewise, design criteria do not conflict with hybridizations and stylistic overlapping, because they are neither based on archetypes and identifying stylemes is not the goal of this approach.

It also turns meaningless the categories of "minor works", thus eliminating racist and elitist prejudices to expand architectural history.

Besides, the idea of "masterworks" or master's Architecture also becomes meaningless, so "anonymous" works and popular architecture as were strongly

25 I adopted this criterion in my doctoral dissertation, and I have been applying it since then in different works.

based on local design criteria, have a space that is denied by the elitist system of the stylistic canon.

I consider that, meanwhile, stylistic categories were originally conceived on the basis of professional art history – from a colonial point of view – and then were applied to architecture; in a contrary sense, design criteria were conceived from the social principles of architecture itself. So, understanding architectural history on the basis of design criteria is, somehow, understanding it from an architectural and horizontal point of view rather than importing elitist categories from European or American Art History.

I think this idea is applicable to interpret any kind of architecture, but it is essential, above all, for the particular topic of this book, Ibero-American architecture, that not only has crosses, hybridizations and intercultural overlapping, but also it is defined by them.[26]

Interculturality as a key factor for understanding societies and their cultural products on the basis of crosses and interactions with other cultures is a relatively recent phenomenon, as regards its application to architectural history.[27]

My work is dedicated to the Arab component in Ibero-American architecture, so my approach is based on the idea of Ibero-American architecture as a hybrid product created by the cross of cultures. In this sense, this perspective has had, from its origin, more than thirty years ago, a necessarily intercultural essence, even many years before than the word "interculturality" became used as an intellectual category of interpretation.

The concept of "design criteria" was first included in my doctoral dissertation I wrote almost twenty years ago[28] to explain the Arabic component in Spanish architecture in the 16th and 17th centuries from the foreign traveler's view. Since then, I have continued using the same principle to understand the Arabic component in Ibero-American architecture, the core of this book.

To finish this chapter and the theoretical introduction to this book, I will explain the structure and organization of the contents. This book will be organized into 10 chapters, each of which corresponds to a specific design criterion or a specific topic where the Arabic component in Ibero-American architecture can be found in different periods, examples, and regions, and even under different stylistic forms.

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26 As I mentioned before, crosses, overlapping and hybridizations define any kind of architecture and even any social process, not only Ibero-American ones.

27 See: Martínez Nespral, F. and Perrotti Poggio, J. (2020) "Interculturalidad y Diseño: apuntes de un desafío pedagógico" in: *Proceedings of Edumeet Conference*, Madrid: Politechnical National University.

28 Martínez Nespral, F (2007) *Un juego de espejos. Rasgos mudéjares de la arquitectura y el habitar en la España de los Austrias* (*siglos XVI–XVII*), Buenos Aires: Nobuko.

I will first analyze the three most emblematic and recognized features, tiles, and, in general, the role of enameled ceramics in Ibero-American architecture, lattices, related to the idea of privacy and thermal control, and ponds and the importance of water in different spaces, all of them obviously related to the Arab legacy.

But the Arab component in Ibero-American architecture represents much more than only tiles, lattices, and ponds, so then I will analyze the main construction techniques and solutions, focusing on the roof system, then the plan construction criteria, and again the fundamental role of privacy in this component. Lastly, the maximalist expressive intention in Ibero-American architecture and its Arabic-origin connections.

In the six cases, I will first define the problem, outlining the relevant design criteria. Then I will explain its connection with Arab culture and how those ideas and shapes were appropriated in Ibero-America. Then I will detail a number of case studies selected to geographically cover diverse regions across Ibero-America, with a clear long-term duration frame from the Viceregal period up to now.

I am convinced that, in this way, not only can we know the Arabic component in Ibero-American architecture but also create a more effective and fair approach to this regional architecture, without any colonial, racist, or elitist prejudices.

As we defined previously, the goal of this book is not only to present a new perspective to understand a certain period or type of architecture but fundamentally to contribute to a more accurate interpretation of Ibero-American architecture based on its multiple connections and hybrid intercultural processes.

CHAPTER 3

Tiles, from the Viceregal Period to Pampulha, Glazed Ceramics of Arab Origin, and Their Role in Ibero-American Architecture

1 The Islamicate Component in Iberian Ceramics (and Culture)

As it is well-known, in 711 AD, based on the differences between two groups of Visigoth governors who then ruled the old Roman Hispania centuries after the fall of the Western Roman Empire, Muslims arrived in the Iberian Peninsula. The first group was small, around 2,000 people, mostly North Africans recently converted to Islam, especially Berbers with Tāriq ibn Ziyād[1] as their leader.

Given the reduced assimilation of Visigoth governors of German origin by the Hispanic-Roman population, Islamization (conversion to Islam) and Arabization (adoption of the Arabic language) among Iberians spread fast and widely.[2]

This led to the rise of an Arab-Islamic component in peninsular culture, which originated in the Middle Ages but with visible signs even nowadays in many cultural expressions, such as gastronomy, music, and architecture, among others. Some of these features can still be vividly perceived, as evidenced by their role in language, which is known as the cultural vehicle par excellence. (In previous chapters, it was said that, on the basis of the number of words, Arabic is the second etymological source of Spanish).[3]

Américo Castro, who has widely studied the Arab presence in the Iberian Peninsula and argued about its fundamental role in Spanish history, wrote the following about this: "In languages, as in any other areas, Hispanic history is a unique, multi-level reality that can only be understood by joining Latin,

1 The city and rock of Gibraltar, located in the Iberian Peninsula but occupied by the British since the 18th century was named after Tāriq ibn Ziyād. The Arab name is Jabal Ṭāriq (Mount of Tāriq).

2 Américo Castro and Claudio Sánchez Albornoz, both exiled from Spanish Civil war, were the most important authors of modern historiography. Both have very different ideas about Spanish medieval history but totally agree in this point.

3 See: Noufouri, H. y Martínez Nespral, F. (1994) *El Diccionario del Alarife*. Buenos Aires, F. Los Cedros. Dictionary of Arabisms in Spanish related to art, architecture and design that evidences the high number of terms, concepts, and ideas of the Hispanic culture with an Arab origin.

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Christian, and European elements with others of Islamic-Jewish origin. All these elements have been equally productive and worthy."[4]

Former Roman Hispania became a part of the Maghreb, the Western area of the Islamic world, ruled by the Damascus Caliphate. In this context, the cultural links between the Iberian Peninsula and the Middle East and North Africa region became quotidian and evident, as we can see clearly in the comparison of three similar structures: the Giralda, the al-Kutubiyya Tower, and the Ṣawmaʿat Ḥassān (Hassan Tower) – all of them built during the Almohad period, in the twelfth century – The tree towers are the minarets of the mosques at Seville, Marrakech, and Rabat, all of them were built with almost identical shapes (as the sabkah or sebka[5] pattern) the same proportions (square plan and prismatic volume), and design criteria.

As a part of this shared design criteria across the Maghreb, and specifically regarding tiles, these elements were common, and the same patterns and techniques were used on both sides of the Gibraltar Strait. Buildings in both continents are characterized by the use of ceramic plinths that cover walls a bit above a person's height, as a protection and surface decoration.[6]

This kind of ceramic is called in Spanish by the Arabism "alicatado" (tile/tiled), which comes from Arabic *al-qaṭʿ* (related to cutting), the action of cutting small pieces or "tesserae" used as pieces of complex geometrical patterns commonly based on pointed stars. The system is formed by independent decorative tile panels, separated from each other by friezes named *cenefas* (from Arabic ṣanīfa = fringe or trimming).

The "alicatado" technique is based on cutting small tesserae to compose panels "upside down"; after being strained with a binding mixture, they are mounted on wall sections; it is still used in Morocco, where it is named zellige[7] (From Arabic *zillīj*, small and polished stone).

This technique was applied in al-Andalus, the Islamized Hispania, and many Spanish and Moroccan buildings, such as the Nasrid Palaces at the

4 See: Castro, A. (1984 [1948]) *España en su Historia: cristianos, moros y judíos*. Barcelona: Crítica, p. 218.

5 From Arabic šabaka it's a rhomboid net pattern used for decoration. Could be made by bricks or tiles and it's very frequent all over Morocco and the Iberian Peninsula. Also, there are examples of sebka in Ibero-America. I will develop this topic later in this book.

6 See: Noufouri, H. and Martínez Nespral, F. (1999) *Nociones de Estética Arábiga y Mudéjar*. Buenos Aires: Cálamo. Especially the section about "Surface qualification."

7 See: Degeorge, Gerard and Porter, Yves (2001) *L'Art de la céramique dans l'architecture musulmane*, Paris: Flammarion or Castéra, Jean-Marc; Rafif, Ahmed-Chaouki; Kerbrat, Marie-Pierre (1996) Arabesques. *Decorative Art in Morocco*, Paris: ACR.

FIGURE 1 A detail of a tile based on the geometric small tesserae in Bin Yūsuf's Madrassa, Marrakech. As the tile is broken, we can see how the complex pattern is composed of a huge number of small pieces.
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

Alhambra in Granada, and Bin Yūsuf's Madrasa in Marrakech, both from the fourteenth century.

The eighth-century Islamization of the Peninsula did not cover the whole territory, and gradually the remaining Northern Christian kingdoms (mainly Asturias, León, Castile, Aragon, and Navarra) expanded their frontiers to the South over the Islamized area.

This was a very long process that lasted, at least, four centuries, with many complex situations and contradictions that avoid understanding it as a unidirectional and linear military advance. To summarize, we will mention three main dates in order to understand this process:

First, in 1085 AD (at the end of the eleventh century), when Christians conquered Muslim Ṭulayṭula, a city called Toletum in Roman times, which was the capital of the Visigoth kingdom, and today is known as Toledo. It is located in the center of the Iberian Peninsula, very close to the present capital city, Madrid. It is historically emblematic due to its relevance for peninsular power, as evidenced by the fact that its archbishop is still considered as Cardinal Primate of Spain. Before 1085, Christians were concentrated in the North of

the Peninsula, and less than a century before (around 1000 AD) the Muslim army of Al Mansur advanced to Santiago the Compostela in the North. But, after the conquest of Ṭulayṭula,[8] Christian Spaniards made a significant step in this prolonged process by dominating the North half of the Peninsula. In this first period, the Douro River frontier was very important, and a lot of current Iberian cities, Romanesque churches, convents and castles located in the area shows the role of this region in the war between Christians and Muslims a thousand years ago.

Now we move to a second period, and in this epoch, I consider that the second relevant date is double; 1212–1248 AD; 1212 was the year of the Navas de Tolosa battle when Muslim power collapsed in the Peninsula, and 1248 is the year of the Christian conquest of Seville, the most important city in al-Andalus, and still the capital city of Andalusia; the area ruled by Muslims was restricted to the Nasrid kingdom of Granada, a vassal of Christian Castile. After the Navas de Tolosa battle, there was no future for the Muslim control of the Peninsula, and after the conquest of Seville, the Muslim rule was only symbolic and totally dependent on the Christians. So, in the two centuries between the year 1000 and 1248, Christian kingdoms took control of almost all Muslim territories.

The third period and the last important year is 1492 AD, when Granada was taken by the Catholic Monarchs of Spain, Ferdinand of Aragon, and Isabella of Castile, who put a definitive end to Muslim rule in the Peninsula. The conquest of Granada was simultaneous to the "discovery" of the Americas, even some of the talks between Cristobal Colón and the Christian kings took place during the campaign. This conquest was mainly symbolic in military terms, but in political and cultural fields represented the end of the Muslim rule of the Iberian Peninsula and a decreasing process of Arab cultural presence in Iberian society.

We can say that two parallel processes happened during the 15th century, the conquest of Granada and the consequent total Christian rule in Europe and the North West Mediterranean and the Conquest of Constantinople by the Ottomans and the consequent Muslim rule of the Middle East and North Africa (MENA) created the bases for the European conquest of the Americas, originated as a consequence of the European need to access to the commerce with the East (mainly China and India) by the West.

These three milestones, between 1085 and 1492, involve a four hundred year period when Arabic-speaking Spaniards, who were mostly Muslims, although

8 The current capital of Spain, Madrid, was founded by the Muslims as a fortification to protect Ṭulayṭula from the northern invasions.

there were also Jews and Christians among them, became "defeated" by the new Christian rulers from Northern kingdoms, and had to decide between two options: migrating to the South, to lands still under the Muslim rule, inside or outside the Peninsula, or staying in their birthplaces and adapt to the new circumstances.

Those who chose the second option were called "Mudejar", a despising term derived from the Arabic mudáǧǧan (tamed or assimilated) a term that many years later, by mid-nineteenth century, in 1859, José Amador de los Ríos[9] used to define the architecture adopted by Islamic *alarifes* (Muslim master builders) in the new Christian kingdoms.[10]

2 Mudejar and Moorish Hybridization of Iberian-Islamicate Ceramics

During the extended period between 1085 and 1492, Mudejar artisans adapted their skills to the likings, preferences, and needs of their new Christian rulers,[11] so a magnificent artistic style was created, that hybridizes Hispanic-Islamic traditions and new styles imposed by Christian Europe, such as Gothic and Renaissance, and new Christian motifs as Saints, representations of the Virgin Mary, or Jesus, were incorporated into the traditional Muslim patterns.

García Felguera explains the differences between this style with the Italian model: "Spanish artists, although trained, as all Europeans, on the basis of the Italian model, have always marked differences and created an original and independent doctrine, opposite to the Italian classicist principles."[12]

One of the main reasons for this difference is the Islamicate component of Spanish culture. This is the key factor that defines the differences between Iberian art (and society) from the other expressions of European Art. I devoted my academic life to the study of this hybridization and particularly to its presence in Ibero-America.

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9 See: "El estilo mudéjar en la arquitectura" speech by José Amador de los Río, June 19th, 1859 [at the Royal Academy of Fine Arts, Madrid].

10 The term *alarife* comes from Arabic *al-ʿārif*= the expert, a name given to architects or master builders.

11 Iberian Christian society was deeply involved in the military campaigns and in religious life, and parallelly they admired the Muslim craftmanship and art and considered them as symbols of a high culture. So, they adopted several elements from the Muslim construction knowhow and made them own.

12 García Felguera, M (1991) *Viajeros, eruditos y artistas: los europeos ante la pintura española del Siglo de Oro*. Madrid: Alianza, p. 15.

With regards to the tiles, this transformation process faced breaks and continuities. The Islamicate tradition of tiled plinths was kept (and it's still used even nowadays), as well as decoration based on panels with geometrically repeated patterns surrounded by *cenefas*, but including new models coming from styles and habits of the new Christian rulers and the active participation of the Peninsula in trade, cultural, and political European networks at the time.

One of the new elements was heraldry, a main topic in European nobility societies, which was incorporated as a key element in the center of big panels with geometrical tiles, but other motifs inspired by classic mythology gradually appeared, promoted by the Italian Renaissance and the revalorization of the old Roman tradition. Also, other styles derived from Christian iconography were added and included in the same space as Islamic geometrical decorations.

Together with the incorporation of the new decorative patterns, there was a deep transformation of technique. The al-Maġrib system with individual tesserae changes to square or rectangular tiles with printed decorative patterns, whether with embossed lines or just painted on smooth surfaces. This system allows to continue with the geometrical pointed star patterns (now painted) but also was ideal for Renaissance motifs as representations of people, animals, mythological creatures, or landscapes that require drawing and painting their complex curves, and non-regular shapes. On the contrary, the small pieces of the traditional Islamic system were ideal for the geometrical patterns, based on mathematical proportions and straight lines.

There are many examples of this, the most famous are tiles from the ancient "Casa de Pilatos" in Seville and "Cenador" (dining room) from Charles the First in the Royal Alcazar in Seville. Both were made by brothers Diego and Juan Pulido at the beginning of the sixteenth century (1530).

Regarding both decoration and the use of heraldic, mythological, or Christian iconographic motifs, or in the technical aspects, when using rectangular tiles with painted motifs, Mudejar and Renaissance Iberian tiles are different from Maghreb tiles, since Morocco kept, even nowadays, the system of individual tesserae with complex polygonal shapes, according to geometrical patterns.

It must be said that in other Islamic regions, such as the Ottoman Empire or Persia, there have been rectangular tiles with painted images that come from a long time ago and constituted a totally different tradition, with no direct connection with the Maghreb style, used during the Islamic Period in the West.

In respect of the social and political history soon after Granada's conquest, the defeated non-Christian population in the Iberian Peninsula had a more complicated situation. In this sense, Jewish people were expelled firstly by a decree issued on March 31st, 1492, less than three months after the end of the conquest of the last Muslim kingdom, on January 2nd that year.

Only a few years later, Muslim Peninsular people were forced to convert to Christianity or be expelled from the country in the first decades of the sixteenth century (those from Castile in 1502 and from Valencia in 1525). Those who chose conversion were called Moorish or new Christians, a despising name that distinguished them from old Christians, those people living in the Iberian Peninsula whose ancestors, supposedly,[13] had never been Muslims.

Together with the persecution of non-Christians, blood-cleaning laws were enacted for people to have access to benefits such as public offices or education. Interested people had to prove that their blood was "clean" from the stain of having Muslim or Jewish ancestors.

During the sixteenth century, there were big groups of Moorish in the Peninsula, living in extremely poor conditions, despised, and persecuted by Christian authorities despite they were at this moment also Christian due to their conversion. Moorish people were just occasionally defended by members of the local nobility, who employed them as a cheap workforce.[14]

This situation became especially critical in certain moments, such as the Alpujarra rebellion, when Moorish from Granada rebelled against the Crown between 1568 and 1571. Moorish were finally defeated and deported to other areas of the Peninsula.

3 Expulsion of Moorish People and the Development of Iberian Ceramics in the Seventeenth Century

After more than a century of tensions, from 1609 up to 1613, in subsequent streams depending on each region, King Philip III decided to expel from the Peninsula all the remaining Moorish (about 300,000 people, mostly from Valencia and Aragon) on a permanent basis, despite the fact that they were by now mostly Christians, distant descendent from Muslims forced to conversion about a hundred years before.

Moorish's tragedy did not end then.[15] They were forced to relinquish their possessions and native land, and, when they arrived in Muslim kingdoms

13 Taking into account the long duration process of the Iberian Peninsula Islamization, the word "supposedly" could be replaced by "improbably" because for 8 centuries there were multiple crosses, even the Christian kings were frequently sons of Muslim mothers due to political marriages related to alliances very frequent in the Middle Ages.

14 See: Márquez Villanueva, F. (1991) *El problema morisco: desde otras laderas*. Madrid: Libertarias-Prodhufi and Domínguez Ortiz, A. – Vincent, B. (1993) *Historia de los moriscos: vida y tragedia de una minoría*. Madrid: Alianza.

15 See: Domínguez Ortiz, A. – Vincent, B. (1993) *Historia de los moriscos: vida y tragedia de una minoría*. Madrid: Alianza.

beyond the Mediterranean Sea, which was a foreign land for them, they were poorly received in many places. In the eyes of local Muslim populations of the Middle East and Northern Africa, the Moorish were strange foreigners who did not speak Arabic but Roman languages as Spanish or Portuguese. We have to take into account that the Arabic language was banned, and the next generations after the first converted Moorish simply never learned to speak Arabic; meanwhile, old people forgot it. Simultaneously, the expelled Moorish were not Muslims, but Christians. So, for the Arab populations of the Mediterranean, they were completely foreign and strange.

Some of them migrated to the Ottoman Empire, where there were communities of Sephardi Jews and Muslims of Spanish ascent. More people went to nearby Morocco, especially to Northern cities close to Spain such as Tangier, Tetouan, and Fez, where they made up communities whose population recognizes themselves as Spanish Moorish descendants, even today.

But a high number of Moorish, at least 80,000, settled in Tunisia. This was because they were welcomed by local rulers, who decided to take advantage of their experience and knowledge in craftsmanship, arts, and working the land. Such a high number of Iberian immigrants and the reduced population of Tunisia at the time provoked a huge Moorish impact on the society and the local culture. The immigrants, or, more precisely, the displaced Moorish people, comprised about 10% of the Tunisian population upon their arrival.

Besides, both Mudejar and Moorish people were dedicated to arts and crafts a great deal, prompted by the lack of these jobs among Christian societies, who, as I mentioned before, considered that the main jobs were the military and the ecclesiastic, so Moorish exiles made up a relatively qualified population, in general, and specifically in construction jobs.

Castillo Oreja wrote that "The particular condition of Mudejars and their industriousness made them dedicate to certain jobs that, as the constructions ones that had been set aside by the winning populations."[16]

These Moorish were basically Iberians, only different from their Christian countrymen because they had been Muslims a few generations ago. They mostly spoke Roman languages, since many had forgotten Arabic, spoken by their ancestors, and many also descended from ancient Hispanic Romans or had a Visigoth German ancestor from Northern Spain, people who, a thousand years ago, were converted from Christianity to Islam during the seventh-century Islamization process of the Peninsula.

16 Castillo Oreja, M. (1985) "La proyección del arte islámico en la arquitectura de nuestro primer renacimiento: el estilo Cisneros" In *Anales del Instituto de estudios madrileños*, 22, pp. 55–63. Madrid: C.S.I.C., p. 58.

In this way, we can say that Moorish immigrants' craftsmen had all the knowledge, customs, and likings of Spain at the beginning of the sixteenth century, and in our field, architecture, Moorish builders (*alarifes*) or artisans knew about a new and particular aesthetic and technique emerged from the hybridization between the Maghrebi Islamic tradition and the Renaissance.

So, in cities with a high concentration of Moorish such as Testour in Tunisia, the architecture presents windows and grating in a proportion like the peninsular Christian tradition, as well as construction details in mud walls and bricks, identical to those used in Aragon. Walking in the streets of Testour recalls in every moment remarkably similar places and buildings from small Spanish villages.

Regarding the tiles, Tunisian architectural ceramics from the seventeenth century were, basically, Spanish ceramics of that century that used the abovementioned system of plinths made of rectangular or square painted pieces, where geometric patterns, framed in *cenefas*, are combined with Renaissance elements such as jars with flowers and decorations around windows with pilasters, cornices, and tablatures. The only (obvious) difference is the lack of Christian iconographic motifs, replaced because of its new use in Muslim societies by images of mosques and Islamic sacred places. In this sense, Tunisian ceramics are a sort of "translation" of the Spanish Christian ones to a Muslim context. This is a process comparable to a mirror game,[17] in which mutual and symmetrical reflections create a unique new image. In this way, we can see how an originally Islamic aesthetic and technique was adopted in the Iberian Peninsula after its Islamization, centuries later, a Christianization of the same territory transformed those aesthetics and techniques into a new hybrid product, and finally, the craftsmen trained in that hybridization were expelled to Muslim lands where the Muslim-Christian art is again modified to be adapted to a new Muslim context.

Examples of these are the Mausoleums of Abū Zamāʿ al-Balawī and Sīdī ʿAbīd al-Ghiryānī, both in Kairouan, with tiled plinths from the seventeenth century directly related to present Iberian examples, and strikingly different from Islamic Maghrebi tiles of that time, which had not been influenced by the European Renaissance. We can see in Figures 2 and 3 patterns, motifs, and colors that clearly recall Spanish (and Ibero-American) Architecture. The differences are details, structure, and general appearance are almost identical to Spanish examples.

17 I used the idea of the mirror game in the title of my PhD dissertation. See: Martínez Nespral, F (2007) *Un juego de espejos. Rasgos mudéjares de la arquitectura y el habitar en la España de los Austrias – Siglos XVI–XVII*. Buenos Aires: Nobuko.

FIGURE 2 Mausoleum of Abū Zamāʿ al-Balawī, Kairouan. Here we can see a tile plinth, with geometrical and floral motifs and central panels identical to those that in the Iberian Peninsula include Saints and Christian figures, but in this case with horseshoe arches, and vases with flowers.
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

FIGURE 3 Tiles at the Bardo Museum, Tunisia. We can see a typical Renaissance Iberian pattern.
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

FIGURE 4 Tiles of the Alhambra, Granada. Motif based on squares and stars made by the combination of small tesserae.
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

FIGURE 5 Tiles at Real Alcazar, Seville. We can see here the same tiles used in the Alhambra of Granada.
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

FIGURE 6 Tiles at Testour, Tunisia. We can see here the same motive seen in Granada and Seville, but here in square painted tiles.
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

In Testour, I found a case where tiles were painted with a pattern identical to that found in Comares' backyard in Alhambra, very similar to those of Peter I Palace at Seville Alcazar (made in the fourteenth century, and thus with the old Hispanic-Islamic system of tesserae). This is the motif that has been imitated in Sevillian tiles up to the present (from the sixteenth century onwards, in tiles painted as Tunisian ones).

4 A Second Intercontinental Loop: the Ibero-American Conquest and the Trans-Atlantic Encounter

Together with the Moorish forced conversion (1502–1525) and expulsion (1609–13), on the other side of the Atlantic, Ibero-America was conquered, and Viceregal cities and big temples, convents, houses, and palaces were built.

After Columbus's "Discovery"[18] in 1492 (the last year of the siege of Granada), Ibero-America was gradually occupied at the beginning of the sixteenth

18 I emphasize the Word "Discovery" because, obviously, that discovery was only valid for the Europeans, the native American people who lived in this continent discovered that land a long time ago, when them arrived to the Americas first.

century. The most important conquered territories were Mexico, between 1519 and 1525 (in parallel with forced Mudejar conversions), and Peru, between 1519 and 1525, Meanwhile in the South of the continent, the first and failed attempt to found my city, Buenos Aires was in 1536 and the second and definitive foundation took place in 1580, only nine years after the rebellion of the Alpujarras.

We can see that the conversion, hybridization, and expulsion processes of Mudejars and Moorish are totally contemporary to the initial development of Spanish colonies in Ibero-America, which also required conquest, migration, and forced conversion of the defeated.

Francisco Márquez Villanueva[19] clearly explained these processes for Moorish, and Tzvetan Todorov for the Ibero-Americans.

> The year 1492 represents this double movement in Spanish history: In this year, Spain repudiates its inner Other by defeating Moorish in the last Granada battle, forcing Jews to leave their land, and discovers its external Other, all the America that will become Latin … one ejects heterogeneity from Spain, the other inexorably prompts Spain into heterogeneity.[20]

Thus, tiles that conquerors brought to Ibero-America between the sixteenth and seventeenth centuries are contemporary and identical to the ones the Moorish took in their exile to Tunisia, that is, the abovementioned system of panels with rectangular or square tiles with geometric patterns painted and framed in valances, that include, as significant elements, a hybridization with decorative motifs inspired by the Renaissance.

There are many examples, such as the convents of Santo Domingo and San Francisco in Lima, which were covered in Sevillian tiles from the beginning of the seventeenth century. Also, San Francisco in Quito, with a chapel and the temple interior plinths fully covered, as many other examples all over the continent.

There is an extended tradition in the use of architectonic ceramics in Viceregal Mexico; even in recent archeological excavations in old Panama City, ceramic fragments with similar motifs were found. We can say in this sense that the use of tiles, both as water protection and decoration, was widely spread across the Spanish colonies in Ibero-America[21] (including the territories that nowadays are part of the United States).

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19 See: Márquez Villanueva, F. (1991) *El problema morisco: desde otras laderas*. Madrid: Libertarias-Prodhufi.

20 Todorov, Tzvetan ([1982] 1999) *La conquista de América: el problema del otro*. México: Siglo XXI, p. 58.

21 Even in the South of the continent and far from the European Metropolis, in Argentina, we received also tiles from Spain. A recent book develope this topic. Se: Girelli, Francisco

FIGURE 7 Tile plinth at the Convent of San Francisco, Lima
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

Many of the biggest examples were ceramics made in Spain and brought to Ibero-America to be installed[22] As they were widely used and preferred by Ibero-Americans, there were also local ateliers in Viceregal times, such as the Puebla ceramic in Mexico.

So, ceramics found in Tunisian and Ibero-American temples in the seventeenth century were very similar or almost identical, and their only obvious difference was induced by religion: meanwhile, in Ibero-America there are more Christian iconographic motifs with saints and symbols of religious orders, (especially religious buildings used to spread faith), in Tunisia iconographic references are naturally linked to Islam and its sacred places, like mihrabs, horseshoe arches, and mosques.

There are also examples of identical patterns on both continents. In Sidi Abid el Ghariani's mausoleum, in Kairouan, there are panels with square tiles

(2022) *Azulejos de Buenos Aires (1750–1850) Recuperando la imagen de la arquitectura colonial porteña*, Fundación Ceppa: Buenos Aires.

22 Tiles were also an excellent ballast to stabilize the ships, heavy and compact worked perfectly for this and were highly choose.

FIGURE 8 Tile plinth at the Convent of Santo Domingo, Lima. We can see here an almost identical tile system (proportions, patterns, motifs, techniques) as we saw in contemporary Tunisia (with the only difference of the Christian or Muslim motives).
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

with a simple motif; a diagonal line divides two triangles of different colors that became very popular in different Ibero-American places at the time, especially in Mexico, where Uruguayan architect Alejandro Artucio found examples in cities as Pátzcuaro, Querétaro, and Puebla.[23]

A unique and unsuspected transatlantic encounter between Muslim Northern Africa and Ibero-America, Christianized through the Iberian Peninsula, occurred.

The Peninsular culture was expelling a part of itself to Africa while expanding towards the "New World", and, as they all belonged to the same culture, displaced Moorish, conquerors, and migrants to Ibero-America produced

23 Uruguayan architect Alejandro Artucio remarks the relationship between Spain and Mexico in this motif in his text: "Ruta de un azulejo del medioevo español al México del siglo XXI" Tile Museum, Montevideo, 2003. We have added in this srticle the connection Tunisia-Mexico of the same pattern.

FIGURE 9
Tiles plinths at the Convent of San Francisco, Quito
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

architectonic examples with tiles that may be considered very different due to some aspects (such as religious signs), meanwhile they were essentially almost identical, as were their authors.

A special mention deserves the particular use of tiles in Portugal[24] and the Portuguese colonies. We must understand that Spain and Portugal were not ever separate kingdoms. The Islamization of the Iberian Peninsula involved the entire territory, and its consequences in culture are visible in the two modern countries.

The first tiles were introduced in the future Portuguese territories from Spanish manufacturing centers as Seville and Valence and were identical to the examples we have just mentioned, but the use of tiles was quickly appropriated by the Portuguese society, which developed a magnificent tile tradition with singularities as the preference of blue and white colors that is still admired nowadays.

24 A complete development of mudejar architecture in Portugal can be found in the classic book wrote by Perez Embid, Florentino (1955) *El mudejarismo en la arquitectura portuguesa de la época manuelina*, Consejo Superior de Investigaciones Científicas: Madrid.

FIGURE 10 Tiles plinths at the Convent of San Francisco, Quito. We can see here a detail of the tile motifs that combine geometric structures and floral designs.
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

From 16th to 18th centuries, the Portuguese created exceptional tiles following the contemporary Spanish system of square pieces painted firstly with Renaissance motives and later with Baroque ones, but geometric patterns based on pointed stars also continued and had a particular development since the finish of 16th century in the "azulejos de padrão" (pattern tiles) that cover even nowadays not only plinths but also entire facades all over Portugal.

All this experience was brought to the Portuguese Ibero-American colonies (mainly Brazil), and we can see exceptional tile plinths in colonial cities like Salvador de Bahia (a good example is the Saint Francis convent), but also in São Luís or in Recife (Carmo Basilic).[25]

The use of tiles was incredibly significant in Brazilian society and generated a continuity after the colonial period, with a visible presence even in modernist and contemporary architectures that we will develop in the next sections of this chapter.

25 See: Calvacanti, Sylvia Tigre de Hollanda (2006) *O Azulejo na arquitetura religiosa de Pernambuco, século XVII e XVIII*. Metalivros, São Paulo.

5 Tiles after the Independence Process: Several Continuities in Design Criteria and Some Formal Disruptions

During the first half of the nineteenth century, almost all Ibero-American colonies declared independence from their European metropolis, Spain and Portugal. In this process, the already independent countries built a new relationship with the most important European powers of those times, mainly France and England, which had been previously prohibited from trading with these territories during the Iberian rule and were very interested in introducing them to the new world order imposed by European colonialism at the time.

It was basically a system through which colonies provided raw material to the rising European industry, and consumed industrialized products made in Europe. This system is kept up to the present in certain aspects,[26] although, especially in the nineteenth century, it changed due to the introduction of the United States of America as a new world power, and because of the rising industrialization of Ibero-America.

So, new power relationships made in the independence process context provoked changes in the preferences of Ibero-Americans, who started to admire the new European technology and Art trends as part of the same interchange system.

At the same time, their new role as consumers of European industrial products introduced new building materials that had been unavailable before as steel, plumbing pipes, and tiles.

The new aesthetic models and the new materials had a very evident impact on Ibero-American architecture from the nineteenth century up to the present.

Back to our main subject of ceramic tiles, pieces manufactured in several other places started to arrive in Ibero-America, mainly from England and France.

In Argentina, Uruguay, and Brazil, the French tiles from Pas de Calais arrived as ballasts of ships that came from Europe in search of regional cereals.[27]

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26 My country, Argentina is a good example in this sense, our exportations are even nowadays fundamentally based on cattle products.

27 I explained this idea previously for the colonial period but now, talking about an epoch of largest and modern ships the volume of ballast tiles increased notoriously. I wrote a text about this kind of French tiles and its use in South American in the second half of nineteenth century. See: Martínez Nespral, F (2023) "The Judo Takedown. French Tiles in the Rio de la Plata Basin (2nd Half of the 19th Century)" in EAHN 2022 Proceedings, Universidad Politécnica: Madrid.

These tiles were widely spread in the region[28] from the second half of the nineteenth century until the beginning of the twentieth. Their aesthetics and technical resolution made them totally different from the Ibero-Arabian ones. In general, they were square, measuring 11 by 11 cm with a white background and drawings mostly in blue but also in other colors like green, yellow, or purple, and made with stencils.[29]

Beyond the visible differences in aesthetics and technique, these tiles were used in this region for purposes common in Ibero-Arabian traditions, that is, in plinths or basing around backyards and in mags of wells, reservoirs, and wellsprings, in all cases to prevent weathering caused by use and, mainly, by humidity.[30]

This implies that Ibero-Arabian design criteria about how, where, and what tiles should be for were kept valid. Change was shown in decoration patterns and technical features related to the foreign origin of materials, imported from France.

Also, an interesting comparison about these French tiles is that they are very common not only in Ibero-America but also in the French colonies of Northern Africa. Tiles were exported from France to different regions that they colonized (Such as Algeria or Tunisia in Northern Africa) but also to other regions where they controlled by commerce (Such as South America) So, in this period, and for a totally different reason, identical tiles can also be seen in Tunisia and in Ibero-America. Even one of the most famous motifs of Pas de Calais tiles is the representation of a man with a Fez (a typical North African and Turkish hat).

In the first decades of the nineteenth century, other types of European tiles started to arrive in Ibero-America, evidencing new styles used in that time. Tiles with Art Nouveau motifs were used with the original design criteria, although local aesthetics is totally different. Many of them can be seen as plinths covering in hallways (or zaguanes in Spanish), a space that also had and Ibero-Arabian origin, which we will develop in Chapter 8.

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28 They have been studied by several authors, such as Vicente Nadal Mora by mid twentieth century and more recently by Uruguaian Alejandro Artucio. See: Nadal Mora V. (1949) *El azulejo en el Río de la Plata* (*siglo XIX*), Buenos Aires: American Art Institute / Artucio Urioste, A. (2004) *El azulejo en la arquitectura uruguaya, siglos XVIII–XIX y XX*. Montevideo: Linardi y Risso.

29 Some of them are very similar to traditional Portuguese tiles because of the use of the same colors (white and blue mainly).

30 I presented a paper developing this topic at the European Architectural History Conference held in Madrid in 2022. See: Martínez Nespral, Fernando (2023) "The Judo Takedown. French Tiles in the Rio de la Plata Basin (2nd Half of the 19th Century)" in *EAHN 2022 Proceedings*, Universidad Politécnica: Madrid.

Also, in the second half of the nineteenth century and the beginning of the twentieth century, architectural revivals spread widely. They were different styles that recreated other past trends. There is an Arab Revival, also known as "Moorish Style," that reproduced antique Arabic shapes and aesthetics, including tiles. Examples of this can be found all over Ibero-America.[31]

One interesting case is that of old subway stations in Buenos Aires, which were covered with Spanish tiles, including Arabic motifs.[32] One of them (Independence Station, Line C, Buenos Aires Metro) even has tiles with Arabic characters reproducing the motto of the Nasrid dynasty of Granada (Wa lā ghāliba ʾillā-llāh – There is no victor except God).[33]

Spanish Revival is a topic of special interest. It originated in the USA after the occupation of Mexican lands that had been originally colonized by the Spaniards. So, American Spanish Revival architecture is characterized by the use of some Arab design criteria adopted from the imitation of Spanish Viceregal Architecture.

Thus, most Spanish Revival architecture, also called "neocolonial"[34] in Ibero-America, reproduced Ibero-American tiles of Arabic origin.

We can find examples of "Neocolonial" architecture across the entire continent and particularly in Ibero-America, most of them including mudejar-inspired tiles. A good example is the residence of Carlos and Martín Noel, nowadays the Museum of Hispanic American Art in Buenos Aires.

One of the main characteristics of neocolonial architecture was the presence of "Andalusian patios", all of them covered by modern reproductions of Spanish Mudejar tiles. This idea of the "Andalusian patio" as "the" solution for a patio became so important that several buildings designed following assorted styles included Andalusian patios inside.

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31 The most complete and recent study about Arab Revival architecture in Ibero-America is the aforementioned book by López Guzmán, R y Gutiérrez Viñuales, R (eds.) (2016) *Alhambras. Arquitectura neoárabe en Latinoamérica*. Granada: Almed.

32 See: Martínez Nespral, F. (2012) "Lazos subterráneos, cerámicas andaluzas en el metro de Buenos Aires" in: López Guzmán, R. (ed.) *Andalucía en América: Arte y Patrimonio*, Granada: Universidad de Granada.

33 A recent text develops this topic about Arab Revival tiles ad its use in South America. See: Girelli, Francisco (2022) "Azulejos neo-árabes en la arquitectura de Buenos Aires (1920–1950)" in Ibero-American and Latinx Visual Culture, Volume 4, issue 3, pp. 98–105.

34 A complete survey about "neocolonial" architecture in Ibero-America can be found in Amaral, Aracy (ed.) (1994) *Arquitectura Neocolonial*, Mexico: Fondo de Cultura Económica.

This generated several Art Deco buildings, like the Otamendi-Miroli Sanatorium or the Radical Party house, both in Buenos Aires,[35] designed following the Art Deco lines in their facades and grand halls, included an "encapsulated" version of an Andalusian patio inside the building. Even some early modernist cases have an Andalusian patio.

I can say that the conception of the Andalusian patio as the best solution for any patio remained all over the 20th century, even nowadays, Andalusian-inspired tiles are still available in the market and are used in contemporary buildings, mostly in patios.[36]

The first decades of the twentieth century were a transition time when historic revivals would gradually disappear, and modernist architecture based on the industrial aesthetic took the central place in architectural design.

So, during the second and third decades of the twentieth century, Modernism spread worldwide. Ibero-America took an active role in this process, to which it made significant contributions.

One of them was the material, technical, and spatial recovery of colonial architecture, resignified by a Modernist conception.

Thus, Ibero-American architects from that time were replicating, without being necessarily aware of, Arabic shapes and design criteria that had been key in Viceregal times. This can be seen in several aspects that I will develop in this book.

Back to the subject of tiles, Modernist Ibero-American architects used them throughout the region, but the most evident case is Brazil, where architects resumed the Portuguese tile significant tradition in a modern version.

Oscar Niemeyer used tiles in many works, such as the Pampulha complex in Belo Horizonte, Minas Gerais, and the Education and Health Ministry in

35 If we can find examples of Andalusian patios all over the continent, my city, Buenos Aires, has a great number of cases because a conjunction of causes: The economic growing at the beginning of the 20th century generated a construction fever and made possible the importation of tiles from Spain. Simultaneously, the arriving of millions of Spanish immigrants during those years was the basis of an active Spanish community highly interested in this style for obvious identity reasons.

36 I was following and researching about this particular topic from several years. This work generated two exhibitions, one in the Buenos Aires' Spanish Art Museum in 2009–2010 entitled Secret Paradises an Andalusian patio hidden in Buenos Aires' Architecture, and a second one with a complete survey in 2017 entitled "Nights in the Spanish Gardens, Andalusian patios in Buenos Aires Architecture". Also, I wrote a paper about this. See: Martínez Nespral, F (2017) "Paraísos secretos, patios andaluces ocultos en la arquitectura porteña" In: López Guzmán, R. (scientific coord.) *De Sur a Sur, intercambios artísticos y relaciones culturales*, Granada: Universidad de Granada.

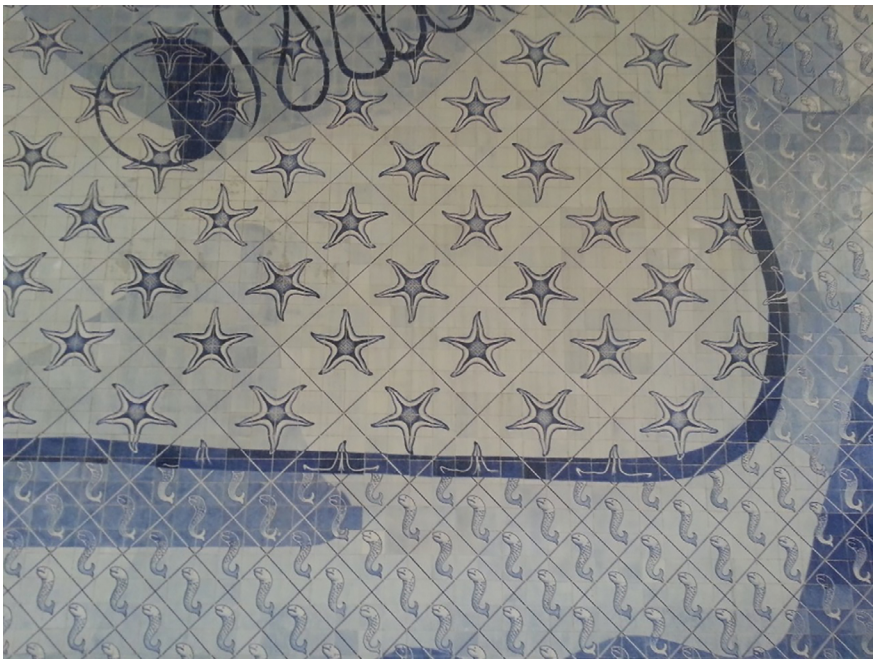

FIGURE 11 Tiles in the Education and Health Ministry, Rio do Janeiro
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

Rio do Janeiro. Tiles are key in both buildings, and the combination of those traditional Portuguese tiles and the modernist shapes of the buildings creates an original hybrid solution.

Designs of these tiles, made by Candido Portinari, are based on Figurative motifs directly connected with Portuguese Baroque tradition, not with Arabic patterns, but, even so, the entire image shows a system where little motifs create a whole, which gives a single vision of the surface. That is, shapes may change, but design criteria are still the same.

Some years later, by the mid-twentieth century, Athos Bulcao designed tiles for several of Niemeyer's works in Brasília, the new capital of Brazil. Bulcao's designs are even more abstract, and some patterns are related to geometrical tesserae in Arabic tiles.

Later, in São Paulo, architect Paulo Mendes da Rocha also included tiles related to the Portuguese colonial tradition, and through it to Arabic shapes, in his big concrete buildings. This is the case of "House in Butanta."

All this evidence demonstrates the importance of tiles in modern Ibero-American architecture, especially in Brazil, where tiles are a distinctive

regional feature. This key and original aspect can only be explained by its Arab component.[37]

Naturally, in all the periods mentioned in this section, the Arabic reference is indirect, except for "Arab Revival", based on an imitation of traditional Arab patterns and motifs. The other architectonic styles intended to recover Viceregal elements and so, indirectly, Arabic criteria. These kinds of "Indirect relationships" are even more interesting for my point in this book, because they prove that Arab features are non a historicist or exotic imitation, but a deeply rooted component of Ibero-American societies, visible in every period and valid even in transformations.

There are other building traditions with tiles around the world, but certainly, those used in Ibero-America in different periods can only be explained by the Arab component in its culture.

Building with tiles in Ibero-America is widely spread, no way limited to the examples given here. I wanted to develop the general topic and some examples that are "revealing", according to Castro, who makes the reader relate them to many others found throughout the continent:

> It is not the fact, but what the fact reveals, what is remarkable; phenomena could be those or others, and some have been grouped to show that it is not by sporadic random; it is a way of expression that belongs to a certain life context.[38]

37 The relationship between modern Brazilian tiles and the traditional Portuguese tiles is evident, but we must consider that traditional Portuguese tiles were also rooted in Islamic traditions. The preference of eight pointed stars as motifs in Portuguese tiles clearly demonstrate the idea.

38 Castro, A. [1948] 1984, *España en su Historia: cristianos, moros y judíos*. Barcelona: Crítica, p. 78.

CHAPTER 4

Lattices, from the Lima Balconies to the CoBoGo, the Screens for Thermal and Privacy Control, Arab Roots, and Local Fruits

1 *Mashrabiyya* in Ibero-America, a "Longue Durée" History

In this chapter I will explain a particular architectural connection between Ibero-America and the Islamic culture, the use of lattices for privacy and climate control, frequently found in several cities of the Americas, and their parallelism with the *mashrabiyya*, so frequently observed in the Islamic world from the Middle Ages to nowadays.

This Ibero-American version of *mashrabiyya*, as many other design criteria that we will develop in this book, originated in Medieval Islamicate Iberian architecture, whose heritage was brought to America by the conquerors and colonial settlers from the 16th century, and after the colonial period remained valid in modern and contemporary societies due to its deep roots.

Ibero-American architectural history literature[1] has discussed widely this topic based on examples from the Viceregal period, labeled as 'Lima balconies'[2] because they are very frequent in Lima, but, as we can see, similar examples can be seen in other regions of the continent. I will develop here that period, but also the modern manifestations of this phenomenon.

I will propose a new interpretation of this problem, understanding, as I explained at the beginning of this book, that it is not a foreign or exotic orientalist influence, but a typical Ibero-American feature based on the importance

1 An early example of historiography about Lima balconies is Hart-Terré, Emilio and Márquez Abanto, Alberto (1959) "Nota para una historia del balcón en Lima" in *Revista del Archivo Nacional del Perú*, XXIII–II, pp. 1–72. But the topic is in a continuous developing and probably the most recent book including a complete photographic archive survey is: Arrieta Alvarez, Ada – Scaletti Cárdenas, Adriana and Segovia Rojas, Rita (eds.) (2017) *Miradas en el aire. Los balcones limeños en la memoria fotográfica. Archivo Histórico Riva-Agüero*, Pontifica Universidad Católica del Perú: Lima.

2 I have published an essay specifically devoted to the balconies of Lima. See: Martínez Nespral, F. (2025) "Echoes of Mashrabiya in Latin America: Reconsidering the Balconies of Lima," in Wolf, C. (ed.) (2025) *Islamic and Islamicate Architectures in the Americas: Transregional Dialogues and Manifestations*. Intellect Books, UK.

 | DOI:10.1163/9789004756557_006

of privacy in architecture, a legacy of the Islamicate integral component of our societies.

'Lima balconies' are elements very common in Ibero-American architecture, consisting of a wood volume that is cantilevered into the urban space on the facade walls, in which its vertical faces are resolved with wooden boards, bars, and latticed windows during the Viceregal period (from the 16th century to the early 19th century), and by incorporating glass from the independent republican period (from the middle of the 19th century until the first decades of the 20th century) During the modernist period in the 20th-century other construction materials were incorporated, I will develop this period in the finish of this chapter.

Most of this kind of balconies are located in private houses, and although we find examples in several cities on the continent, there is a lot in Lima, the former capital city of the Viceroyalty of Peru, and the current capital of the said country. This kind of balconies can be seen in almost all houses located in the historic center of Lima. Paintings, drawings, and old photographs of Lima show them everywhere. Therefore, they are recalled by literature as 'Lima balconies'.

In Lima, we can find even nowadays a lot of examples of this kind of balconies. One of the most famous buildings with Lima balconies is the former Torre Tagle Palace, now the Headquarters of the Peruvian Foreign Affairs Ministry, but other remarkable cases are Osambela house, del Oidor house, Goyeneche house, and Riva Aguero house, among several others.[3]

The typical Lima balconies of the Viceregal period, with their lattices, specifically, are remarkably similar to the Islamic *mashrabiyya*. A clear example that we can see even nowadays in Lima is the Torre Tagle Palace, the current headquarters of the Ministry of Foreign Affairs of Peru.

In Islamic architectural history, we can find the *mashrabiyya*, although there is a very similar form to the already described Lima balcony, a cantilevered architectural volume of wooden lattices that has also been called *mucharabyeh* or *roshãn*. It is a typical element of Islamic architecture, as explained by Sphaic Omer:

> From the latter period of the Mamluki rule in the late 8th AH/14th CE century, and especially during the Ottoman Empire, the *mashrabiyya*,

3 A very complete survey about Lima balconies, including several that disappeared during the first half of the twentieth century can be found in: Arrieta Álvarez, A. – Scaletti Cárdenas, A. -/ Segovia Rojas, R. (eds.) (2017) *Miradas en el aire. Los balcones limeños en la memoria fotográfica. Archivo histórico Riva Agüero*. Lima: Fundación M. J. Bustamante de la Fuente – Pontificia Universidad Católica del Perú.

FIGURE 12 Lima in 1872 by H. Meyer. We can see in this drawing how this kind of balcony covered almost the entire façade of the upper floor in all the buildings shown. CREDIT: IMAGE EXTRACTED FROM "REVOLUCIÓN DE LIMA: RESEÑA DE LOS ACONTECIMIENTOS DE JULIO – 1872," BY HÉCTOR VALERA, CC0 1.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=14779046

both as a notion and a definite architectural reality, became ubiquitous in the Muslim world. It became one of the most recognizable features of Islamic architecture.[4]

This evident similarity between Lima balconies and Islamic *mashrabiyya* has been pointed out by Western travelers – mainly English, French, and German – who, since the beginning of the 19th century, have visited the city of Lima. Meanwhile, Spanish or Iberian travelers do not point out this element because it is not unusual for them. The same happens in any Arab component of Ibero-American culture, Iberians are not surprised, meanwhile other Europeans, both for their exotist vision and for not knowing those features, write their impressions, remarking on those elements.

One of the most characteristic cases is the French traveler Max Radiguet, who, in his impressions about a trip to Peru in 1841, referred to Lima balconies

4 'The origins of rawashin and masrabiyyahs' by Sphaic Omer, Medianet, accesed May 19, 2020, https://medinanet.org/2016/04/1058/.

FIGURE 13
Lima balcony, Torre Palace, Lima
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

with surprise, comparing them with wardrobes: 'private houses whose upper floors are decorated by continuous balconies like wardrobes carved and painted against the walls.'[5]

This surprise in Radiguet's text and his comparison with wardrobes can be explained by an idea that I developed in previous chapters. Western imaginaries are not prepared to relate Ibero-America with the Islamic World, even when this relationship is evident, like in this case, so, to present an explanation comprehensible for his Western readers, Radiguet conceived the comparison between these balconies and a similar wooden element well known in the Western World, the wardrobes.

5 Radiguet, M. [1846] (1971) *Lima y la sociedad peruana* Lima: Biblioteca Nacional del Perú. p. 27.

FIGURE 14
Mashrabiya at Al-Sadat house, Cairo. We can see in these pictures the evident similarities between both cases.
CREDIT: BY DR.EOMR – OWN WORK, CC BY-SA 4.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID BY FERNANDO=49598516

Later, during the 20th century, Ibero-American architectural literature dealt with this subject, clarifying some data and debating others.

All the authors agree about the Islamic affiliation of Lima balconies. It has been understood that this architectural type was born in the Middle East and settled in the medieval Islamic Iberian Peninsula, from where it reached Ibero-American colonies, like many other elements of Mudejar architecture[6] brought by the European conquerors.

6 As from the nineteenth century, Spanish-Arabic art under Christian rules was called 'Mudejar'. This word was firstly used by José Amador de los Ríos in 1859 in his speech to join the Royal Academy of Fine Arts of San Fernando (Madrid). Amador de los Ríos, José (1872) *El Estilo mudéjar en arquitectura. Discurso leído en la junta pública del 19 de junio de 1859*, Madrid: Imprenta de Manuel Tello.

The famous Italian-Venezuelan architectural historian Graziano Gasparini, in an article about Islamic, Spanish, and Ibero-American balconies in which he specifically referred to the Lima ones, made this relationship clear by saying: 'I want to extend the topic to the Lima examples, considering them the most closely related, from a formal point of view to the Mudejar-Andalusian and Arab-Islamic samples'.[7] Then he gave a specific reference to its relationship with the *mashrabiyya*:

> The balconies of Lima show a very close formal relationship with those of the Islamic Arab countries. There is an indisputable relationship with the *mashrabiyya* of Egypt, Damascus, and Constantinople, both in the constructive features and in the reserved, intimate, and private atmosphere with filtered light provided by dense lattices.[8]

This idea is still in force, and more recent works, such as the one written by Carlos Cosme Mellarez, sustain the validity of this relationship is sustained: 'Lima balconies are evidently influenced by their Islamic counterparts, the *mashrabiyya*'.[9]

The formal similarity is so evident that it is almost impossible not to relate both architectural pieces.

The only author who differs in terms of certainty and considers the relationship with the Iberian-Arabic as 'probable' is Ramón Gutiérrez in his book 'Architecture and Urbanism in Iberian-America', where he said: 'latticed balconies constituted a typical formal Lima development with a probable Moorish ancestry.'[10] About Gutierrez's argument, I think the idea of "probable" implies a misevaluation of the case because there is no other possible origin,[11] so it is not "probable" is "certainly" or "surely".

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7 Gasparini, G. (1994) 'Nuevos aportes sobre los balcones islámicos, andaluces, canarios, venezolanos y limeños', in *x Coloquio de Historia Canario-Americana,* ed. Morales Padrón, F. Las Palmas de Gran Canaria: Ediciones del Cabildo Insular de Gran Canaria, p. 946.

8 Gasparini, G. (1994) 'Nuevos aportes sobre los balcones islámicos, andaluces, canarios, venezolanos y limeños', in *x Coloquio de Historia Canario-Americana,* ed. Morales Padrón, F. Las Palmas de Gran Canaria: Ediciones del Cabildo Insular de Gran Canaria, p. 949.

9 Cosme Mellarez, C. (2009) 'La influencia hispano musulmana en la arquitectura colonial peruana', *Revista de Arquitectura*, 3, p. 111.

10 Gutiérrez, R (1992) *Arquitectura y urbanismo en Iberoamérica*. Madrid: Cátedra, p. 175.

11 Despite we can see some latticed balconies in other regions of the world, like India, for example, it was impossible a connection that justified how those techniques are able to arrive to the Iberian Peninsula. On the contrary, the Arab-Islamic connection is clear based on the Medieval Islamization of the old Roman Hispania.

But beyond this broad consensus on the Islamic origin, other aspects are less clear in the literature. First, how did it get to Ibero-America? Specifically, who and how did they bring it? And then, why is its presence so particularly concentrated in Lima, while many fewer are seen, or are directly absent, in other Ibero-American cities?

2 One Question / Several Answers: How Did Arab *mashrabiyya* Arrive in Ibero-America?

As regards my first question, which aims to unravel the way that this architectural form would take from Islamic Iberia to the American continent, several historians justify the arrival of this type of balcony in Ibero-America based on the presence of former Spanish Muslims, then converted into Christianity, called '*Moriscos*'[12] among the first settlers of the colonies, who would have personally been the 'bearers' of this Islamic know-how.

For example, the aforementioned Italian Venezuelan Graziano Gasparini highlights the presence on the Pacific coast of *Moriscos,* among the Andalusians who went to work in the Potosí mines:

> Investigating and researching about how the Andalusian "start" might have originated the profusion of Lima balconies with lattices, I consider it was caused by the large contingent of Andalusian miners who traveled to the Cerro Rico mines in Potosí.[13]

More recently, Cosme Mellarez has sustained the link between Mudejar architecture and the presence of *Moriscos*, although he erroneously calls them *Mudejares*:[14] 'What were the transmission dynamics of Mudejar culture that enabled their wide presence in Ibero-America? One of the possible answers

12 As from the first decades of the 16th century, with the entire Iberian Peninsula already under the rule of different Christian kingdoms, the Muslims hitherto called *Mudejares* were forced to convert to Christianity. These converts and their descendants were given the name of '*Moriscos*'.

13 Gasparini, G. (1994) 'Nuevos aportes sobre los balcones islámicos, andaluces, canarios, venezolanos y limeños', in *x Coloquio de Historia Canario-Americana*, ed. Morales Padrón, F. Las Palmas de Gran Canaria: Ediciones del Cabildo Insular de Gran Canaria, p. 951.

14 As I explained previously, Mudejar is the name given to a Muslim to inhabit a territory ruled by Christians, meanwhile Moorish is the name of a former Muslim after he was converted to Christianity. People that arrived to Ibero-America after the Iberian conquest and colonization must be Christian, and the colonization process started after the forced conversions, so, definitively they were Moorish, not Mudejares.

would be that originally Mudejar's workforce was brought to the Ibero-American territory.'[15]

I disagree with this idea mainly for two reasons. First, if Gasparini's hypothesis was right, there should be more latticed balconies in Potosí, the final destination where said *Morisco* workers settled more frequently than in Lima, a city where they just lived transitorily on their way to work. Secondly, about the idea that the presence of Mudejar architecture required the physical presence of Muslim people, I agree with Cummins and Feliciano when they clearly explained the topic using the absurd:

> By such reasoning, one might suppose that the many French who lived in or visited the Americas were responsible for the Gothic features in the cathedrals of Santo Domingo, Mexico City, Lima, Bogotá, or Cuzco because the style originated in France.[16]

In my opinion, the presence of *Moriscos* in the American continent could not be a key factor in the spread of Mudejar architecture in general, and of Lima balconies. It is not possible to determine exactly how many of them came here since it was prohibited; those who did it hid their origin, but anyway, there must have been a few. Their clandestinity further complicated their actions as eventual promoters of Islamic traditions; they clearly tried to hide their Muslim past, rather than showing it.

Furthermore, European colonizers made up a small part of the Viceregal society and manual labor, including construction. These jobs were done mostly by Native Americans, so the impact of the improbable and reduced presence of Moriscos was even less probable.

Mudejar architectural forms were deeply rooted in the Iberian culture, in such a way that they were common for different social actors regardless of their religion or social class. In this way, my position is that Spanish Christian conquerors and settlers brought the Mudejar features to this continent as their own features; they are replicating in Ibero-America the same elements that they had in the houses and cities where they were born and lived in Spain before the conquest. In the Iberian-American world, there were many examples of Mudejar architecture in the eighteenth century, and in certain cases even in the nineteenth, unrelated to the eventual presence of *Moriscos* in the

15 Cosme Mellarez, C. (2009) 'La influencia hispano musulmana en la arquitectura colonial peruana', *Revista de Arquitectura*, 3, p. 105.

16 Feliciano, M. J. y Cummins, T (2017) "Mudejar Americano: Iberian Aesthetic Transmission in the New World" In: Finbarr Barry Floodand y Gülru Necipoglu: *A Companion to Islamic Art and Architecture*. Hoboken, NJ.: John Wiley & Sons, Inc. p. 1024.

sixteenth century. This makes it impossible to relate this architecture to the direct action of this group; it can only be explained by the deep incorporation of these motifs into Ibero-American tastes.

Finally, Cosme Mellarez makes a hypothesis much closer to my approach, and explains these cases by assimilating Mudejar forms into Iberian culture:

> The Mudejar style has existed in Peru since the first artistic manifestations of the Viceregal period. Although it may be related to the arrival of some former Mudejar population, forced to be converted to Christianity, it mainly exists because this tradition had been incorporated into the Iberian culture through several centuries of activity of the Mudejar population in the peninsula. That is to say, the alarifes didn't need to be originally Mudejar, because their expressive force and formal and technological repertoire had been fully integrated into the culture that we call Hispanic.[17]

From this assimilation of the Mudejar to the Iberian tastes, we can know how this type of balcony reached the American continent; it was brought by Peninsular conquerors since Iberian Christians themselves were those who appreciated, used, and promoted this type of architecture.

3 A Second Question: Why Are They So Frequent in Lima? Answers Based on the Epoch, the Weather, and the Religion

We still have to answer why this type of architecture is concentrated with such emphasis in Lima and has not spread more widely throughout the Americas.

Gasparini, to explain the difference between Lima balconies and those without lattices like the typical open balconies found in other cities, analyzed it based on the relative age of the works. The most important Viceregal cities, like Lima, were founded earlier (at the beginning of the 16th century) and therefore would be temporarily closer to medieval Iberian Islamic styles. So, he said: 'On the contrary, they had arrived in Lima two centuries earlier, in the sixteenth century, and, therefore, carrying out the entire Moorish tradition of lattices.'[18]

17 Cosme Mellarez, C. (2009) 'La influencia hispano musulmana en la arquitectura colonial peruana', *Revista de Arquitectura*, 3, p. 117.

18 Gasparini, G. (1994) 'Nuevos aportes sobre los balcones islámicos, andaluces, canarios, venezolanos y limeños', in *x Coloquio de Historia Canario-Americana*, ed. Morales Padrón, F. Las Palmas de Gran Canaria: Ediciones del Cabildo Insular de Gran Canaria, p. 946.

This hypothesis is not enough to explain the problem, either because if it were simply linked to age, there should be as many balconies in Mexico as in Lima, since they are cities from the same period and both heads of the Spanish empire on the continent. Or even more in Santo Domingo or the Caribbean, where Spanish conquerors arrived first. However, this is not the case; although there are some latticed balconies elsewhere, the concentration in Lima is significantly higher.

Then Gasparini proposes another alternative, the relationship between the privacy of these spaces and religious practices:

> Those "confessional" balconies must have been enthusiastically approved by religious authorities. Lima was the city with the highest number of nunneries in that part of South America, and an atmosphere of silence, prayer, and modesty prevailed in those convent spaces.[19]

This explanation does not solve the dilemma either; it is not sustainable to affirm that Lima was more religious than other cities on the continent, or that this type of balcony was singularly attractive for the Christian religion. The comparison between Lima balconies and confessionals is not appropriate either, because, beyond the formal similarity, their use and location are notoriously different.

In more recent times, Javier Ignacio Gil Crespo, analyzing the origin of Canarian and Viceregal balconies, argued a climatic reason for the preference of this type of balcony in Lima:

> The enclosed balconies, similar to Canarians and Andalusians, have only been preserved in Peru because if so, they would be better adapted to the coastal climate, hot and extremely dry, where it only drizzles a little bit. On the contrary, in the Antilles and the continent surrounded by the Caribbean, open balconies proliferated, since they were more suitable for the warm and humid climate of the tropics.[20]

But I think climatic determinism is not conclusive, firstly because Lima does not have a different climate from other points of the Pacific coast that had

19 Gasparini, G. (1994) 'Nuevos aportes sobre los balcones islámicos, andaluces, canarios, venezolanos y limeños', in *x Coloquio de Historia Canario-Americana*, ed. Morales Padrón, F. Las Palmas de Gran Canaria: Ediciones del Cabildo Insular de Gran Canaria, p. 952.

20 Gil Crespo, J. (2011) 'La discusión sobre el origen de los balcones canarios y coloniales. Antecedentes en las arquitecturas tradicionales de la península ibérica', *Estudios Canarios. Anuario del Instituto de Estudios Canarios*, p. 229.

fewer examples of this type of balcony, and because saying that Lima's climate is 'extremely hot' is a misstatement.

According to official data reported by the National Meteorological and Hydrological Service of Peru, the average maximum temperature for the city of Lima is 26.5 degrees Celsius during the Southern hemisphere summer in February,[21] a climate that cannot be considered excessively hot.

In coincidence with my opinion, Gutiérrez justified these constructions precisely because of a benevolent climate: 'In Lima, the stable climate and the habitual lack of sun and rain enabled the development of roof covers'.[22]

Furthermore, Rafael Agüero León, a specialist in bioclimatic architecture issues who has also studied Lima balconies, justifies their proliferation in this city by the existence of a temperate climate: 'The start and subsequent massive use of latticed balconies were favored by the climatic conditions of Lima, due to its pleasant temperatures and an almost permanent cloudy sky'.[23]

These last statements are correct and coincide with meteorological data, but since the temperature is not excessive and the sky is mostly cloudy, an architectural element such as the *mashrabiyya*, conceived in the Middle East for the protection from excessive sunlight and heat, would not be justified.

Therefore, we had to discard the climatic hypothesis. In fact, Agüero León, after explaining a wide series of temperature, wind, sunlight, and lighting conditions measurements in his dissertation, concludes that these reasons do not justify the proliferation of Lima balconies: 'the adoption of latticed balconies in Lima was due to aesthetic, social, or formal reasons rather than comfort reasons.'[24]

So, we are surely in the presence of a social based problem,[25] to understand the concentration of *mashrabiyya* balconies in Lima requires a social approach.

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21 Average temperature for West Lima, National Service of Meteorology and Hydrology of Peru, accessed May 19, 2020, https://www.senamhi.gob.pe/main.php?p=pronostico-detalle&dp=lima&localidad=0001.

22 Gutiérrez, R. (1992) *Arquitectura y urbanismo en Iberoamérica*. Madrid: Cátedra, p. 175.

23 Agüero León, R. (2009) *El balcón y la celosía. Elementos de confort lumínico y térmico en el clima de la ciudad de Lima*. MA dissertation Universidad Politécnica de Cataluña, p. 8.

24 Agüero León, R. (2009) *El balcón y la celosía. Elementos de confort lumínico y térmico en el clima de la ciudad de Lima*. MA dissertation Universidad Politécnica de Cataluña, p. 80.

25 I am convinced that social and cultural reasons are the key factor to understand architectural decisions. Weather, topography, availability of construction materials sure has an important influence in the choices made by architecture designers, but always the key factor is social and cultural. If not will be impossible to find crystal skyscrapers in the Arab Gulf cities or marble buildings in tropical forests for mentioning only two extreme examples.

4 Social and Gender Connections: Balconies as Architectural Veils

Once discarded the climatic argument, we must analyze, as suggested by Agüero León, the social motivations for the concentration of these balconies in Lima. There is a suggestive coincidence between the architecture and traditions of Lima's Viceregal society. For example, in Lima was very frequent for women to cover themselves in public spaces with a kind of veil. This became a local tradition, and those who were dressed in this way were called '*tapadas*' (covered). And, despite we can find women covered in many places across Ibero-America, certainly, this kind of costume was much more frequent in Lima than in other cities.

In a recent PhD dissertation, Al-Murahhem said that the close relationship between veils and *mashrabiyya* is also established in Islamic culture: 'In fact, my main argument is that the ḥijāb is the Islamic rule behind the concept of the rūshān, and this is the main reason for the existence of this architectural feature wherever and whenever Islam has existed.'[26]

So, we can understand *mashrabiyya* as the architectural version of the veil that avoids vision from outside to inside and, at the same time, makes possible the opposite vision from inside to outside. Both work as asymmetrical filters of privacy, a solution very frequent in Islamic Architecture, in which the importance of privacy is central in any cultural tradition.

On the other hand, this woman's dress habit of "tapadas" was contemporary to Lima balconies and drew numerous comparisons between Lima traditions and Islamic culture.

Max Radiguet, the same French traveler who had been surprised by the balconies and had compared them with wardrobes, highlights in his book the covered women that abounded in the city; in connection with Alameda promenade, he points out that: 'All the benches were occupied by *tapadas*.'[27]

They also had a leading role and were a recurring theme in iconography until the beginning of the 20th century, as well as a subject preferred by the first photographers who recorded local customs, as Eugène Courret (See Figure 16).

The topic of *tapadas* has generated a great deal of research in social sciences and particularly in gender studies. The hypothesis generally accepted for this case is the same as for the balconies; *tapadas* are attributed to an Islamic origin from in Islamized Iberia and spread into Ibero-America during the conquest.

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26 Al-Murahhem, F. (2008) *Behind the Roshān: Visualising the Roshān as an Architectural Experience in Traditional Domestic Interiors*. PhD dissertation University of Brighton, p. 27.

27 Radiguet, M. [1846] (1971) *Lima y la sociedad peruana* Lima: Biblioteca Nacional del Perú. p. 47.

FIGURE 15
Tapada by Jacobus Boelen
CREDIT: IMAGE EXTRACTED FROM PAGE 303, VOLUME 2 OF REIZE NAAR DE OOST- ORIGINAL HELD AND DIGITIZED BY THE BRITISH LIBRARY, PUBLIC DOMAIN, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=32776582

Andrea Bazán Avendaño explains it with a parallelism with Islamic balconies; the use of veils was prohibited in Spain after the Christian conquest, and then flourished in the American colonies.

> After the fall of the Muslim kingdom of Granada in 1492, the Spanish Crown prohibited Arab women in Andalusia to wear the Islamic veils that covered their faces and hid their identity. It was not easy to uproot this ancient and secular habit, and the emperor Carlos V, as well as his son King Philip II, kept the prohibition. When, finally, women were forced to abandon their veils and adopt the Castilian shawl, they began to wear the new garment to cover their faces, exposing only one of their eyes.[28]

In connection with architecture, Graziano Gasparini, when he spoke about the abovementioned balconies, presented a similar case: 'In Andalusia, many of

28 Bazán Avendaño, A. (2018) *Cuerpo, movimiento y erotismo: Lecturas sobre la tapada limeña en representaciones escriturales y visuales entre los años 1830 y 1850*. BA dissertation Pontificia Universidad Católica del Perú, p. 5.

FIGURE 16
Tapadas limeñas. In both figures, we can see here how a tapada looks like and how characteristic of Lima society those women were. CREDIT: PHOTO BY EUGÈNE COURRET, PUBLIC DOMAIN. HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=71213625

the Arab Islamic balconies disappeared as from the sixteenth century, either by social rejection or by direct demolition orders.'[29]

Ramón Gutiérrez gives an urbanistic reason for their disappearance in Spain: 'They disappeared for reasons of sunlight and hygiene, given the narrowness of the streets of Seville."[30] This was opposite to the conditions of Lima, a newly planned city with much wider and ventilated streets.

The situation was identical for balconies and *tapadas*; *mashrabiyya* and veils had an Islamic origin, were introduced in the Iberian Peninsula in the Middle Ages, and, after the conquest by the northern Christian kingdoms, were prohibited by the new Christian authorities that considered those features inappropriate. Following this prohibition, the population, accustomed to

29 Gasparini, G. (1994) 'Nuevos aportes sobre los balcones islámicos, andaluces, canarios, venezolanos y limeños', in *x Coloquio de Historia Canario-Americana*, ed. Morales Padrón, F. Las Palmas de Gran Canaria: Ediciones del Cabildo Insular de Gran Canaria, p. 950.

30 Gutiérrez, R. (1992) *Arquitectura y urbanismo en Iberoamérica*. Madrid: Cátedra, p. 175.

these elements, developed adaptation mechanisms and alternative solutions that flourished in the Iberian American colonies.

With the *tapadas*, the same criterion of concentration of balconies was applied. Although the habit of covering one's head with a kind of shawl – named differently according to the region – was common in all the Iberian American colonies, its concentration in Lima caused that, like the balconies, they are remembered as '*tapadas limeñas*'.

This coincidence still does not resolve a priori the dilemma of why veils and latticed balconies are especially present in Lima, but at least shows that two elements of Islamic origin related to the preservation of privacy in architecture and clothing were common in this city.

5 Geographical and Historical Connections between Two Big Cities: Lima and Seville

In connection with architecture, Gil Crespo describes a fact that can connect the two abovementioned elements when he refers to the transcendence in Lima of 'the Andalusian palaces fashion'.[31] This implies that Andalusian traditions, naturally more related to the Islamic culture, singularly appeared in the capital of the Viceroyalty of Peru, one of the most important cities of the Spanish empire in the Americas.

Ramón Gutiérrez adds to this idea by saying that Lima 'aspired to imitate the ways of life of the court',[32] and added that: 'These balconies still seen in the 19th century were frequent in Seville'.[33]

As regards clothing, Bazán Avendaño establishes the same connection with Seville, a key city in the relationship between Spain and its colonies:[34] 'The *tapada* fashion was associated with Seville's reputation of opulence and

31 Gil Crespo, J. (2011) 'La discusión sobre el origen de los balcones canarios y coloniales. Antecedentes en las arquitecturas tradicionales de la península ibérica', *Estudios Canarios. Anuario del Instituto de Estudios Canarios*, p. 228.

32 Gutiérrez, R. (1992) *Arquitectura y urbanismo en Iberoamérica*. Madrid: Cátedra, p. 153.

33 Gutiérrez, R. (1992) *Arquitectura y urbanismo en Iberoamérica*. Madrid: Cátedra, p. 175.

34 In Seville was established the most important "Casa de contratación" (Hiring House) that managed the commerce between Sapin and its Ibero-American colonies, and Seville was also the most important Spanish port for the development of this commercial relationship. So, was comprehensible that Lima, one of the most important heads of Spanish colonization in the Americas, took Seville as the example and tried to imitate their buildings and fashions.

ostentation, a reputation that grew after the city's designation as the Spanish port to the Americas in 1503.'[35]

This coincidence shows a special relationship between Seville and Lima that could justify the greater presence of the Islamic Andalusian traditions in the city. As Lima tried to emulate the customs of the metropolis in general and Seville, the city that functioned as a link with the colonies, we can understand the greater concentration of examples that refer to Andalusia and, through it, to the Islamicate culture.

To reinforce this, Gutiérrez addresses the differences between the different cities of Peru, considering that, while in Cusco we can see a true syncretism between the Hispanic and native forms, 'a Spanish architecture installed in America can be found in Lima'.[36]

This idea, in my opinion, is a valid justification for this concentration in Lima instead of other cities of the continent.

It was clear that the Iberian Arabic forms (*mashrabiyya* and *tapadas*, among many others) would be implanted more visibly in cities of greater importance and development, where there was better architecture and artisans, and closer monitoring of Iberian fashions.

As the two heads of the Spanish colonies were Lima and Mexico, it would have been reasonable that Islamicate features were visible in both cities equally; however, Mexico, like Cusco, was a city founded on the very center of a pre-existing culture, even in the same location as the previous capital Tenochtitlan, built over the previous Mexica pyramids, palaces and temples or their ruins and frequently by reusing ancient stones and even entire walls. Therefore, both cities were characterized by hybrid forms, with a visible mark of the Mexica and the Inka cultures, respectively.

On the contrary, Lima, founded on the coast and far from Cusco, the Inka power center, clearly showed the transposition of Iberian traditions. Following Gutiérrez's words, Lima would be an example of a Spanish city 'implanted' in Ibero-America, a kind of "new Seville," totally new and much freer to adopt the tastes, fashions, and architectural elements visible in the Iberian Peninsula.

In other words, Lima shares seniority and relevance with Mexico as factors that contributed to the installation of Islamic traditions, but differs in that Lima is a new city, where the Iberian forms had more freedom to develop. That

35 Bazán Avendaño, A. (2018) *Cuerpo, movimiento y erotismo: Lecturas sobre la tapada limeña en representaciones escriturales y visuales entre los años 1830 y 1850*. BA dissertation Pontificia Universidad Católica del Perú, p. 7.

36 Gutiérrez, R. (1992) *Arquitectura y urbanismo en Iberoamérica*. Madrid: Cátedra, p. 57.

is my explanation of why both forms, *mashrabiyya*, and *tapadas*, were much more concentrated in Lima than in Mexico City.

Until here, I have discussed the current ideas about Lima balconies and their connection with Islamic *mashrabiyya* and contributed to answering the questions about how that form arrived in Ibero-America and why it was especially concentrated in the city of Lima. In the next pages, I will develop a hypothesis about the originality of this kind of balcony as a hybridization process.

6 Not a Simple Copy: Ibero-American Viceregal *mashrabiyya* as a New Local Solution

I think there is one relevant aspect that has not been considered by the literature yet, and it is precisely the differences between Lima balconies and *mashrabiyya*. Both architectural elements have deep similarities but also some important differences that we have to take into account for a better understanding of this phenomenon.

I will now explain a sensible difference between the two forms, related to the architectural design and features of Islamic and Peruvian buildings, which define how those spaces are perceived by their inhabitants.

If we think about the abovementioned Radiguet quote, 'private houses whose upper floors are decorated by continuous balconies like wardrobes carved and painted against the walls.'[37] We will see that the term 'continuous' here describes that these balconies are exceptionally long and occupy almost all the fronts of the buildings.

The most traditional facade solution, present in almost all cases, includes two long balconies that occupy the entire upper floor, sometimes excluding only the main access sector, which, to remark its importance, contains several ornaments that exceed the height of the ground floor, interrupting the balconies. Even in houses built in a corner, this balcony is continuous and joins both facades around the corner (See Figure 17).

This gives the balconies a very pronounced horizontality in relation to their height, different from the traditional image of Islamic *mashrabiyya*, made up of vertical rectangles separated from each other by wall sections like windows.

On the other hand, the cantilever over the street in Lima balconies is also much higher than the one in its Islamic references. Lima balconies usually protrude from the facade by about a meter and a half, so they are much wider than

37 Radiguet, M. [1846] (1971) *Lima y la sociedad peruana* Lima: Biblioteca Nacional del Perú. p. 27.

FIGURE 17 Corner balcony, del Oidor House, Lima
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

traditional *mashrabiyya*, which, as we can see in the Gayer Anderson Museum building in Cairo (See Figure 18), are flush with the wall or cantilever less than a meter.

This relevant difference in proportions causes a noticeable compositional contrast between the facades of Lima and those of Islamic models, but also shows that both internal plan solutions have important spatial divergences.

In *mashrabiyya*, due to their proportions and shallow depth, the cantilevered volume of wooden lattices is integrated into the interior space of the house, forming a single room in which the *mashrabiyya* acts as a slightly flown window and generates a space integrated into the larger room, normally used to place water jugs for cooling, and sitting (in a similar way than a bay window but with lattices instead of glass).

In most Lima balconies, the notorious horizontal proportion of the cantilevered wooden construction makes it cover the space of more than one room in the building. A single continuous balcony frequently covers all the rooms on the floor. This causes a fluid integration between a single balcony and the interior of several rooms, such as the sitting room, dining room, bedroom, etc., that is architectonically useless.

Therefore, Lima balconies form an independent volume that is not integrated into the internal rooms like their Islamic precedents and conform to an independent space, a latticed balcony separated from the rooms.

FIGURE 18 Gayer Anderson Museum, Cairo
CREDIT: PHOTO BY YAMILA ZŸNDA AIUB

Consequently, these balconies are deeper because they are separated from the interior of the building, which requires a minimum dimension that allows them to be used as an independent space. Even examples such as the Torre Tagle Palace incorporate seats in the wall that separates the balcony from the interior.

This makes a sensible difference between both cases despite their evident similarities in terms of the use of wood, the lattices, and its consequences on the privacy of the house inhabitants. Islamic *mashrabiyya* is a device like a window used individually for each room; on the other hand, Lima balconies are a separate and independent space, accessible from several rooms to be used separately, and its impact and proportions in the façade are also different.

At the same time, this condition of separate spaces invalidates the protection against excessive solar radiation and the cooling of houses given by *mashrabiyya*, because the Lima balcony is not directly associated with any room. These advantages of solar protection were necessary for the hot and sunny climate of the Middle East and Andalusia, but not for Lima's temperate climate.

FIGURE 19 Torre Tagle Palace, Lima
CREDIT: PHOTO BY YAMILA ZŸNDA AIUB

FIGURE 20 Bayt Al-Suhaymi, Cairo. We can see here how the *mashrabiyya* works as a window for a singular room.
CREDIT: PHOTO BY MOHAMED NOFALOVICH – OWN WORK, CC BY-SA 3.0. HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=30033090

FIGURE 21 Latticed balcony, Torre Tagle Palace, Lima. On the contrary, we see here how the Lima balcony is a separate space that connects different rooms and was conceived to be used separately.
CREDIT: PHOTO BY MINISTERIO DE RELACIONES EXTERIORES CC BY-SA 2.0, HTTPS://WWW.FLICKR.COM/PHOTOS/CANCILLERIADEPERU/4602194095

Gasparini makes a valuable observation related to these considerations. According to him, this type of balcony was called '*mirador*' (a room for look-out) in Lima: 'In Lima, these balconies are also called *miradores*, meaning that the view is not open and clear; rather than looking and being looked at, people want to look without being observed and, rather than looking, people want to snoop, glimpse, sniff, and pry.'[38]

They have a particular name, *mirador*, related to their specific use; they were considered a different room that allowed the inhabitants to look at traffic in public streets from an interior space of the house without being seen by the people that is walking on the street outside the house.

For all these reasons, Lima balconies solved a social need inherited from Islamic culture, such as the importance of privacy. This is also related to the use of several types of asymmetrical filters like *mashrabiyya* and veils – with which you can see from the inside to the outside but not the other way round – together with a technical and formal resource also inherited from Islamic architecture: wooden lattices. Using those Islamic inherited elements, in the Ibero-American case was created a new spatial solution for a different climatic and social context. This implies the emergence of a new independent look-out in the house, starting from a device that is part of the Arabic legacy and had been created in other latitudes for a hot climate, but was used in a new context with a different environment.

I consider that Lima balconies combine two pre-existing typologies in the Iberian Peninsula and Viceregal Ibero-America: the open 'corridor balcony', which was used as a drying space in northern Spain and adapted as a protection from rain and sun in the hot and humid climate of the Antilles, very frequent in Cuba or Santo Domingo, and the *mashrabiyya* from the Islamic-Andalusian areas.

The 'corridor balcony' provided elongated volumes and independence of the interior space in buildings; meanwhile, the *mashrabiyya* provided the latticework that turned these initially open balconies into '*miradores*' that preserve the privacy of those who look from there. The combination of both elements creates a third one, undoubtedly related but also certainly different, a new creation based on the adaptation of a social and architectural legacy in a different geographical environment.

These differences that I have just explained, rather than belittling the merits of Lima balconies because they differ from their Islamic precedents, exalt

38 Gasparini, G. (1994) 'Nuevos aportes sobre los balcones islámicos, andaluces, canarios, venezolanos y limeños', in *x Coloquio de Historia Canario-Americana*, ed. Morales Padrón, F. Las Palmas de Gran Canaria: Ediciones del Cabildo Insular de Gran Canaria, p. 950.

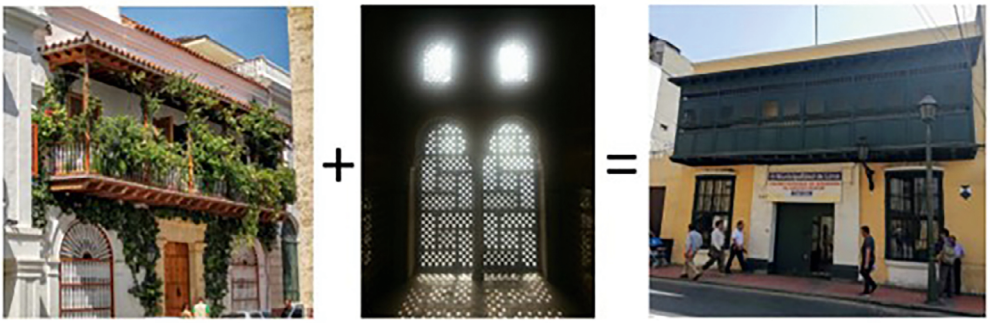

FIGURE 22 From corridor balcony to Lima balcony through *mashrabiyya*
CREDIT: FERNANDO LUIS MARTÍNEZ NESPRAL (INCLUDING HOUSE IN OLD TOWN CARTAGENA DE INDIAS – BY ASPERGREY CC 4.0 HTTPS://COMMONS.WIKIMEDIA.ORG /WIKI/FILE:HOUSE_IN_OLDTOWN_OF_CARTAGENA_DE_INDIAS.JPG / MASHRABIYA AT THE ALHAMBRA, GRANADA, SPAIN – BY FERNANDO LUIS MARTÍNEZ NESPRAL / LIMA BALCONY – BY FERNANDO LUIS MARTÍNEZ NESPRAL)

them since they are a new solution generated in Lima to adapt an appreciated Islamic social criterion, such as privacy and the valued and preserved Andalusian aesthetics, both of Iberian Arabic origin, to a different historical and climatic context.

Authentic replicas of Cairo *mashrabiyya* would have been useless in the climate of Lima, and since they were used separately from the internal rooms of the buildings, the continuity of the corridor balcony and their greater depth made them a much more attractive space.

7 A New Layer about Screen Devices: Lattices Created after the Viceregal Period

As I have already stated about other topics, design criteria and their deep connection with Ibero-American societies' ideas and needs still exist; they change much more slowly than ephemeral stylistic trends. Lattices are interesting examples of these continuities that prevail against ruptures.

The traditional Spanish system, as described hereinabove, was adopted during the Viceregal period, that is, from the sixteenth up to the beginning of the nineteenth century. After that, as I explained earlier in this book, the key role of other European countries as France and England, as regards politics, economy, culture, and aesthetics, started to influence already independent Ibero-American societies; their effects, very evident in different areas, were also remarkable in the topic developed here.

Balconies designed after Ibero-American independencies incorporated Neoclassical decorative motifs in their woodwork, and lattices were replaced by glazed windows. This evidence that strictly functional needs, such as the use of lattices for privacy, were quickly set aside when a new social or cultural requirement appeared (in this case, the adoption of European "modernizations" like glass in windows).

As stated above, balconies closed with lattices were mostly used in Lima, where the weather was mild, not too hot, and also in different Ibero-American places with varied climates. This evidence suggests that the main reason for using them was related to privacy rather than climatic control.

By replacing lattices with glass, we may think that privacy is reduced, but this is partially because, unless there is an inner light source, glass reflects outer light and does not let us see anything from the street; on the contrary, it lets people inside the balcony clearly see the outside. This still works (at least during daylight) as a "viewpoint," as explained by Gasparini.[39]

But, by receiving other European influences[40] Ibero-American societies changed, and privacy, which was especially important for Iberian-Arabs, gradually lost its central role; as I said before, this example shows ruptures as continuities entailed by this gradual change.

In this way, the visibility of the house interior from outside became interesting in the new context of a society influenced by the new European fashions, by which the social life of the upper classes became a kind of spectacle, as happened in the opera houses, public parks, and boulevards. This represents a clear change in people's habits, based on the increasing appreciation of European modernity and its tastes, fashions, and trends.

Anyway, these new European-like uses were mostly adopted by the higher classes, which were more connected with the new influences; lattices were used in places with a mild climate, where reversal of the temperature reduction effect was not very difficult to achieve.

On the contrary, in popular architectures, more connected with local traditions and less with European trends, and mostly built in places with extremely hot temperatures, lattices are still used, and made of different materials, such

39 Except that at night the opposite happens, the inside of the house is exposed.

40 Ibero-America received several non-Islamic influences. First those related to Renaissance, Baroque and other European styles incorporated by the Spaniards and Portuguese during the colonial period. But after the independencies, the new Ibero-American countries started a profound relationship with England, France and Germany, the most important world powers of those days and then, the arrival of no Islamic influences increased exponentially.

as wood in the cases mentioned hereinabove, and also cane, vegetable fiber, and bricks.

Later, during the first decades of the 20th century, in the Spanish Colonial Revival Style era (or Neo-colonial as it was named in Ibero-America), Lima balconies were replicated all over the continent.

A very singular case happened in the city of Lima, where several original Lima balconies, built during the Viceregal period, were replaced by modern reproductions. That is the case of the new Archbishop's Palace, beside the Cathedral. Designed in 1924 by two foreign architects, the French Claude Antoine Sahut Laurent and the Polish Ryszard Jaxa Malachowski Kulisicz, a Neo-colonial building including two exceptional Lima balconies in its façade.

But not only the Archbishop's Palace but almost all the buildings located in front of Lima's Main Square, all of them original from the Viceregal period, were destroyed in the first half of the 20th century. The Presidential Palace, designed by Jaxa Malachowski, replaced the old Viceregal Palace. The new City Hall, a Neo-colonial project from 1943 by the aforementioned architectural historian Emilio Harth Terré, includes a kind of Lima balconies too, and together with the Caretas building, the Union Club building, and the Royal Guard building, all the constructions surrounding the Main Square are Neo-Colonial designs from the 20th century that replaced old Lima balconies with modern reinterpretations.

Out of Lima, there are a lot of examples of Lima balconies in Neo-colonial Ibero-American architecture. The Noel Residence in Buenos Aires (now the house of the Hispanic American Art Museum) has two latticed balconies in its main façade, and a list of similar cases is extremely large all over the continent.

This takes us to a new period, the mid-20th century, or even to the present, when several Ibero-American architects intended to resume the use of traditional solutions, created during the Viceregal period, because of their technical advantages, use of local materials, workforce wisdom, and skill to efficiently solve social needs, such as climatic control in very hot climates, and privacy preservation.

One of the aforementioned authors, the Mexican Architect Luis Barragán, used lattices for the Capuchin nun's convent in Mexico City, a modernist work from 1960. We can see again the use of lattices related to privacy in a convent where this is a vital component.

There are examples related to lattice use in modern architecture, especially in hot weather places, such as the Caribbean region, Brazil, or Paraguay.

Emblematic examples in the Caribbean area are the lattices built by Carlos Raúl Villanueva (1900–1975) in the University City of Caracas, Venezuela, a tropical country with a high incidence of solar radiation and a hot climate.

FIGURE 23 Arch. Joao Filgueiras Lima (Lele) Colina Velha at UNB Campus, Brasília, Brazil
CREDIT: PHOTO BY GABRIEL FERNANDES – OWN WORK, CC BY-SA 2.0 HTTPS://WWW.FLICKR.COM/PHOTOS/GAF/47962387801

Lattices are widely used in Brazil; there is an architectural work with its own name, the CoBoGo, that is an acronym formed by the first letters of their authors' names.[41] Not only were they built by famous architects or were selected pieces of art, but lattices can be found everywhere, as a solution to inclement hot weather and privacy in interior spaces. Even popular[42] and rural architecture uses latticed screens frequently.

Paraguay is another place with extremely hot weather, where different kinds of lattices have been used up to now (wooden or vegetal during the Viceregal period and mostly brick in contemporary architecture). Architects

41 This topic has been fully explained in the paper: Lara, F. (2022) "Cobogó and the coloniality of the Brise-Soleil: Islamic roots and marginalization in Brazilian modern architecture" *Ibero-American and Latinx Visual Culture* 4.3, University of California Press. pp. 113–119.

42 For a complete study of popular modernist architecture in Brazil see: Lara, F. (2008) *The Rise of Popular Modernist Architecture in Brazil*, Gainesville: University Press of Florida.

such as Solano Benitez have applied interesting solutions with lattices made of bricks that we can see in several of his works as his project for the School of Architecture, Design, and Art, National University of Asunción.

In Argentina, with a much milder climate, there are also significant examples of lattices made of bricks, such as "The Brick House" by Diego Arraigada, "The Sieve Stack House" by Francisco Cadau, or most of the works by Jorge Scrimaglio, like the Alorda house in Rosario. All of these works are rebuilding a new era in the use of lattices in Ibero-American architecture, even including connections with parametric architecture and the digital design era.

If we asked any of these architects whether they intended to build a direct connection with Arab architecture when making these works, they would likely say it is not true, and maybe they would be surprised to know their works have similarities with an architectural style that they consider remote and distant.

But if we asked them whether they looked for rooted local traditions, they would say, for sure, that they did. All these works were made to recover and renew Ibero-American popular traditions and knowledge. Of course, these local traditions are rooted in the native people's knowledge and contributions from the Viceregal period. Based on this information, the Islamicate connection is indirectly evidenced, Viceregal lattices of Arabic origin rebirth in a new generation of modernist and contemporary architects.

Many will think that the fact that this connection is indirect weakens or even cancels the connection with the Iberian-Arab style. I think, on the contrary, that it makes it more interesting because this connection has been appropriated (that is, made its own), that is, a real Ibero-American component, rather than a distant exotic influence.

This is one of the main goals that I am looking for in this book: to make visible the indirect connections with the Arab culture that are still visible in the region.

CHAPTER 5

Ponds, from the Alhambra to Luis Barragán, Water as the Origin of Creation in Islam, and Its Presence in Ibero-American Buildings

1 Islamic Ideas about Water and Their Reflections on Ibero-American Viceregal Architecture

Water is an essential element for Islam. Its importance is explained in detail in the Koran, the Muslim sacred book, in different ayahs.

They state that God's throne is placed inside water,[1] then, it is explained that humans and all living begins, have been created out of water,[2] a statement confirmed by the idea that life is impossible without this vital element.[3]

Following the importance of water, Islamic ideas about Paradise remark that water is essential in this sacred place[4] that has "rivers of unaltered water".[5]

Paradise descriptions envisioned as an ideal garden where everything helps to achieve maximum pleasure and enjoyment for humans have become a model for designing earthly gardens that, beyond limitations imposed by their

1 Al-Qur'ān 11: 7 "And it is He who created the heavens and the earth in six days – and His Throne had been upon water."

2 Al-Qur'ān 21: 30 "Have those who disbelieved not considered that the heavens and the earth were a joined entity, and We separated them and made from water every living thing? Then will they not believe?"

3 Al-Qur'ān 25: 48–49 "And it is He who sends the winds as good tidings before His mercy, and We send down from the sky pure water. That We may bring to life thereby a dead land and give it as drink to those We created of numerous livestock and men."

4 Al-Qur'ān 47: 15 "Is the description of Paradise, which the righteous are promised, wherein are rivers of water unaltered, rivers of milk the taste of which never changes, rivers of wine delicious to those who drink, and rivers of purified honey, in which they will have from all [kinds of] fruits and forgiveness from their Lord, like [that of] those who abide eternally in the Fire and are given to drink scalding water that will sever their intestines?"

5 There are many books published about water trascendence in Islamic culture, even Law books such as Vigevano, M. (2016) "El agua en el Islam. Desde sus orígenes hasta la encrucijada actual" in *Revista Jurídica de Buenos Aires*, no. 2016-1, Buenos Aires: Facultad de Derecho y Ciencias Sociales UBA. As regards History, Trillo de San José, C. (2006) "El agua en Al-Andalus: Teoría y aplicación según la cultura islámica" in *Tecnología del Agua*, Number 271, Madrid: Reed Business Information. The most complete and related study, as it provides an aesthethic aproach with its architectonic applications, undoubtely is Puerta Vílchez, J. (2011) *La poética del agua en el Islam*, Gijón: Ediciones Trea.

 | DOI:10.1163/9789004756557_007

worldly condition, try to emulate paradise's ideal garden,[6] with all its features, such as the essential presence of water.

So far, I have mentioned ideas related to Islam and, consequently, to its believers. But, as happened in the case of other design criteria that I developed earlier in this book, throughout the long Islamization of the Iberian Peninsula, these ideas reached those who were not Muslims and spread as preferences of the whole Iberian societies.

Several gardens were originally built for Muslims, such as Granada's Alhambra, the Aljafería Palace in Zaragoza, or the gardened patios in the Great Mosques of Seville or Cordoba, among many other examples. Those buildings were later appropriated by Christian conquerors, then they were either kept or reformed, but mostly have conserved the general criteria of the Islamic Garden up to now.[7]

Evidence to this is that all the Western travelers who visited Spain clearly highlight this topic. A good example is Antoine Jouvin, a French Voyager in the second half of the 18th century clearly recognized their paradisiac image after many centuries had elapsed from the end of the Muslim rule in the Peninsula: "Winter has never entered there, since spring lives there forever, and it really looks like an earthly Paradise."[8]

These peninsular gardens then became models of those built in Ibero-America after the Iberian conquest and colonization, and in this way, as happened with other Arabic design criteria, via the Iberian conquerors, the Iberian Arabic Garden arrived in the Americas.

Related to gardens is the Patios, which are for sure a key element of Iberian architecture and its Ibero-American constructions, but, as almost all the building's plans are based on patios, I will develop widely this topic of the patio as the center of the architectural composition later in this book and we will focus in this chapter on the role of vegetation and water as emulation of paradise.

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6 There is much literature about this, as Concepción Castillo-Castillo's remarkable text. She states: "The Islamic Garden is the methaphor of Islamic Paradise, since it was made modelled on heavenly gardens. Earthly gardens are a metaphor of heavenly gardens, and their structure is the symbnolic structure of the Paradise garden" See: Castillo-Castillo C. (2013) "El jardín islámico y su simbolismo" In: *Cuadernos del CEMyR*, number 21, La laguna: Universidad de La Laguna.

7 In my doctoral thesis I wrote a chapter aboot this topic, entitled: "Jardines: un paraíso posible" See: Martínez Nespral, F. (2007) *Un Juego de espejos. Mudejarismo en la Arquitectura y el Habitar de la España de los Austrias a través de la mirada de los extranjeros*, Buenos Aires: Nobuko.

8 Jouvin, A. (1659) "Viaje de España y Portugal" In García Mercadal, J. (1999) *Viajes de extranjeros por España y Portugal*, Valladolid: Junta de Castilla y León.

Most of those patios have the presence of water in their design, frequently materialized by fountains, ponds, or cisterns. And, in the same way, the water in patios is accompanied by vegetation. So, the Western idea of "garden" and "patio" as two separated things it is not valid in the Arabic-inspired Iberian and Ibero-American context.[9] Patios work as private gardens surrounded by buildings that recreate the Qurʾānic idea of Paradise.

A good example in this sense is the convent "cloister-gardens" that we can find all over Ibero-America. Almost all of them followed a quadripartite model based on the Qurʾānic description of a paradise with four rivers. We have mentioned previously, talking about tiles, the Convents of San Francisco and Santo Domingo in Lima, and also San Francisco in Quito, but buildings of this type can be found all over the continent. For example, San Juan Evangelista in Culhuacan, San Nicolás de Tolentino in Actopan, San Miguel in Huejotzingo, Santo Domingo de Guzmán in Oaxtepec, San Andrés Apostol in Epazoyucan, and several others, mentioning only some famous Mexican cases.

The most frequent architectural solution is to place a central fountain and four irrigation ditches that divide the place in the shape of a cross and emulate the abovementioned four rivers. The four quarts of the space bordered by irrigation ditches-rivers, were in turn covered by plants, especially by species chosen due to the profusion of flowers and fruits that also emulated the idea of the ideal garden in the Qurʾānic paradise. Obviously, as these spaces were built now in a Christian context, the Qurʾānic references to paradise were adapted to the new religion. In this way, the scheme of four paths was interpreted as the Christian cross, and the division into four spaces was assimilated to the four evangelists, or the four cardinal virtues, the fountains and the water were connected to purity and baptism, and, in this way, any Islamic allegory was reinterpreted as a Christian one. But as I explained before in this book, the design criterion remained; meanwhile, the changes were focused on iconography and justifications of the shapes.

Other examples in the continent can be seen in the current United States in Californian Franciscan missions, such as the one in Santa Barbara, but there are cases of gardened backyards in religious buildings in all of Ibero-America, such as convent cloister patios that can be seen in, Santiago de Chile (Convent

9 I have also pointed out in my PhD dissertation how the characteristics of "patio" and garden are combined in the Iberian-Arab model. First, the gardens are surrounded by walls, to preserve the privacy to which we have already referred, for which they are spatially homologated to the "patios" and then the patios are usually "landscaped" that is to say with a profusion of plants and trees for which it is usual the denomination of "courtyard-garden" See: Martínez Nespral, F. (2007) Un Juego de espejos. Mudejarismo en la Arquitectura y el Habitar de la España de los Austrias a través de la mirada de los extranjeros, Buenos Aires: Nobuko.

FIGURE 24 Cloister-garden of Santo Domingo Convent, Lima
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

of San Francisco) and even Buenos Aires (Convent of La Merced, Las Catalinas, among others).

In all of them, water plays a key role, from the fountains it flows from, and the irrigation ditches it runs over, to ponds where it can be calmly observed.

Also, the sound of the flowing water it's a particularly important element that contributes to the creation of a special ambience that characterizes these patios.

Beyond the larger examples of religious architecture that are more abundant in the Viceregal period, there is also this type of garden with fountains and ponds in houses; one example of this is the Valdehoyos Marquis's Palace in Cartagena de Indias, Colombia.

But this feature is not only visible in convents, palaces, or other large structures, as I explained earlier, a building without a patio is almost unconceivable in Iberian American Architecture. So, in any house or private building, we will find at least one patio including a water device, flowers, and verdure growing from the soil or in flowerpots.

Uncountable examples of this can be found in each Ibero-American city throughout the Viceregal period (centuries 15th to 19th) in all of Ibero-America;

some have been conserved up to the present. As we said, this was the common and almost unique architectural typology across the region.

Later, during the independent period, from the first decades of the 19th century, a similar process took place, as I explained in previous chapters. New European fashions as Neoclassicism, Gothic Revival, or Academicism, impacted Ibero-American architecture and imposed new façade styles and ornaments, but the main Arabic-related design criteria from the Viceregal period remained alive.

A clear example in this sense was the Juan Manuel de Rosas' "mansion" in Palermo, Buenos Aires, a suburban residence of the mid-19th century with Italianate features but including a big pond and several water devices like cisterns in garden patios very similar in its architectural climate to the ones we describe for the Viceregal period.

Unfortunately, this building was demolished, and its gardens make up the current Palermo Park in Buenos Aires. At the end of the 20th century, some archaeological excavations and historical studies about the building and its environment were made. The existence of a pond was remarked.[10]

The Rosas 'mansion is also a good example to see the widespread use of this kind of space and how this architecture was appropriated by the entire society. It happened that Rosas was governor of Buenos Aires and leader of the federal party, one of the faced parties in the Argentine Civil War that took place during the first half of the 19th century. The leader of the opposite part (Unitarian Party) was Justo José de Urquiza, and his San José palace, located near Concepción del Uruguay, followed the same design criteria, a design characterized by Italianate facades but organized in the base of garden-patios with several kinds of water devices. These criteria were adopted transversally for the entire society, because, as I explained earlier in this book, all of them considered these ideas as their own.

So, we can see the importance of using water as a key factor in design that is present in any kind of building, independently of the location, the political period, or the ideology of the inhabitants.

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10 There is a much-related literature, specially written by Daniel Schavelzon, who made the excavations at Rosas' home; specifically in connection with the pond there is a remarkable text written by Ramos, J. and Schavelzon, D. (1992) "El estanque de Rosas y el baño de Manuelita en Palermo" in: "Revista del Instituto de Investigaciones Históricas Juan Manuel de Rosas", number 28, Buenos Aires: Instituto de Investigaciones Históricas J. M. de Rosas.

2 Water in the Beginning of the 20th-Century Architecture: Revivals, Exoticism, and Migrant Identities

From the first decades of the 20th century, the Ibero-American elites favored historicist architectural styles. There was a high number of revivals of past stylistic shapes, including Neoclassicism, Gothic Revival, Renaissance Revival, and Egyptian Revival, among several others. In this sense, there was included an Arab Revival, also known as Moorish Style, which intended to directly emulate Arabic architectural shapes. There was also a Spanish Revival, and a Spanish Colonial Revival (Also known as Neo-Colonial style in Ibero-America and as Mission Style in the United States), more frequently found in the Americas, where it indirectly replicated several aspects of Iberian Arabic architecture.

Both the Arab Revival, Spanish Revival, Spanish Viceregal, and Mission Style included fountains, irrigation ditches in backyards, and gardens with an evident Arab inspiration. This was reinforced because these styles were frequently applied to buildings used for leisure and entertainment[11] such as summer and garden houses, clubs, and buildings featured by the abundance of gardens and open spaces.

In this case, the connection with Arabic models is much more direct and evident, since these are buildings that deliberately try to resemble Arabic or Arabic Iberian models. I have already stated this in the previous chapter, but the book "Alhambras: arquitectura neoárabe en Latinoamérica"[12] has the most complete compilation of Arab Revival Architecture in Ibero-America up to the present.

A special example I want to mention because I have conducted several studies about it,[13] is the case of Argentinean writer Enrique Larreta and his Neo-Hispanic house. On the one side, his former permanent residence, currently the

11 This was because the exotic and orientalist vision of the Arab Culture related it particularly to leisure, sensuality, and luxury, for a complet developing of this topic see: Martínez Nespral, F. (ed.) (2009) *Arquitectura de inspiración andaluza en los espacios para el ocio. Argentina, siglo xx, number 225 of the series "Documentos de Trabajo"*, Buenos Aires: Universidad de Belgrano. And Martínez Nespral, F. (2016) "De la Sierra Morena a las sierras cordobesas. La arquitectura andaluza como símbolo de lo placentero en la obra de León Dourge" en: Betti, M. y Martínez Nespral, F. (eds) (2016) *Imágenes de España, reflejos de Argentina. Vínculos en la arquitectura y el arte*. Buenos Aires: Diseño Editora.

12 See: López Guzmán, R. y Gutiérrez Viñuales, R. (eds) (2017) *Alhambras: Arquitectura neoárabe en Latinoamérica*, Granada: Almed Ediciones.

13 The most recent publication is: Martínez Nespral, F. (2021) De la literatura a la arquitectura. Fantasía española de Larreta en Buenos Aires. In: *Quiroga. Revista de Patrimonio Iberoamericano*, Number 19, pp. 102–115.

FIGURE 25 Neo Arab fountain in the Larreta Museum garden, Buenos Aires
CREDIT: PHOTO BY ROBERTO FIADONE – OWN WORK, CC BY-SA 4.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=57064415

Buenos Aires Spanish Art Museum, whose garden has been studied in detail[14] and, on the other, the house of his "farm", or ranch called "Acelain", located in Tandil, Argentina, designed by the contemporary and famous neo-colonial architect, Martín Noel.

In both houses, the permanent residence in Buenos Aires and the ranch house, the presence of water plays a fundamental role in the design. Including several references to historic Spanish Arabic examples as the Alhambra or the Seville Royal Alcazar, materialized by fountains covered with Mudejar tiles, and ditches that cross the garden, highlighting axes and ponds in which the water surface reflects the buildings and gardens.

Besides gardens and backyards, there are other spaces where water plays a key role and that were frequently designed in Neo-Arab styles following the idea of water's importance in Arab Islamic culture.

14 See: Rosa, M (2009) "Paraísos en la tierra. Dos casos de estudio de jardines neo hispano musulmanes en Buenos Aires" in: Martínez Nespral, F. (ed) (2009) *Arquitectura de inspiración andaluza en los espacios para el ocio. Argentina, siglo XX, number 225 of the series "Documentos de Trabajo"*, Buenos Aires: Universidad de Belgrano.

These spaces are baths, either for individual use, built in private houses, or public baths, located in complex buildings designed for the use of water for body treatments, for medicinal or pleasure purposes.[15]

As an example of domestic baths, we can mention the one located in the abovementioned Enrique Larreta's house, whose main bathroom was designed in a pure Neo-Arab style with horseshoe arches to make divisions among the different areas of the room.

With regards to public baths, there were different buildings used for hydrotherapies as the one still known as "Turkish bath", very similar to those made in Arab *hamman*. An example is the "Arab Palace", a bathhouse in Buenos Aires that was built at the beginning of the 20th century, but it is not there any longer. These buildings are remarkably interesting because they combine the exotic view of the Arab culture and its bath traditions with modern and advanced therapies for those times. In this way, the buildings show this singular connection, including a combination of modern and Arabic feature in its design.

3 Islamicate Links about Water in Modern Ibero-American Architecture: a New Life for Old Ideas

Once the first decades of the 20th century had elapsed, some Ibero-American modernist architects intended to recover Iberian Arabic elements, either directly or indirectly, by using Viceregal architectural shapes and criteria.

A well-known case is the Mexican architect Luis Barragán, who stated he admired Ferdinand Bac's "*Jardins enchantes*".[16] The author was a European drawer whose garden drawings were clearly inspired by Ibero-Arabic culture. This work by Bac had an important impact on buildings projected by Barragán, where water plays a key role in design.[17]

15 There are a lot of examples of Arab bath all over the world, one of the most famous between the private bathrooms is the one that belonged to the Russian imperial family in the Tzarskoye-Selo Palace. About public facilities, the Vichy Catalan complex, located near Barcelona it's a good example of a building for water medical and relaxing therapies designed following the Arab Revival Style.

16 Ver: Bac, F (1925) *Jardins enchantes, un romancero*, París: Louis Connard Libraire Editeur

17 There is an extensive literature about Luis Barragán; one of the newest texts is: Loredo Cansino, R. (2021) "Más allá de las influencias. Luis Barragán y los procesos interculturales" in: *Anales del Instituto de Arte Americano e Investigaciones Estéticas*, number 51. Buenos Aires: IAA/FADU/UBA.

Even in Barragán's first works, there is a key role of water in fountains and ponds with clear Ibero-Arab references. Examples of this period are González Luna house (1928) and Cristo house (1929), both in Guadalajara, Mexico.

In later works, such as his own studio house in Mexico City (1947), the plan for "Los clubes" in Atizapán (1964) (See Figure 26), or Gilardi house (1976), Barragán uses water following Arabic design criteria that were present in Mexican Viceregal tradition, included in a Modernist aesthetic context.

There are fountains, ponds that reflect architecture, not only in gardens, backyards, or other outer spaces, but also in inner spaces, such as the fabulous swimming pool in Gilardi's house's dining room (See Figure 27).

The Salk Institute in San Diego, California, although it is not currently located in Ibero-America, and was not designed by a Ibero-American architect, is remarkable because its author Louis Kahn, followed Barragán's advice to include an irrigation ditch around the complex, with different fountains in their extremes, that conform a unique space directly related to Iberian Arabic tradition as regarding the use of water in architecture (See Figure 28).

In Barragán's work, there is a clear Iberian Arabic inspiration in the use of water in spaces, such as the exploitation of all possibilities, from spaces with still water, such as ponds, to other dynamic forms as irrigation ditches, fountains, and pumps.

Although in these examples, shapes are not mimetic, that is, they do not intend to literally imitate Arabic-origin examples. We can see inspiration in the Arabic architectural use of water, but the prismatic shapes and the volume are clearly modernist, and the brilliant colors are undoubtedly a legacy of the Mexican natives' cultures. So, in the entire work, we can see how it merges three different architectural traditions.

Another Ibero-American architect from the 20th century who has remarkably used water in connection with the Ibero-Arabic tradition is Rogelio Salmona, a Colombian. In his project for the Environmental Axis Jimenez Avenue in Bogotá, he uses the forced channelization of a river resulting from the city's expansion to create an axis with irrigation ditches and fountains that pump water from that river. All this linear design based on water has a clear reference to Iberian models, both from the peninsular and Viceregal Ibero-America (See Figure 29).

But, out of urban projects and talking now about houses and private residences, in the design for the illustrious guest house in Colombia (1978), located in Cartagena de Indias, Salmona had included ponds and fountains clearly related to the Alhambra. This work became one of the most emblematic projects of Ibero-American architecture in the eighties, and its ideas were reapplied in many works made by others, as it happened with Barragán's works.

FIGURE 26 Lovers' fountain in "Los clubes", Atizapán, México
CREDIT A WORK BY LUIS BARRAGÁN. PHOTO BY ESPARTA PALMA, OWN WORK CC BY 2.0 HTTPS://WWW.FLICKR.COM/PHOTOS/ESPARTA/3573608700

FIGURE 27 Swimming pool in Gilardi house, Mexico City, Luis Barragán
CREDIT: PHOTO BY ULISES00 – OWN WORK, PUBLIC DOMAIN, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=5384676

FIGURE 28 Salk Institute, San Diego, California, designed by Louis Kahn
CREDIT: PHOTO BY CODERA23 – OWN WORK, CC BY-SA 4.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=81787561

There are also ponds in other buildings designed by Salmona, like the Virgilio Barco Library (2001), located in Bogotá. We can summarize that the use of water is fundamental in Salmona's works, always inspired by the traditional Colombian architecture and the Viceregal period features, based on Arabic design criteria.

I have already mentioned it in the chapter about historiography, but an especially useful source for this topic is Ana María Apud's[18] dissertation about Islamic components in three Ibero-American architects' works, the abovementioned Barragán and Salmona, and the Uruguayan Julio Vilamajó.

Vilamajó, who during his youth traveled to Spain and was very influenced by Iberian architecture, used in the design of his own house located in Montevideo several references to the Arabic Islamic gardens and particularly

18 See: Apud, A. (2016) *Sincretismo en la arquitectura moderna latinoamericana: componentes islámicos en la obra de tres arquitectos: Julio Villamajó, Luis Barragán, Rogelio Salmona, a doctoral thesis* submitted to Universidad Pablo Olavide, Sevilla, available in: https://rio.upo.es/xmlui/handle/10433/2883.

FIGURE 29 Environmental Axis Jimenez Avenue, Bogotá by Rogelio Salmona
CREDIT: PHOTO BY FELIPE RESTREPO ACOSTA – HIS OWN WORK, CC BY-SA 3.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=14638003

to the use of water. The house combines a clearly modernist prismatic volume with asymmetrical windows with an Arabic-inspired garden including a fountain and a pond.[19]

The key role of water in architecture and its connections with Arab Islamic culture is a current phenomenon in Ibero-American architecture, as mid-century modern masters use water in their projects following the Arab design criteria. In the same way, several contemporary architects are still developing this topic, both by recycling old Viceregal buildings and making new buildings.

For example, Argentinean architect Miguel Ángel Roca developed a geometrical outline of rotated squares related to the eight-point star widely used in Islamic art, and a number of ponds and fountains in nodal points of geometrical structure in his project for the redesign of Spain Square in Córdoba, Argentina, finished in 2023.[20]

19 For a complete study of this house and its connections to mudejar legacy see: Kornecki, Sylvia (2022) "La arquitectura de Julio Vilamajó: entre lo mudéjar y la modernidad" in *Ibero-American and Latinx Visual Culture*, Volume 4, issue 3, pp. 106–112.

20 More information about this recent Project can be found in the mass media: https://www.clarin.com/arq/tunel-centro-cultural-subsuelos-plaza-espana_0_CN2SiomOK.html.

The allusion to the connection between water and Islamicate culture is multiple here. It is a memorial park that honors Spain and the Spanish immigration in Argentina, which enabled these connections between Ibero-America and the Islamic world. Then this connection became more evident by designing the eight-point star outline, and even more by including fountains and ponds. All project ideas coincide with that.

Another example could be the Mexican architect Ricardo Legorreta, a follower of the master Luis Barragán. Legorreta designed dozens of buildings not only in Mexico but all over the world based on the legacy of Barragan's architecture. So, his projects, even large structures like hotels, museums, and corporate buildings, water is an essential part as it was in Barragán's ones.

For example, in the MARCO Museum, Monterrey, México (1991), Legorreta designed a kind of pond-patio, a space in the core of the building that works like a patio but is periodically filled with water, becoming a pond.

Parallelly, in the fantastic house in Kona, Hawaii (2005), multiple ponds and pools characterize the entire design, including a master suite apparently floating on a water mirror.

We can say that Legorreta brought Ibero-American Architecture, and its Arab component, to every corner of the world.

Finally, I want to remark that water, as an essential Arab component of the Ibero-American culture, may have a permanent presence as a design criterion in Ibero-American architecture, which was fully developed by several designers, from Viceregal irrigation ditches, cisterns, fountains, and ponds to their present reinterpretations.

CHAPTER 6

Wood and Clay: Iberian-Arabic Construction Techniques and Their Role in Ibero-America from the Viceregal Period to the Present

1 "Tabiques" and "Crujías" Basis of a Composition Design System

The building technology brought by Iberian conquerors to the Americas, which is frequently found even today, is based fundamentally on clay[1] and wood. Clay was used for walls, either raw in "tapia" walls, sun-dried in *adobes*, or baked as bricks or tiles. And wood was selected for windows, doors, and roof covers.

Both elements, clay and wood, although used since very old times by different cultures all over the world, arrived in the Americas in the form of shapes and techniques created in the Iberian Peninsula from its Arabization and Islamization in the Middle Ages. The Iberian Middle Ages work in this way as a bridge that connects the Arab culture construction know-how and Ibero-America. I will develop this topic in the current chapter.

On the contrary, in the Americas, a large continent characterized by different geographies and climates, previously to the European conquest, it was a lot of different construction techniques. In the Andean region (Mexica or Inka societies), stone was preferred for walls and even for roofs, so we can see great pyramids and temples made with monumental stones. But in the Caribbean and other tropical regions as current Paraguay or Brazil (for example, the Guarani culture), wood and vegetable fibers were used to construct thin and light partition walls; meanwhile, the structure of the building was basically based on wood columns.

Back into the Iberian Arabic system brought by the conquerors, with regards to the walls, the Spanish word "tapia" describes a wall construction system based on tamped raw soil, which reached such an extensive and popular use that the word "tapia" itself is used in several Ibero-American regions to name any kind of wall.

1 In the Iberian Peninsula there are places characterized by the abundance of stone, but in the Americas the situation is not the same, stones with the necessary resistance for constructions can be find in some places, as de Andean region, but not everywhere. Also, constructions made of brick are cheaper and faster than the ones based on stone, so, in several cases, Iberian conquerors preferred to use bricks, adobes or any kind of earth walls.

 | DOI:10.1163/9789004756557_008

In this *tapia* construction system, a formwork is used, which has horizontal wooden tables that mark both extremes of the thickness desired for the wall; once the cast is made, raw clay is poured between the tables and is tamped until reaching the formwork height. Then the tables are slid vertically upwards to form a new section, and so the wall is raised.

The use of this system in the Viceregal period is evidenced in several sources, among them one of the most important is Jesuit Florián Paucke's drawings, which clearly show its application in the Jesuit Guarani missions located between Argentina, Paraguay, and Brazil.[2]

This system had been extensively used during the Islamization of the Iberian Peninsula, and this is evidenced in many buildings as the iconic Granada's Alhambra. Arab societies valued this construction method because it was cheap, easy to build, and fast.[3] Then it can be covered with tiles, plaster, or other materials in order to obtain the desired appearance.

It's clear that this construction technique had been used before and then spread throughout the world, but it's also certain that the immediate precedent to the conquest and colonization of the Americas is the Iberian Arabic use of "tapia". So, we received it from the closest link, the Arab Spain.

Following the linguistic approach that I proposed for this book, I have to point out that the Spanish word "tabique" which defines the thinner wall that divides two rooms, comes from the Arabic *tašbīk*,[4] the same as the word "albañil", which names the worker in charge of building walls, that also comes from Arab *bannā'*,[5] so it can be ensured that the Iberian and Ibero-American Viceregal wall construction tradition has strong Arabic roots still visible in the names of the different architectural elements and people involved in the construction process.

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2 Florian Paucke was a Polish Jesuit missionary born at the beginning of the 18th century, who lived in South America by mid-18th century. He wrote a manuscript that was translated to Spanish by Edmundo Wernicke and published in 1942. The text has many images that clearly evidence life and habits of that time. See: Paucke, F. (1767 [1942]) *Hacia allá y para acá. Una estadía entre los indios mocovíes, 1749–1767*. (Spanish translation by Edmundo Wernicke), Universidad Nacional de Tucumán.

3 One of the characteristics of Islamic architecture is the idea that a faster and cheaper construction is better. The Islamic idea of decoration that cover the entire walls with tiles, plaster ornamentations and other qualifications of the surface, engage perfectly with simple clay walls that will be invisible when were covered by the decorations.

4 See Diccionario de la Lengua Española, Real Academia Española de la Lengua, https://dle.rae.es/tabique?m=form, checked on 03/27/2022.

5 See Diccionario de la Lengua Española, Real Academia Española de la Lengua, https://dle.rae.es/alba%C3%B1il?m=form, checked on 03/27/2022.

The same happened to the architects or master builders in charge of works that were called "alarifes",[6] a word derived from Arabic *al-ʿārif*, which means "expert",[7] so we can see how almost all the aspects of the construction process and the people in charge of the work[8] has a direct relationship with the Arab culture.

This is because Medieval Christian Iberian culture was very focused on two activities: the military and the Church,[9] so the knowledge of other works and activities came from the Iberian Arab culture and was transferred to the Christian world without significant changes.[10]

By means of this construction system based on walls, "crujías" were made; that is, a Spanish word related to the space with longitudinal proportions between two bearing walls, between two rows of pillars, or between a combination of both, walls and pillars.

The width of these *crujías* is defined by the structural width between columns or walls that can be saved with wooden roofs, so they tend to be relatively narrow and define a sequential row of small rooms, or, when more surface is required, rectangular spaces of elongated proportions.

The number, size, and layout of these rectangular *crujías* depend on each building's needs, the available budget, and the ground size, but tend to be arranged to create inner empty spaces between one and the others that let

6 "Alarife", an Arabic originated word, was the preferred name in Spanish societies for the head of a design and construction work instead of "Architect", a Greek word. This shows the huge impact of Arab culture in the topic. The word "Architect" was slowly incorporated since European Renaissance influence became more visible.

7 See: Diccionario de la Lengua Española, Real Academia Española de la Lengua, https://dle.rae.es/alarife?m=form, consult, checked on 03/27/2022.

8 As I mentioned before, Hamurabi Noufouri and me wrote a Dictionary including more than four hundred Spanish words with Arabic origin, only selecting those related to architecture, design, and construction. See: Noufouri, H. and Martínez Nespral, F. (1994) *El diccionario del alarife*. Buenos Aires: Fundación Los Cedros.

9 There is a story in my family that gives a full idea about the importance of this fact based on its validity. My Spanish great-grandfather wanted to study Chemistry at the end of the 19th century. His parents told him that it was not an appropriate profession for him, a descendant of an old Christian family, and that he had to choose between the military, the church or, at most, a career in law. As a result, he emigrated to Argentina, where he studied Chemistry at the University of Buenos Aires, and gave origin to the Argentinean family branch.

10 As I have already mentioned in previous chapters, Hamurabi Noufouri and me wrote a dictionary of Arabic-origin Spanish words related to architecture, design, and construction, and we could verify that there are more than 400 words of this origin, that make up the most significant knowledge about Iberian construction in the Middle Ages and early Modernity. See: Martínez Nespral, F. and Noufouri, H. (1994) *El Diccionario del Alarife*. Buenos Aires: Los Cedros.

light and air in. These spaces are named "patios" and are the cores around which buildings are constructed.

In this way, a building in Iberian or Ibero-American societies is composed by a series of rectangular and elongated "crujías" that house the inner rooms and surrounding open patios. This system of plan composition generates spaces with private expansion, ventilation, and illumination. This is directly related to the importance of privacy, which I will develop later in this book.

In terms of construction techniques, the most common solution is that the crujías wall was made of clay, sometimes in tapias, or with sun-dried *adobes*, or with cooked bricks.

On the contrary, the use of stone was limited to the places where it was available and particularly for columns, reinforcements in the corners of the buildings, or façade decorations.

In the tropical regions, where wood is abundant in the forest, the main structural pieces were made in wood, but, even in these cases, clay was used for constructing walls that guarantee the privacy of the living areas. In this way, crujías were also present and defined an identical composition of the plan. The difference is focused on the opportunity to take advantage of a regional, cheap, and available material for structural uses. One of my masters, the Slovenian-Argentinean Bozidar "Darko" Sustersic, explained this tropical system clearly[11] and, following his explanation, I presented a paper about its connections with Arab legacy and the fantastic intercultural process that emerged from the conjunction of Native American and Iberian Arabic knowledge.[12] I will develop this topic later in this book.

In other regions, such as the Andes, we can see a combination of Inka stone constructions and Spanish clay imprints. This is very frequent in Peru, but particularly in Cusco, where ancient Inka constructions were appropriated by the Spanish conquerors, building clay walls over the stone basements.

As we can see, the conquest and colonization implied a giant hybridization process that involved several different native cultures, geographies, climates, and construction knowledge, but the common denominator in this complex equation is that the Iberian contribution to the construction system was particularly focused on the use of clay for the walls and the organization of the

11 See: Sustersic, Bozidar Darko (1999) *Templos Jesuítico-Guaraníes*. Facultad de Filosofía y Letras: Universidad de Buenos Aires.

12 See: Martínez Nespral, Fernando (2021) "Lessons from the jungle and the desert. Native and Mudejar bases of tropical colonial churches in the Americas" presented at the Ibero-American Studies Conference.

building plan by crujías and patios, in a way undoubtedly based on the Spanish Arabic legacy. Any of the convents that we mentioned before talking about tiles and water work perfectly as an exemplification of this idea (San Francisco and Santo Domingo in Lima and Quito, San Francisco in Santiago, San Nicolás in Actopan, La Merced in Buenos Aires, among several others) Also houses and palaces are designed in the crujías and patio system (Torre Tagle palace for example).

I will explain about patios and their social and spatial implications in the next chapter, so I won't detail anything more about them here.

2 "Carpintería de lo blanco" Geometry as the Base of a Ceiling System

Once the wall structure of buildings is defined, roofs are made of wood. The techniques for building wooden roofs, known in Spanish as "carpintería de lo blanco" have a clearly Arabic origin. The most widely spread roofing system in the Iberian Peninsula for those times was certainly the "carpintería de lo blanco" we can find examples everywhere, from the great and monumental buildings of the capitals and main cities to small villages and rural constructions.

This kind of roof is visible everywhere, but we can mention here only a few examples to bring an idea of the system: The upper cloister of the convent of San Juan de los Reyes, Toledo – Main Hall, University of Alacalá de Henares – Cathedral of Teruel, Royal Alcazar, Seville, among many others.

This system was widely developed and efficiently spread, since there was a specific bibliography that explained to carpenters how to build this type of roof. The main example of these manuals is "Breve compendio de la carpintería de lo blanco y tratado de alarifes" by Diego López de Arenas.[13]

López de Arenas' book was very much available in the Americas and worked as a mechanism to train and guide carpenters that built roofs, that's why the solutions it proposed became "the" solutions used throughout the continent during all the Viceregal period; they were even applied to popular architectures up to the beginning of 20th century with the start of Modernity and the use of new techniques based on steel or reinforced concrete.

13 López de Arenas, D. (1633) Breve compendio de la carpintería de lo blanco y tratado de *alarifes*, Seville.

This topic has been and still is widely studied; there are authors such as Enrique Nuere[14] and Joaquín García Nistal[15] who work on it, and there is even an Interpretation Center where training courses are given to current carpenters and art historians about this technology. Complete general information can be found in Albanécar[16] website, that actively helps to the dissemination of this topic.

I want to highlight, especially at this point, the contemporary studies of a young Ibero-American researcher, the Chilean Francisco Mamani Fuentes, who has focused on the study of construction techniques, particularly in the carpintería de lo blanco in Ibero-America. His PhD dissertation, entitled "Enlazada con grande artificio. La charpenterie de lo blanco dans l'architecture religieuse de la vice-royauté du Pérou aux XVI^{e} et XVII^{e} siècles" was presented in 2022, constituting surely the most recent contribution to the topic.[17]

The "carpintería de lo blanco" (white carpentry) system is called this way because the type of wood most appropriate for roofs, since it enables having bigger and longer pieces, is clear, such as pine wood, so it was named white for the clear wood used.

Basically, by applying the extensive Arabic study of geometry, this technology is based on building geometric structures that achieve a greater width between columns, and that are stable at the same time, on the basis of the geometrical stability given by multiple polygonal intersections generated in a complex net of small beams.

These systems create interlacing between different pieces of wood based on geometric patterns, which are generally polygonal and star-shaped, typical of the Arab culture, the same idea that we saw talking about tiles and lattices. This requires an absolute dominion of geometry and its possibilities.

There are a lot of examples of this type of roof in all of Ibero-America; some of the most remarkable can be found in Quito, Ecuador, but, as I said previously, until the arrival of steel or concrete, it was the most widespread system, so we can see works everywhere.

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14 Nuere has an extensive bibliography, among them are: Nuere, E. (1985) *La carpintería de lo blanco. Lectura dibujada del primer manuscrito de López de Arenas.* Madrid: Ministerio de Cultura.

15 See: García Nistal, J. (2007) *La carpintería de armar en la provincia de León* (*siglos XIV–XVIII*), León: Universidad de León.

16 Ver: https://www.albanecar.es/que-es-albanecar/ checked on 03/27/2022.

17 See: Mamani Fuentes, Francisco (2022) "Enlazada con grande artificio. La charpenterie de lo blanco dans l'architecture religieuse de la vice-royauté du Pérou aux XVI^{e} et XVII^{e} siècles" PhD dissetarion presented at the École Normale Supérieure, Paris.

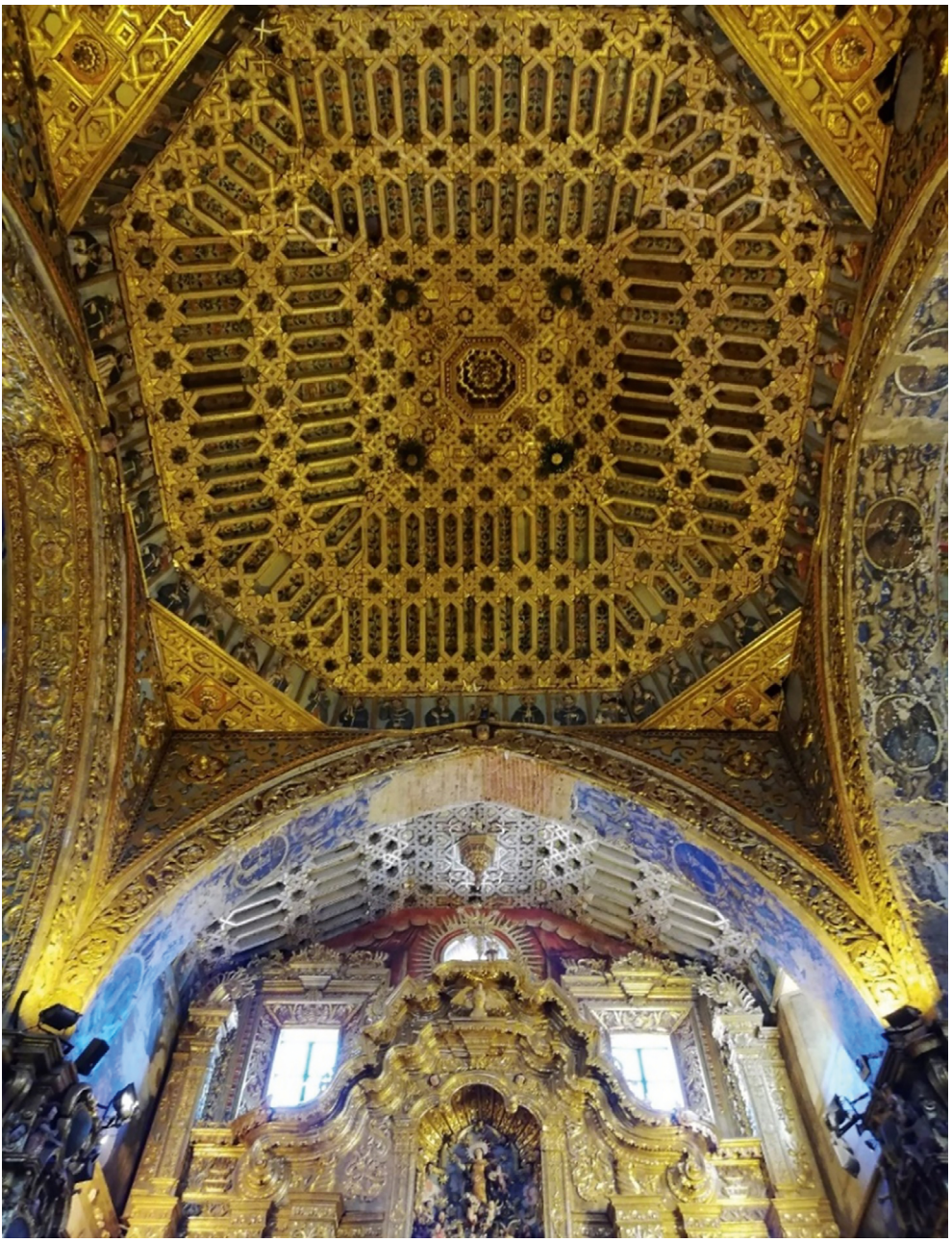

FIGURE 30 San Francisco church, Quito, Ecuador. We can see the geometrical and star-shaped decorations of the ceiling.
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

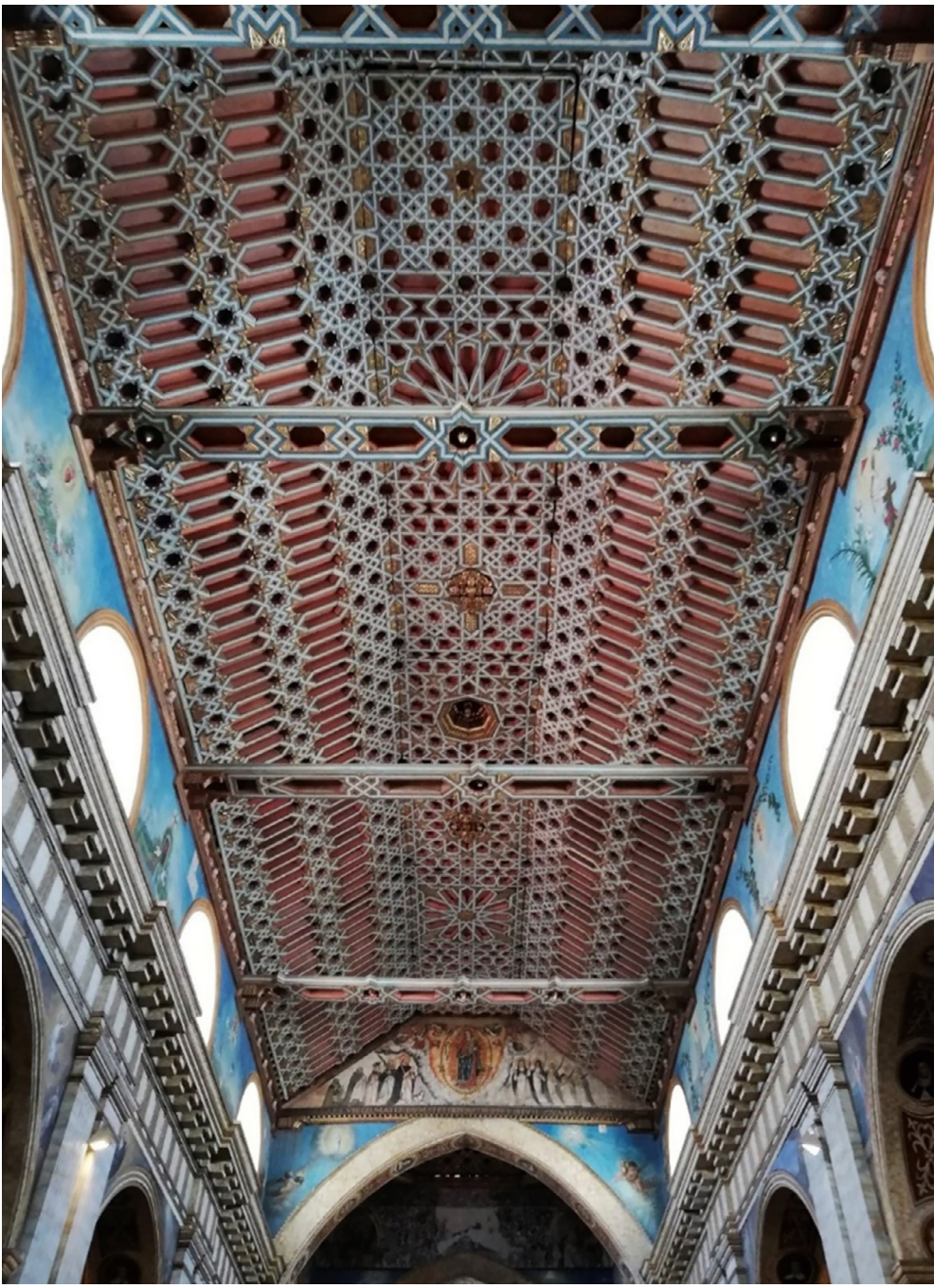

FIGURE 31 Santo Domingo church, Quito, Ecuador
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

In this way, the system of wall crujías and wooden roofs based on "carpintería de lo blanco" that was organized around backyards is practically the only construction form in all the Iberian world (including Ibero-America) up to the end of the 19th century, with the only exception of some buildings that were externally and strongly influenced by European Baroque, for example.

In the second half of the 20th century, with the arrival of new materials and technology such as steel, and later reinforced concrete, the abovementioned system was gradually replaced by these others, which permitted achieving a larger clear span between columns and other spatial possibilities. But even nowadays, that system has not been fully discarded, and many contemporary Ibero-American architects still explore the possibilities given by some elements described hereinabove.

Tapia walls are still admired because of their remarkable capacity for thermal isolation, their economic construction, and their exceptionally low environmental impact. In this sense, the Kaiser Studio designed a house in Bolivia entirely constructed using the tapia system with a contemporary aesthetic.[18]

The use of bricks and experimentations with their expressive potential have been widely applied by Ibero-American architects, from Mexican Carlos Mijares and the aforementioned Colombian Rogelio Salmona up to the most recent ones, such as Paraguayan Solano Benítez and Argentinean Diego Arraigada and Horacio Campodonico, inter alia.

Mijares made in his works a particular use of bricks based on geometrical patterns and rotated squares that clearly recalls the eight-pointed star typical in the Arab culture. His Chapel in Jungapeo, Mexico it's a remarkable example, but the idea of stars made using bricks is a common denominator in his entire work.

Regarding the wooden roofs, interlacing and star-shaped forms from "carpintería de lo blanco" are no longer used in contemporary works, because were replaced by easier solutions based on modern materials. But buildings that combine these materials with the clay wall system are still projected and play even nowadays a fundamental role in Ibero-American architecture. An example of this is Italian-Argentinean architect Giancarlo Puppo's "El Arca" house, in Maldonado, Uruguay.

18 See: https://www.archdaily.cl/cl/943431/casa-experimental-de-tapial-estudio-de-arquitectura-y-planificacion-kaiser, Accessed on June 20th 2023.

FIGURE 32 El Arca House, Maldonado, Uruguay, by the architect Giancarlo Puppo
CREDIT: PHOTOGRAPH TAKEN BY GIANCARLO PUPPO – "GIANCARLO PUPPO – UNA ARQUITECTURA DE LA PLURALIDAD" SOMOSUR XIX – ESCALA, COLOMBIA, MÉXICO, PUERTO RICO AND PANAMÁ – 2003 – JULIO CACCIATORE, HUMBERTO ELIASH Y ADRIANA IRIGOYEN'S INTRODUCTION. PAG.158, CC BY-SA 3.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP ?CURID=5908220

CHAPTER 7

Zaguanes and Patios: the Sacred Value of Privacy in Arab Culture and Its Continuity as a Design Criterion in Ibero-America

1 Houses as Convents: an Unsuspected Arab Component in Ibero-American Architecture

The Arabic language is based on a root and declination logic, so different words derived from the same root are connected by a common meaning. An example of this are the words *haram* and *harem*, both derived from the same root. *Haram* means "forbidden"[1] and *harem* refers to the most private part of a house.[2]

This linguistic connection clearly shows that in the Arab-Islamic culture.[3] The private parts of a house are related to something forbidden, which explains to us that society gives fundamental importance to keeping privacy.

This is a base for the entire society, and its consequences can be seen in several aspects. Talking about clothes, the use of the veil is another expression of the same idea that works in a comparable way than lattices. I explained this idea in chapter 4.

However, when these requirements for prominent levels of privacy should be solved by architecture, several design actions are meant to create a space distribution and a wide range of architectonic devices that can ensure such a high standard of privacy.

In this way, the plan organization based on "patios," with rooms that ventilate to said inner "patio", and, thus, outer walls with few or no openings to the

1 *Haram*: in Islam, a sacred place or territory … *Ḥarams* are "forbidden" areas set apart from the mundane human landscape by codes for ritualized behavior. See: https://www.britannica.com/topic/haram.

2 *Harem*, Arabic *ḥarīm*, in Muslim countries, the part of a house set apart for the women of the family. See: https://www.britannica.com/topic/harem.

3 This importance of privacy was a common denominator for all de cultures of ancient Mediterranean, since pharaonic Egypt and Mesopotamia, and later in Greece and the Roman empire. All those cultures designed their houses based on patios, and the expansion and ventilation of the rooms were private because took place in interior and private areas, patios and gardens, meanwhile exterior facades were mostly blind, simple walls without windows or with only a few and small ones. This privacy legacy was continued by the Arab culture, for which this has a fundamental role, even more than in the previous Mediterranean cultures.

 | DOI:10.1163/9789004756557_009

urban space at all, is a basic element of the architectonic solutions that seek privacy. This system was not only used by the Arab Islamic culture; we can see examples in different societies across global history, but, as happened in other cases previously explained, the version received in Ibero-America is the one brought by the Iberian conquerors, the Arabic solution.

In an absolutely opposite way to the Western modern model of a building as an autonomous compact object located in the middle of the ground, with windows in the outer perimeter, in the Arab culture buildings are conceived as a built dispersed mass that contours the perimeter and leaves a free space and windows oriented to the center of the building and then guaranteeing the keeping of privacy.

Another architectural resource for privacy is the "zaguanes", intermediate spaces that serve as access to the building and have double doors, so that when one is open, the other remains closed, and so privacy "filtrations" are reduced (this is similar to "cold entrances" very frequent in Northern European architecture made to avoid losing inner heating in cold weather areas) Zaguanes can be seen in any Ibero-American houses of the Viceregal period and even during the nineteenth century or until de first decades of the twentieth. The patio that occupies a central space of the ground is connected to the street entrance by the zaguan that also works as a corridor connecting (and separating at the same time) the public urban space from the interior private and sacred inner space.

All of the houses we mentioned before, such as the Torre Tagle Palace in Lima, have zaguanes; other examples could be the Casa Colorada in Santiago, Chili, or the Sobremonte house in Cordoba, Argentina. But, despite those examples, every home had a zaguan.

Zaguanes are a common solution in Iberian and Ibero-American architecture, even some of them (especially those located in the Iberian Peninsula) were designed in a non-linear way, interposing a wall or a ninety-degree circulation in order to avoid the view from outside to inside, as is usual in the public restrooms design.

Asymmetric privacy filters, such as lattices, are also a useful strategy to keep privacy in buildings. We have developed this topic in chapter 4, so we will not abound in this here.

As I mentioned earlier, for the topics developed in previous chapters, all these design criteria that feature the Arab culture remained in Iberian architecture; conquerors brought them to Ibero-America, where they were adopted and remained applicable until the end of the 19th century and the beginning of the twentieth.

In Ibero-American Viceregal cities, as well as the Iberian and the Arab ones, urban volumes are like a solid body pierced by central "patios" from different buildings, and streets are like "gashes", bordered by the continuous walls of façades.

In this scheme, vegetation and gardens appear from the center of blocks and can be perceived thanks to the emerging treetops, but can never be seen directly from the street. Almost the entire life of the building happened inside, protected from the external views.

An example that shows the high privacy standards in Iberian and Ibero-American houses is that there are no significant differences between the plan and the architectural solutions of a religious convent and the plant of a private house. Both are built with the same system of "patios" and "zaguanes." This means that the social requirements of privacy for a common house are so high that they are the same as the ones for a cloistered convent.

Evidence of this is that there are many buildings originally designed as houses that later on became convents, such as the cases of Las Descalzas Reales in Madrid or Las Teresas in Córdoba, Argentina, and, in turn, other buildings constructed as convents may be reconverted with minor changes into houses or hotels. This would be impossible in the Central European vision of space, where convents have similar cloister shapes but houses, on the contrary, are compact volumes that look outside and have a full connection with the urban space.[4]

This idea of plan organization through "patios" and "zaguanes," together with other architectonic resources like lattices used to ensure privacy, represents a design criterion, as previously explained hereinabove; that is, a number of ideas about how architecture must be, which is fully independent from ornamental styles and fashions.

Buildings in Ibero-America from the colonization and conquest periods until well into the 19th century and the beginning of the twentieth were constructed on the basis of these premises, beyond the rise of subsequent styles such as Renaissance, Baroque, Neoclassicism and even other "neos" as Gothic or Egyptian Revivals that arrived in Ibero-America and influenced the local architecture, mainly in façades ornamentations, but almost nothing in plan organization.

4 A detailed development of the topic can be searched in the book with which I ended my PhD investigation. See: Martínez Nespral, F. (2007) *Un juego de espejos. Rasgos mudéjares de la arquitectura y el habitar en la España de los Austrias* (siglos XVI–XVII), Buenos Aires: Nobuko.

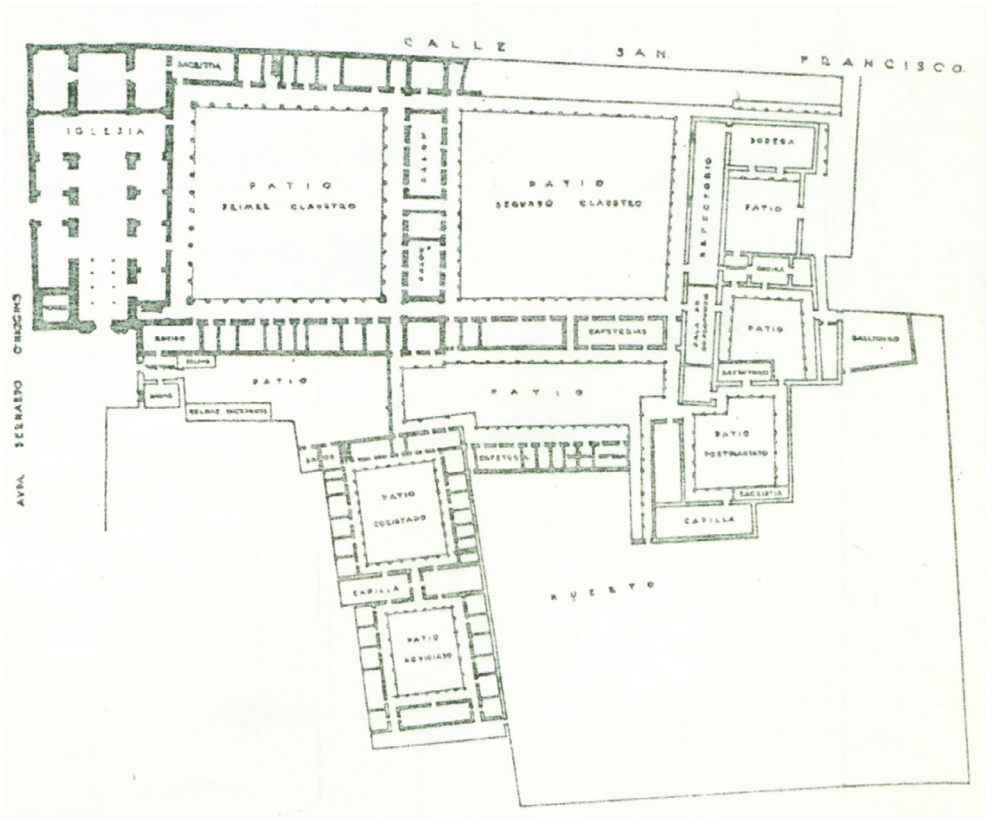

FIGURE 33 Plan of a convent. We can see here the crujías and the patios, and how any room is open to the patios but not to the public space.
CREDIT: PHOTO BY MARIA IGNACIA MARIN – OWN WORK, CC BY-SA 3.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=26225721

In this way, buildings classified by historiography as Baroque or Neoclassic due to their façade appearance represent a continuity of Iberian-Arabic design criteria, because of the shape of their plans and the way users inhabited spaces.

This is an example of the hereinabove explained idea that not only buildings with visible Arabic features or stylemas can be related to Arab culture, but also that, by means of the concept of "design criteria", the Ibero-American works related to the Arabic have grown exponentially, and represent almost all the examples in certain periods, as the Viceregal, and most of the cases during the independent period in the 19th century.

This is due to the fact that meanwhile, the "patio" scheme represented a unique model applicable to almost all architectonic typologies (except churches and some other particular cases), almost all buildings from Ibero-American architecture are solved in this way, not only houses (from modest

ones to most important palaces) but also hospitals, schools, government buildings, commercial buildings, convents, military facilities, hotels, and many other uncountable examples.

2 Western Modernity and Open Facades: an Increasing Influence

The Arab design criteria that I am developing in this book are not fixed or immutable; they have changed over time and have been affected by several external influences and contributions. Every social process is intercultural[5] and it's not only affected but defined by multiple cultural crossings, and this case is not an exception.

One example is the importance of privacy in architecture, which, as long as it has an Iberian-Arabic origin and does not belong to Western architectural essentials, "was diluting" gradually over time in Ibero-American architecture; meanwhile, other European influences advanced.

The increasing importance of façade design and the search for greater permeability between buildings and the urban space, which were constants in the different European architectural styles over time,[6] was widely influenced and finally pervaded in Ibero-American architecture.

Together with subsequent European styles and their ornamental shapes, an increasing willingness to open more and bigger windows in outer building façades arrived in Ibero-America. Viceregal façades without windows became considered for the new generations that tried to emulate Western European Architecture as old or out of fashion. They sought to order said windows according to rhythms and modulations based on the outer façade geometry, symmetries, and external ornamentations typical of the Western façade design system.

That is why a generally efficient indicator to date the age of an Ibero-American building is the amount, proportion, and location of windows in its outer façades. In older Viceregal buildings, where medieval Iberian-Arab

5 I developed this topic in a recent text. See: Martínez Nespral, F. y Perrotti Poggio, J. (2020) "Interculturalidad y diseño, apuntes de un desafío pedagógico", In: *Proceedings of Edumeet Conference*, Madrid: Universidad Politécnica Nacional.

6 Since Renaissance, the façade project became a key factor in European architecture. Several examples as the Ospedale degli Innocenti in Florence by Filippo Brunelleschi or the Western façade designs for the Louvre in Paris, are basically façade projects designed to be superimposed over a previous building. We can see in these cases how the façade occupies (and still nowadays occupies) a main role in Western architecture. So, the impact of this idea in societies like the Iberian or Ibero-American ones, characterized by a fully oriented interior design in contrast with simple and not open facades, was enormous.

FIGURE 34 Outside, on Avenida Independencia Avenue, of the Santa Casa de Ejercicios Espirituales CREDIT: PHOTO BY AOVERONA – HIS OWN WORK, CC BY-SA 4.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=85928415

modalities transmitted during the conquest and colonization were applicable, there were a few outer windows, generally small and at located at a height, so that those who walk in the street could not see the interior space of the building. On the contrary, in later buildings, where the European influence was more evident, there were more and bigger windows connecting interior and exterior spaces, and a façade design that was missing in previous buildings became a primary element in the conception of the building.

An example of this idea is the Santa Casa de Ejercicios Espirituales, built in Buenos Aires in the 18th century, which today is one of the oldest buildings in the city; as can be observed in Figure 34, there is a limited number of windows at an unreachable height for those who are outside the building.

This is even more evident in buildings from the 16th or 17th centuries, when the Arab criteria from the Middle Ages were closer. We can find several examples in the big capitals of the Iberian empire in the Americas, the facades of old convents and palaces in México, Quito, or Lima are characterized by this kind of design.

On the contrary, if we focus on examples like the Anasagasti House, built in the latter half of the nineteenth century as a bourgeois residence and later transformed into the headquarters of the National Museum of Costume History (also located in Buenos Aires, like the Casa de Ejercicios), we can analyze a building constructed in the second half of the 19th century, with much

FIGURE 35 Anasagasti house in Buenos Aires (Later the headquarters of the National Museum of Costume History), Buenos Aires, Argentina
CREDIT: PHOTO BY FLORENCIA AMADO SILVERO

bigger windows, located at a height that enables a visual connection between the interior of the house and the street. These windows are placed following a rhythm and proportions conceived for the façade design as a goal in itself (See Figure 35).

We can see in the façade of this building other Italianate features as Ionic pilasters, friezes, and balustrades, among other ornaments, that clearly refer to classical European architecture. This shows how the European influence modified the traditional Viceregal conception of Ibero-American Architecture, opening the façade to the public space.

But, in spite of the greater façade permeability, there still remains a design Arab criterion by which the house volume occupies the lot perimeter, meanwhile, the free space stays in the middle and makes up a private "patio", as well as a "zaguan", and its double door serves as a submarine decompression chamber that buffers the differences between the urban public space and the private inner space. This shows how the intercultural process affects the building

conception in different and parallel ways. Some criteria remain, meanwhile others have changed.

Since the end of the 19th century, and especially during the 20th century, the influences of Western architecture, evidenced in the presence of buildings with a free perimeter conceived as a regularly compact volume and oriented to the outside, have been increasingly seen in Ibero-America. Buildings designed in the late 19th century could frequently include a perimetral garden surrounding a compact central volume; in those cases, the change was deeper.

This did not prevent that, due to the colonial lot shape, with a limited front to the street and great depth, different architectonic solutions continued adopting the "patio" system as the organizer of the architectonic conception.[7]

During this period, there were also different architectonic revivals, and when the imitated style was Ibero-Arabic, these "patios" or "zaguanes" were kept, ensuring fidelity to the same imitation. A good example in this sense is Enrique Larreta's residence in Buenos Aires, now the house of the Buenos Aires' Spanish Art Museum, but almost all Spanish revival, Arab Revival, or Spanish Colonial Revivals across the continent are characterized by the inclusion of Arab inspired patios.[8]

An evident example of this is that, within the multiple stylistic varieties adopted by academician eclecticism, by which each architectonic function or program was associated with certain style that ideally solved that type of building, "patios" were frequently designed in Spanish revival style, even in buildings whose façades or other inner parts had been solved with other styles, showing how the association of the idea of patio itself and the Spanish or Arabic or Viceregal revival styles remain valid in several cases even nowadays.[9]

3 Modernity as a Way Back to the Origin: Contemporary Experimentations

As we have mentioned in previous chapters, after the second half of the 20th century, different Ibero-American architects questioned the so-called

7 This is visible even nowadays, because the shape of the lots is the same, and even when and old building is demolished, the new one have to adopt a patio based design in order to adapt the new project to the shape of the lot.

8 An extraordinary survey of Arab Revival cases can be found in: López Guzmán, R y Gutiérrez Viñuales, R (eds.) (2016) *Alhambras. Arquitectura neoárabe en Latinoamérica*. Granada: Almed.

9 A full development of the topic can be found in: Martínez Nespral, F (2017) "Paraísos secretos, patios andaluces ocultos en la arquitectura porteña" In: López Guzmán, R. (scientific coord.) *De Sur a Sur, intercambios artísticos y relaciones culturales*, Granada: Universidad de Granada.

"International Style" and the Mid-century Modernist shapes, either as inappropriate or disconnected from local and regional traditions. In that context, a revalorization of Viceregal architectures emerged, Iberian-Arabic design revived on the basis of "patios" and "zaguanes" reinterpreted through more recent experiences.

An excellent example of this current is the "casas blancas" (white houses) movement that emerged in Argentina. The first work in this sense was the Fatima church by Claudio Caveri and Eduardo Ellis, designed in 1954, but later, several projects designed for those young architects as Ellis' own house in Talar de Pacheco, near Buenos Aires (1958) are based on patios, zaguanes, and multiple references to Viceregal architecture.

My master, Rafael E. J. Iglesia, was part of that group and wrote one of the first critics worldwide refusing modernist architecture and proposing a revalorization of traditional, local, and historical features (in this case, based on the Spanish colonial Architecture).[10]

But the idea of a return to the advantages of traditional Viceregal features was spread all over the continent, and several examples emerged in every country.

Luis Barragán in Mexico used patios and a privacy design criterion in his works like his own studio and house or the Gilardi house both located in Mexico City, and I have previously mentioned Ricardo Legorreta that followed Barragan's inspiration in houses and buildings located all over the world but also in Mexico, like the "Casa de los quince patios" (fifteen patios house).

Decades later, Juvenal Baracco created magnificent patio houses in Peru, like the Ghezzi house, and Jose Ignacio "Togo" Díaz also built colonial-inspired designs in Córdoba, Argentina.

A remarkable case is the Colombian illustrious guest house projected by Rogelio Salmona in Cartagena de Indias that I have previously mentioned in chapter 5. As seen in the floor plan (See Figure 36) the complex is organized on the basis of a number of chained "patios" that can be walked gradually, appreciating each of them subsequently without intending an integral vision of the whole. This constitutes a clear reference to Iberian-Arabic buildings like the Alhambra, designed in the same way.

But the list is uncountable, and we can find examples like these in every country across the region.

Finally I must say that the phenomenon of "patios" and "zaguanes" as an essential element of Ibero-American architecture is still in progress and is even a recent trend in the most contemporary architectonic solutions, and,

10 See: Iglesia, R. (1965) "La reacción antirracionalista en Argentina" in *Zodiac*, no. 14, Milano.

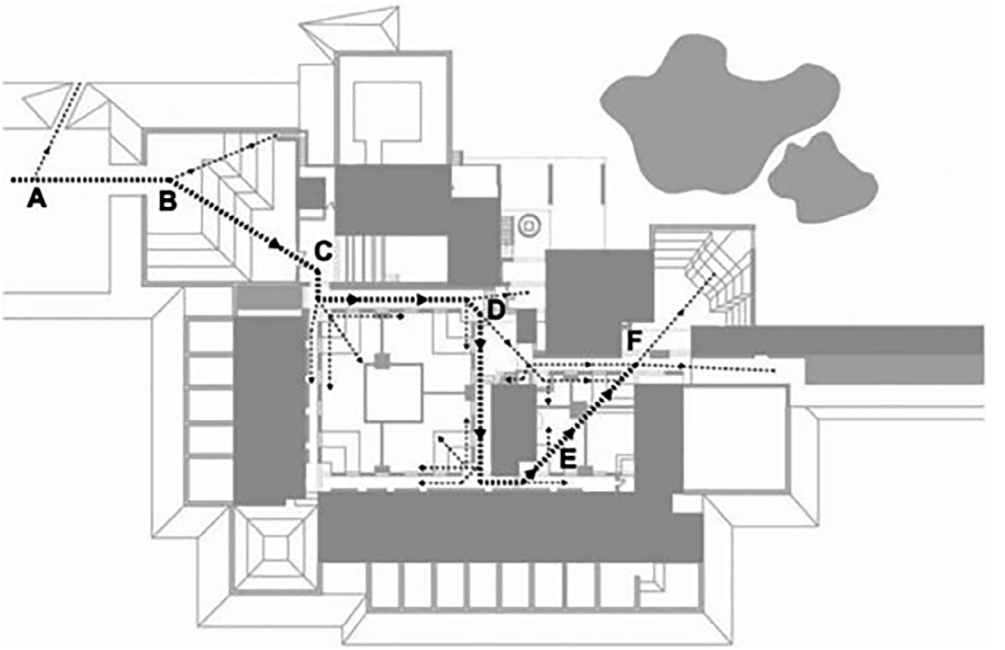

FIGURE 36 Plan of the Colombian illustrious guest house, by Rogelio Salmona, arch
CREDIT: TAKEN FROM ALVAREZ, A. (2009) "LA CASA DE LOS SENDEROS QUE SE BIFURCAN. UN RECORRIDO POR LA CASA DE HUÉSPEDES ILUSTRES EN CARTAGENA DE ROGELIO SALMONA" IN BITÁCORA NO. 15, BOGOTÁ: COLOMBIA NATIONAL UNIVERSITY

although it has not been generally recognized, is one of the most valid features of the continuity of Iberian-Arabic design criteria in regional architecture because implies the way of living and inhabiting of spaces and so, it's totally independent of styles or fashions constituting a social requirement that defines Ibero-American societies and its culture.

CHAPTER 8

More Is More, Not "Horror Vacui": Complexity as a Goal of Islamic Design and Its Geometric Explorations from the Middle East to Ibero-America

1 Ancient Architecture Was Postmodern Too: Islamic Complexity from a Contemporary Re-reading

The famous German architect Ludwig Mies van der Rohe, who is today seriously questioned due to his attitudes towards nazism,[1] immortalized the sentence "less is more" as a motto and basis of the minimalist trend that he proposed for modern architecture.

A few years later, this idea was questioned by a new generation of "post-Modernist" architects, such as Robert Venturi, who answered Mies' sentence with another one equally short and convincing: "Less is a bore."[2]

Venturi and postmodernists' criticism was added to the one made previously by organicists, such as the Italian Bruno Zevi.[3] And in Ibero-America, several tendencies such as the aforementioned "casas blancas" or "casablanquismo"[4] that had been denouncing since the fifties that minimalist modern architecture, in its rupture with history and traditions, had also broken the connections with society, and had created an aesthetics that only satisfied the "initiated", but was alien to most of the population.

If we analyze different architectures developed throughout the world in different periods and cultures of history, we see that almost all of them were maximalist, rather than minimalist. From Indian classical architecture to Baroque or Mexica temples, a profusion of ornamentation, reliefs, shapes, and colors is the rule; meanwhile, the minimalist search, such as Japanese gardens[5] is much less frequent.

1 See: https://www.theguardian.com/artanddesign/2002/nov/30/architecture.artsfeatures.
2 See: Venturi, R. (1966) *Complexity and contradiction in contemporary architecture*. New York: MoMA.
3 See: Zevi, B (1945) *Verso un'architettura organica*. Torino: Giulio Einaudi editore.
4 See: Iglesia, R. (1965) "La reacción antirracionalista en Argentina" in *Zodiac*, no. 14, Milano.
5 That makes up sets where buildings have complex shapes and diverse ornamentations.

 | DOI:10.1163/9789004756557_010

As regards our topic, art history describes Islamic art based on a singular criterion, the "horror vacui" idea, a Latin expression that means "fear of emptiness".[6]

Although Islamic art is characterized by a profuse decoration, it is difficult to sustain any explanation based on the horror to the opposite. It is said that Muslims choose decoration because they are afraid of empty surfaces, because they live in the desert. But this is not true, not all Muslims lived and living in the desert, and people do not do things only for the horror to do the opposite. Instead, we can simply explain this idea because, as well as most human beings, they think that it is a better option. So, adding ornaments to surfaces helps increase their communicative ability.

From this conception and as an answer to Mies van der Rohe, it could be said that, opposite to the minimalist "less is more," different artistic expressions over history, including Islamic art, have confronted "less is more" with the idea that "more is more," an openly maximalist statement.

Explained by a positive determination, statement, or action rather than by fear and negativism, Islamic art has always aimed to complexity,[7] because not only is it not limited to adding more decoration, but it also expressly searches for complex shapes. This is the case with multifoil arches, polylobed arches, ribbed vaults and domes, and the conformation of architectural "lace" with multiple interlacing as we saw in tiles, lattices, and roof structures.

In all the cases, using a simple generating shape, such as a rounded arch, the design is meant to complexify it, to enrich it by giving it geometric complexity. In Islamic art, complexity is a goal, and architectonic design is always looking for diverse ways to obtain it.

Examples of this are several cases explained in this book, such as tiles or lattices; by means of their complex geometric delineations, they contribute to the general goal of searching for complexity as a valuable element, and then more is more.[8]

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6 The first and most important source in this respect is Richard Ettinghausen, that proposes as possible causes the search for the opposite to desert uniformity and compactness and mottled urban structure in Islamic cities. It also analyses the possibility of a religious justification, although he does not enlarge on that. See: Ettinghausen R, (1979) "The Taming of the Horror Vacui in Islamic Art" in: *Proceedings of the American Philosophical Society* Vol. 123, no. 1, pp. 15–28. Anyway, these causes do not account for the phenomenon, since not all the societies where Islamic art was developed lived in deserts, and if it were for the dense and mottled urban fabric, this also existed in many other cases, generally in almost all premodern societies with walled cities, from Ancient Mesopotamia to medieval Europe.

7 Another topic connected with postmodern analysis of Venturi's book, where he presented the ideas of complexity and contradiction as conservable architectural values.

8 I wrote a paper focusing on the idea of "more is more" applied in this kind of architectural works. See: Martínez Nespral, F. (2020) "Más es más. Una relectura venturiana de la

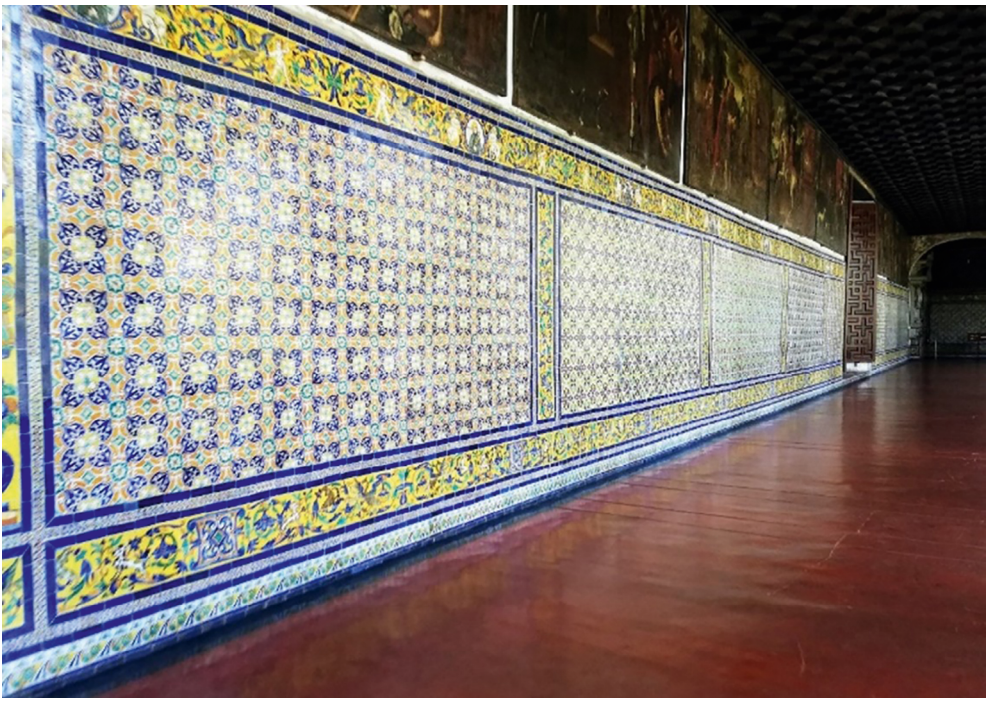

FIGURE 37 Tiles of Santo Domingo Convent, Lima
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

In both cases, tiles and lattices, much simpler shapes had permitted them to comply with the function these elements were conceived for, without any inconvenience; tiles might have been smooth and would have complied with their impermeabilizing goal; lattices may have had much simpler wefts and would still work as privacy filters. In both cases, geometric complexity is a visual or ornamental goal that visually transforms surfaces; this means that complexity is independent of other functional goals and is a goal itself.

In this sense, a secondary argument is needed; we commonly use the words "ornamentation" or "decoration" in the way that Western modern civilization defined them. But those words must be deconstructed because the idea of decoration as an accessory element that adds up to a structure that is the essence of anything is not accurate. We shall leave the conception of decoration as something accessory or of minor importance when, on the contrary, it is essential. If in any decorated object as tiles (See Figure 37), its decoration was replaced

arquitectura española de los siglos XV y XVI a partir del Palacio Avellaneda" in: *Cuadernos de Historia de España*, no. 87: pp. 143–158. Buenos Aires: Instituto Sánchez Albornoz, FFyL/UBA.

or deleted, the essence of its appearance would change. This is not a minor aspect, and its relevance exceeds Arabic or Ibero-American Architecture. What happens if we take out the decoration from Bernini's works or from an Asian temple? The undecorated building will look so different that it will become unrecognizable. In the same way, really became a different building.

I have already mentioned in previous chapters how Islamicate art forms in force in the Iberian Peninsula from the Middle Ages, but with significant continuities in the Modern Age, arrived in Ibero-America with European conquerors and remained significantly valid during the Viceregal period and beyond, in the context of the newly independent nations, up to the end of the 19th century and even the beginnings of the 20th.

In this way, the complex geometrical weft of tiles, the poly-lobed or mixtilineal arches, and the wooden framework of lattices and "jointed rafters" covers of Ibero-American architecture, found even well into the 18th century, represented the Ibero-American continuity of these Islamicate art maximalist traditions.

Mixtilinear arches (or draped arches) are a good example to going deep into this topic. We can find a lot of works with complex archeries all over Ibero-America, from the Government house of Tlaxcala in Mexico to the Torre Tagle palace in Lima and several other cases (See Figure 38).

We could say that these complex lines are related to Baroque architecture, but the shapes are not similar to Italian Baroque examples, but have direct precedents in Ibero-Arab cases like the Aljafería Palace in Zaragoza or the Church of the Virgin in Tobed, Aragón, both in Spain and both built centuries before the Baroque. So, if we have a direct connection to the Arab examples, why do we need to relate these shapes to an indirect influence of Italian Baroque, this is clearly a consequence of the colonial approach that I have been questioning in this book since the beginning.

A similar situation happened with multi-foiled arches, which could be related erroneously to Baroque but are deeply rooted in Iberian Arabic architecture (See Figure 39).

Complexity as a goal can also be found in the intricate plan organization based on multiple crujías and patios that I described in chapter 7, and similar relationships can be established between any topic analyzed in this book.

Moving to a different period, as I explained in the previous criteria, during the 19th and the first half of the 20th century, Viceregal features were gradually replaced by European fashionable styles such as Academicism or Eclecticism, but in that context revivals of picturesqueness also abounded, such as the Arab

FIGURE 38 Mixed-line arches at the Torre Tagle Palace, Lima, Peru
CREDIT: HTTPS://COMMONS.WIKIMEDIA.ORG/WIKI/FILE:PASADIZOS_QUE_RODEAN_EL_PATIO_PRINCIPAL_DEL_PALACIO_DE_TORRE_TAGLE_%2858054140 52%29.JPG

and Spanish Revival, that enabled a continuity of Islamic art complex shapes in a different context, in Ibero-America.

An example of this is the Arab Revival tiles used in the entire continent (See Figure 40) to build Ibero-Arabic monuments. It was frequently an exotic and Orientalist appreciation of Islamic art, but beyond that, we can find several unbelievably valuable examples in different Ibero-American countries.[9]

In this sense, a good example is the Arabic-inspired tiles that cover the entire Line C of Buenos Aires' Subway, imported from Seville during the decade of the 1930s following the project of the neo-colonial architect Martín Noel. We can see across de different stations several complex patterns directly related to

9 A very important source in this respect is Rafael López Guzmán and Rodrigo Gutiérrez Viñuales's book, that I have already mentioned in previous chapters. See: López Guzmán, R. and Gutiérrez Viñuales, R. (2017) *Alhambras: arquitectura neo árabe en Latinoamérica*. Granada: Almed.

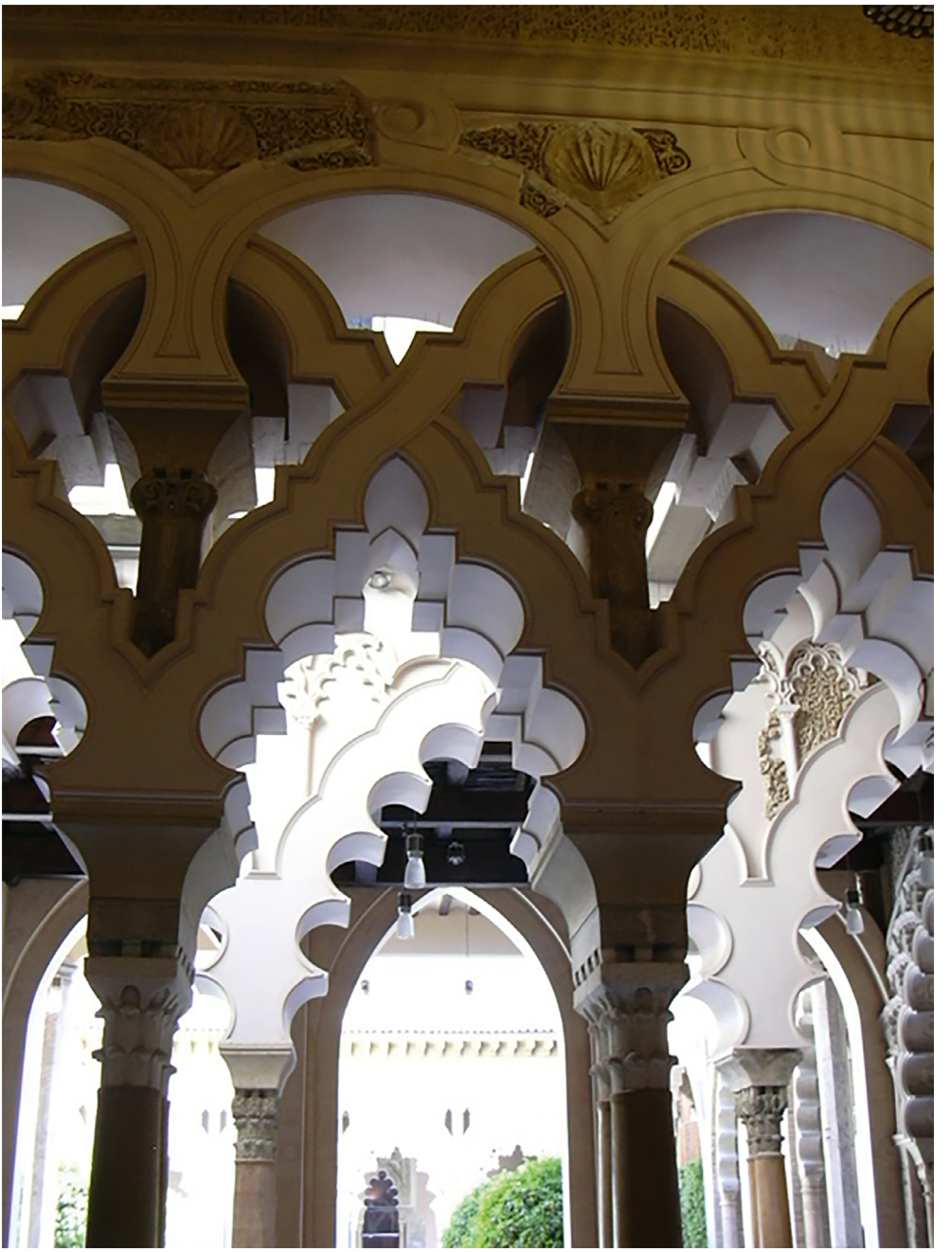

FIGURE 39 Mixed-line arches, Aljafería, Zaragoza, Spain
CREDIT: PHOTO BY ECELAN – SELF-PUBLISHED WORK BY ECELAN, CC BY 2.5, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=97430

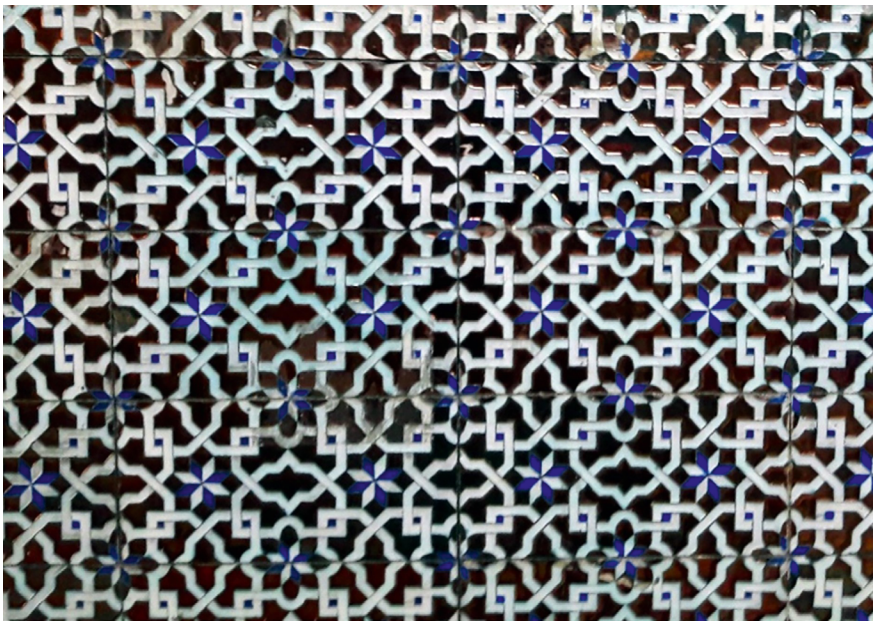

FIGURE 40 Arabic inspired tiles, Buenos Aires subway
CREDIT: PHOTO BY JONYSNIUK – HIS OWN WORK, CC BY-SA 4.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=51996992

FIGURE 41 Tiles with Arabic calligraphy at Independence Station in Buenos Aires' Subway
CREDIT: PHOTO BY JONYSNIUK – OWN WORK, CC BY-SA 4.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=48474112

Spanish Arabic architecture with pointed stars and even some Arab calligraphy in the tiles of Independence Station that reproduces the Grenadian Nasrid dynasty motto "There is no victor except God"[10] (Wa lā ghāliba ʾillā-llāh – ولا غالب إلا الله).

2 Modern Complexities Are Not Contradictions: Islamicate Sources in 20th-Century Architecture

Between the twenties and the fifties, Rationalism and Minimalism were at their peak in the architecture debate, but, beyond that, they never really displaced other architectonic ideas,[11] and there were obvious differences inside Modernism.[12] For mentioning only two famous examples already developed in this book, Niemeyer continued using Portuguese tiles in his Brazilian modernist works, and Barragán also did it in Mexico, designing with lattices and other Viceregal elements connected with the Arab-Islamic culture. In a certain way, we can say that almost all modernist Ibero-American masters incorporated in their projects some kind of Arabic-related design criteria, and all those criteria are characterized by the common idea of complexity as a goal.

Later, since the second half of the 20th century, new architectonic trends questioned Minimalist Rationalism on the basis of diverse organicist, regionalist or postmodernist positions. There were recovery proposals for Ibero-American traditions and history, among which the complex weft of tiles and lattices rose, in a contemporary context.[13] This new approach to historical

10 I wrote a text and organized an exhibition at the Buenos Aires' Spanish Art Museum about this topic. See: Martínez Nespral, F. (2012) "Lazos subterráneos, cerámicas andaluzas en el metro de Buenos Aires" in: López Guzmán, R. (ed.) *Andalucía en América: Arte y Patrimonio*, Granada: Universidad de Granada.

11 An interesting example in this respect is León Dourge, a French architect settled in Argentina that along his career made Minimalist Rationalist works, but also Academicist and even Spanish Revival ones. For more detail, see: Martínez Nespral, F. (2020) "Menos era aburrido: León Dourge como ejemplo de las complejidades y contradicciones en la arquitectura argentina, 1920–1960" in *Perspectivas*, Vol. 4 no. 3, Buenos Aires: Universidad de Belgrano, pp. 97–114.

12 Fernando Luiz Lara's works are very significant in this respect, inter alia. See: Lara, F. (2008) *The Rise of Popular Modernist Architecture in Brazil*, Gainesville: University Press of Florida.

13 There are many examples in this respect, but an interesting case to remark the search for geometric complexity in his works with an open connection with Arab-Islamic architecture is the aforementioned Mexican architect Carlos Mijares, who in works such as

traditions revitalized the Arab design criteria incorporated in the architecture from the Viceregal period.

In this sense, we explained previously the "casas blancas" movement in Argentina and it complex floor plans based on patios like the Eduardo Ellis House (1958), the work of Rogelio Salmona in Colombia, and his illustrious guest house of Cartagena de Indias (1981) inspired in the Alhambra or Juvenal Baracco's patio houses in the coast of Peru, like the Ghezzi house (1983).

Simultaneously in Brazil, the modern developments based on traditional Portuguese tilework continue the exploration of complex shapes that cover surfaces and create spaces and images that clearly can be related to the intricated Arabic patterns. The work of Athos Bulcão is fundamental in this sense, and we can see several of his tile designs in Brasília (See Figure 42).

In contemporary times, the debate between Minimalism and Maximalism was revived, due to a new neo-Rationalism influence, through which the famous Mies van der Rohe's sentence has retaken a central role in architecture. In this way, crystal skyscrapers still appear in tropical cities, and cubic white structures remembering old modernist designs from the beginning of the 20th century are reproduced and celebrated by some critics as "modern" or "contemporary" even one century after those ideas emerged.

But, although it has spread more widely outside the circles of architecture connoisseurs, in my opinion, it is mainly a snob fashion; meanwhile, the wrongly called handicrafts or popular architectures and the tastes of the common people are still traditionally searching for complexity, and recovery and reinterpretation of Ibero-American art related to the Arab-Islamic culture is still renewing between them.

Beyond popular tastes and back into the young generations of practitioner architects, the contemporary experimentations with parametric architecture and digital design make a new bridge with Arabic traditions of formal complexity, particularly using bricks and composing lattices and other kinds of nets.

Good examples of this idea are the work of Francisco Cadau, and his "Damero" building in Campana, Argentina (2021), the Brick house in Rosario, Argentina (2014) by Diego Arraigada, the Santa Fe Foundation building in Bogotá, Colombia (2016) by the Mazzanti team or the Teleton Rehab Center in Asunción, Paraguay (2010) by Gabinete de Arquitectura. All of them are defined by a permanent search for complexity that if is not directly related to the traditional Arab solutions, have several intersections and common interests.

Jungapeo chapel explored square rotations to create an eight-pointed star, solving the transitions with brick vaults.

FIGURE 42 Tile pattern designed by Brazilian artist Athos Bulcão at the University of Brasília Institute of Arts in Brazil.
CREDIT: PHOTO BY GUILLERMO ARÉVALO AUCAHUASI – HIS OWN WORK, CC BY-SA 3.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID =14935046

As I said in previous chapters. I am convinced that this "indirect" relationship is not a motive for misvalue or discarding these cases, but, on the contrary, is the basis of new reinterpretations that are keeping alive historical traditions.

CHAPTER 9

A Case Study: Native and Mudejar Bases of Tropical Colonial Churches in the Americas

As we near the end of this volume, I will focus on a particular case study that, in my opinion, synthesizes the ideas that I proposed to understand the Arab component in Ibero-American architecture, and, beyond this, as a new perspective to understand Ibero-American architecture in general. My position is that the influence of Western and European architectures in the region is overvalued by the colonial point of view of canonical historiography; meanwhile, the central role that the non-Western components play, fundamentally the native knowledge and the Arab component, are blinded, forgotten, or at least undervalued. I am not a specialist in the native component; my expertise is about the Arab one, but as I go deeper in the study of my topic, I noticed that the hidden of the Arab component is parallel to an identical concealment of the native one. The case that I will present here is, in my opinion, a perfect example of this point.

In several places located all over the Tropical region of the Americas, from the Caribbean to Paraguay, we can find similar wooden churches, different from the more frequent mud or brick constructions of the Viceregal period.

St. Atanasio in Villa de los Santos, Panama, Yaguarón in Paraguay, and Concepción in Chiquitos, Bolivia are good examples of this kind of constructions which take advantage of the natural resources of the jungle and create a fantastic architecture fully engaged with the local climate and native social practices.

These cases have been seen by colonial historiography as "minor" examples, defined by a lack of budget that forced their "naïve" constructors to choose "poor" materials and "elementary" techniques distant from the canonical European models.

Some authors, to explain this misunderstood architecture, appealed even to impossible comparisons with classical Greek temples or Roman churches, both characterized by massive stone or brick structures and compartmentalized spaces totally absent in these wooden buildings of the tropics.

On the contrary, we propose that the keys to understanding these churches are non-European and not canonical: The native wisdom and the ceilings of "par y nudillo" that I explained previously in this book, creating both an original

 | DOI:10.1163/9789004756557_011

carpentry that adapted the vernacular knowledge to the spatial requirements of a Christian church.

We argue that, as happened in several colonial period cases, the European contribution was fundamentally based on decoration while the design criteria and the technical solutions were mainly native American and Arabic-Mudejar. In the next pages, I will develop this case study.

Our vast continent has a wide range of landscapes and climates, from the Poles to tropical areas and the Equator. In such different contexts, diverse people have lived, with traditions closely related to the environments they inhabit.

Architecture also shows this diversity. From the Inuit igloos to a wide range of tents and soil, stone, and wooden constructions that are typical of each area.

Otherwise, the European conquerors that arrived in the fifteenth century came from a much less wide and diverse cultural and geographic space. Likewise, their architectural preferences were much more homogeneous, since they were almost exclusively Occidental European and Christian. Although there were some regional particularities, they shared a basic core of codes in common.

The classic tradition, recent medieval experiences, and the then brand-new Renaissance conformed an aesthetic frame of the desirable styles, and many layout typologies, such as the basilica, had been perfected and strengthened for many centuries, together with construction experiences and knowledge about stone wall constructions.

This provoked a conflict since a limited group of conquerors tried to impose a series of similar social, cultural, and aesthetic ideals over a wide range of preexisting societies located in very diverse environments.

European pragmatism caused previous local experiences to be frequently used, since obviously they were successfully adapted to the local conditions, thus creating a number of syncretic solutions that merged conquerors and conquered people's knowledge. Iberian American Viceregal architecture shows a wide range of related examples.

However, this homogeneous conception of European conquerors' ideals does not fully evidence their ideas, which included at least a non-Occidental and non-European feature, the Ibero-Arab component from Spaniards and Portuguese that would play a central role in some of these syncretic solutions, especially in this period of history, as later will be explained.

Among the abovementioned diverse American landscapes, the tropical jungles from the Caribbean up to South America presented a more adverse scenario for the conquerors to install their European constructions.

Regions such as the current Panama in the Caribbean and the Guarani area between current Paraguay, Brazil, and Bolivia lacked stones useful for structural purposes and had an overabundance of wood that exceeded their needs.

But beyond natural resources, Europeans found societies deeply experienced in wood construction, with a system completely different from the one already known, but very efficient and fast at the same time, features that made it attractive for conquerors.

These construction systems had different regional variants, with some common elements:

1. First, installing rows of columns made of whole logs, taller in the center of the building and shorter at the edges. The number of columns may vary to adapt to the building dimensions, but the odd number is fixed since one column is necessarily placed at the center.
2. The ridge beam that defines the highest point in a gable roof is placed over the row of central columns, and other beams that mark the level of lower edges in said roof are placed over the rows of shorter columns.
3. There is a number of secondary transversal beams placed over these main beams, that follow the roof slopes. Over these slopes, there are shorter backings and a vegetal cover.

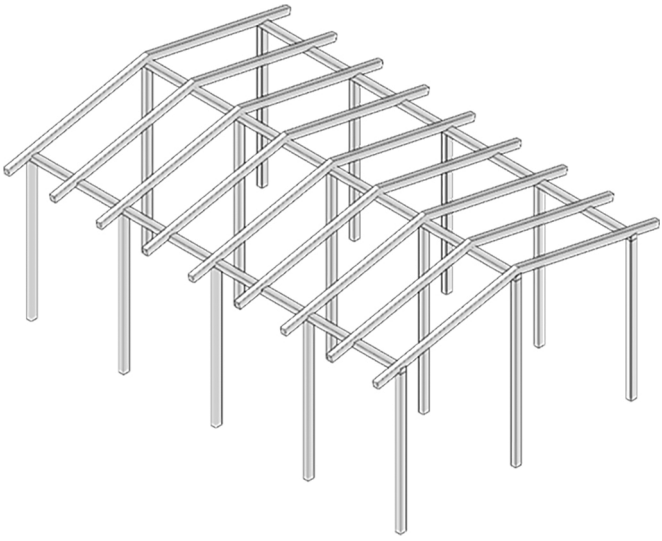

FIGURE 43 Scheme of a typical Guaraní construction
CREDIT: BY FERNANDO LUIS MARTÍNEZ NESPRAL (DRAWING BY NICOLÁS FONDACARO)

FIGURE 44 A typical construction in Guaraní regions. House in Puerto Iguazú, Misiones, Argentina. We can see here a materialization of the previous scheme.
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

As we can see, the construction systems do not require walls to support the cover, so the vertical walls could not exist (as they are placed in tropical areas), or, if they do, they are light vegetal-shaped structures that are only used for enclosure.

As regards the Guarani area, the system is widely described in "Templos Jesuítico-Guaraníes" (Jesuit-Guarani temples) by Sustersic,[1] who highlights the Europeans' surprise at the news this type of construction entailed.

Thus, Priest Cardiel, a Jesuit missionary mentioned by Sustersic, explains the diversity that this local construction tradition meant for Europeans accustomed to firstly build foundations, then structural walls, and lastly covers: "... todos estos edificios se hacen de diverso modo que en Europa: porque primero se hace el tejado y después las paredes" (... all these buildings are made differently from Europe: firstly, the roof and then the walls.)[2]

1 Sutersic, B (1999) *Templos Jesuítico-Guaraníes*, Buenos Aires: Facultad de Filosofía y Letras UBA.
2 Sutersic, B (1999) *Templos Jesuítico-Guaraníes*, Buenos Aires: Facultad de Filosofía y Letras UBA, p. 33.

But it was not just about showing the difference, Cardiel was admired at how fast this system was when compared to those he knew that required at least some months or even years of work:

> "Fuimos al puesto donde juzgamos imposible de creer (si la vista no lo atestiguara) que de noche se pudiera haber hecho tanta obra; cuya oscuridad vencieron grandes hogueras, a cuya luz se hizo toda aquella obra; propia de la divina diestra, a quien hicimos las debidas gracias" (We went to the post, where we could barely believe (if it weren't for what we saw) that so much work could have been done at night. Great bonfires defeated darkness and permitted to work; we thank God for this.)[3]

On the contrary, trying to build Stone churches, covered with vaults and domes in the Italian style, was almost impossible, since there was no good quality stone or any lime, and the local workforce was not trained in those techniques.

In fact, when at the end of their presence in South America, Jesuits tried to build a church in the European system, the Trinity Mission in the current Paraguay, the process[4] was hard and complex and led to many arguments and even to the collapse of the vault.

Although we have, thanks to Sustersic, these excellent historical sources to describe the Guarani case, different authors such as Damián Bayón have remarked the great similarity between this case and the constructions in the Caribbean jungle areas: "En la región boscosa, la buena solución parece ofrecerse de una manera casi espontánea, y es la misma que ya hemos encontrado en Cuba, Panamá y Venezuela y que veremos también en la región de Moxos y Chiquitos, Bolivia." (In the woods, the right solution is almost spontaneous, and it is the one we have found in Cuba, Panama, and Venezuela, also seen in Moxos and Chiquitos, Bolivia.)[5]

Mario Buschiazzo (mentioned in a Nicolini's text) also remarked this similarity, by saying that Paraguayan churches reminded him: "notablemente las iglesias panameñas de Parita, Penonomé, las Toblas, Natá y San Francisco de Veraguas" (notably Panamanian churches of Parita, Penonomé, las Toblas, Natá and San Francisco de Veraguas), and he also justified it by the overabundance

3 Sutersic, B (1999) *Templos Jesuítico-Guaraníes*, Buenos Aires: Facultad de Filosofía y Letras UBA, p. 30.

4 Broadly explained in Sustersic's book.

5 Bayón, D and Murillo, M (1989) *Historia del Arte Colonial Sudamericano*, Barcelona: Polígrafa, p. 201.

of wood: "consecuencia del clima tropical y del material dominante, la madera" (a consequence of the tropical climate and the dominant material, wood).[6]

Europeans considered it extremely complicated to impose their known construction systems in different South and Central American jungle areas, but found very efficient local solutions.

However, local systems, beyond their efficiency, and due to the fact that they had been conceived in societies with very different beliefs and ideals from Europeans, had two important limitations that altered conquerors' purposes:

1. The unclear delimitation of an inner and outer space: European buildings, made with thick structural walls, clearly remark the inner and outer space, something that the wood construction model did not assure.
2. The row of central columns that support the highest ridge is totally inadmissible for a ritual with such visual and processional components as the Christian. In a Christian church, beyond the different types of layout and styles developed a long time, the central space is always free.

Besides, local construction systems had other differences from the European ideal schemes. For example, belfry towers, so frequent in Spanish and Portuguese churches, were not built ("Spain is a country full of towers" said Fernando Chueca Goitía)[7] and, as regards inner space, the large gabled roof frequent in tropical areas did not enable the height differences between the nave and aisles in a typical basilica church, with their clerestories of overhead light. Beyond this, the row of central columns and the lack of perimeter walls were the main obstacles.

To solve these differences, Europeans promoted a hybrid system, adding belfry towers to the local system, or eventually, steeples and closing walls, whether made of soil or stone, as available.

From the conquerors' point of view, this added wall enabled the construction of a front façade that could imitate European ornaments such as arches, friezes, columns, and volutes, making the building more similar to the European models.

Bayón relates this facade to the Panamanian case, that he cleverly defines as a "screen", since it hides behind its superficial baroque appearance the whole building made with other parameters: "La única parte barroca del edificio, sería por así decir, la "pantalla" que hace las veces de frontis libre que se despliega en curvas a lo ancho de la fachada, recordando soluciones brasileñas y paraguayas. Ese rasgo resulta funcional en la medida que oculta el nacimiento del gigantesco techo a dos aguas." (The only baroque part of the building would be

6 Buschiazzo cited in Nicolini, A (1995) "El mudejar en Paraguay" in El mudéjar iberoamericano, Barcelona: Lundwerg, p. 289.

7 Chueca Goitía, F (1947) *Invariantes castizos en la arquitectura española*, Madrid: Dossat.

the "screen" that acts as a free facade that deploys in curves along the façade, and this reminds Brazilian and Paraguayan solutions. This feature is functional as long as it hides the start of the of the huge gabled roof.)[8]

As per Bayón's comment, some divergent features of the local solution were accepted, as their change would have been very complicated, such as the huge "gabled roof." Instead, roofs separated with a height difference between the nave and aisles, and others were modified; an example is the inclusion of perimeter walls and mainly a façade.

Bayón also states that this solution is not only proper of Panama, since it was implemented in other tropical areas as the current Venezuela: "... la fachada-pantalla que oculta las dos aguas del techo, como a su vez la torre, representaron más tarde un modelo para una multitud de otras iglesias venezolanas." (The façade-screen that hides the gabled roof and the tower later became a model for many other Venezuelan churches.)[9]

There was still an unsolved and very important problem, the row of central columns of the local model that disrupted the Christian conception of a liturgical space. To solve this problem, conquerors used their own non-European components.

As we know, with the exception of the Anglo-Saxons and the French, who mostly occupied the Northeast of North America and some Caribbean regions, most of our continent, from Florida, Texas, and California to the south, was mainly conquered by Spaniards and Portuguese.

So, Spaniards and Portuguese shared a core feature of their culture, the Arab component, born during the Islamization of the Iberian Peninsula in the Middle Ages. This process, although politically concluded in the same year of the "discovery" with the fall of the Muslim kingdom of Granada under the Catholic Monarchs' control, has had huge and unforeseen cultural consequences up to the present, and even more in those times.

I proposed from the beginning of this book that, even from language, the Iberian conception of space and construction was strongly based on the ideas from the Iberian-Arab period.

As regards carpentry, historical texts such as Diego López de Arenas' book[10] and the abundant contemporary bibliography by Rafael López Guzmán[11]

8 Bayón, D and Murillo, M (1989) *Historia del Arte Colonial Sudamericano*, Barcelona: Polígrafa, p. 121.

9 Bayón, D and Murillo, M (1989) *Historia del Arte Colonial Sudamericano*, Barcelona: Polígrafa, p. 131.

10 López de Arenas, D. (1633) *Breve compendio de la carpintería de lo blanco y tratado de alarifes*, Seville.

11 López Guzmán, R. (2000) *Arquitectura Mudéjar*, Madrid: Cátedra.

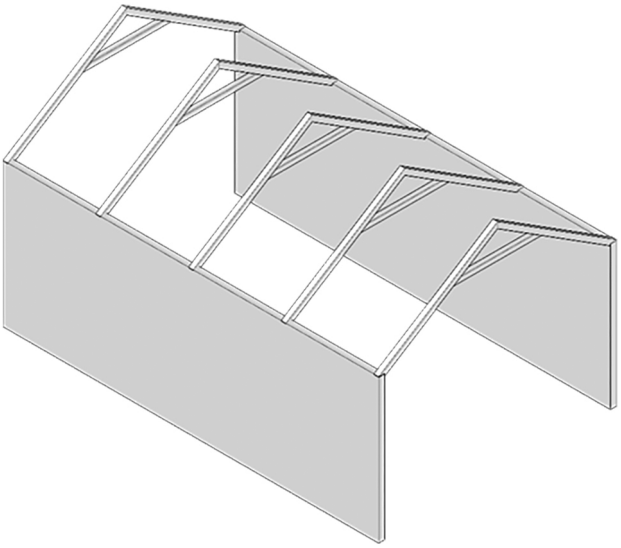

FIGURE 45 Simplified scheme of a "par y nudillo" roof. We can see here the basic structure shape as a letter "A", a "par y nudillo" roof has many other pieces that we eliminated here to simplify the comprehension of the essence of this structural system.
CREDIT: BY FERNANDO LUIS MARTÍNEZ NESPRAL (DRAWING BY NICOLÁS FONDACARO)

books coincide in that Iberian construction elements related to wood would be inconceivable without their Arab component.

As I explained previously in the chapter about wood and clay, a common element in this Iberian construction knowledge is using different resources to avoid the use of wooden beams that are highly scarce in Mediterranean Islamized areas, which have deserts and woods, with trees that are not tall enough to obtain big beams.

We saw that the most important resource is the cover system called "par y nudillo" (pair and collar beam), by which, through the inclusion of a small horizontal beam or "nudillo" (collar beam) that absorbs flexion efforts from the diagonal beams of the slope or "rafters", a roof truss with a capital A-shaped form is built.

This lets the system do without the big central ridge beam (the longest one with the biggest section), over which rafters would normally lean on and makes a cover system that may be fully solved with shorter beams with a smaller section, available in the areas where the system was created.

If we apply this to the American jungle areas, where wood is abundant, the solution would be useless. But, for the conquerors, the elimination of the

central ridge beam solves the problem of the row of central columns without a ridge beam to support, since columns are unnecessary.

From the collar beam, the only row of central columns of the original system is replaced by two rows of columns placed at both sides of the collar beam, which leaves the so-desired free space in the center, thus solving the visual and processional needs of Christian liturgy.

This created a layout with three naves similar to the one of European churches, although, naturally, as they had been built very differently, the resulting space was diverse, since the division between the nave and aisles is much less remarked by the slenderness of wooden columns if compared with thick European stone pillars; the single roof, without any height differences or a clerestory, also dilutes the effect of three differentiated spaces that was common in Renaissance churches.

This is a clear paradox that we have been studying in other situations in this book. The Iberian European conquerors, who considered themselves "old Christians" and sworn enemies of peninsular Muslims whom they had

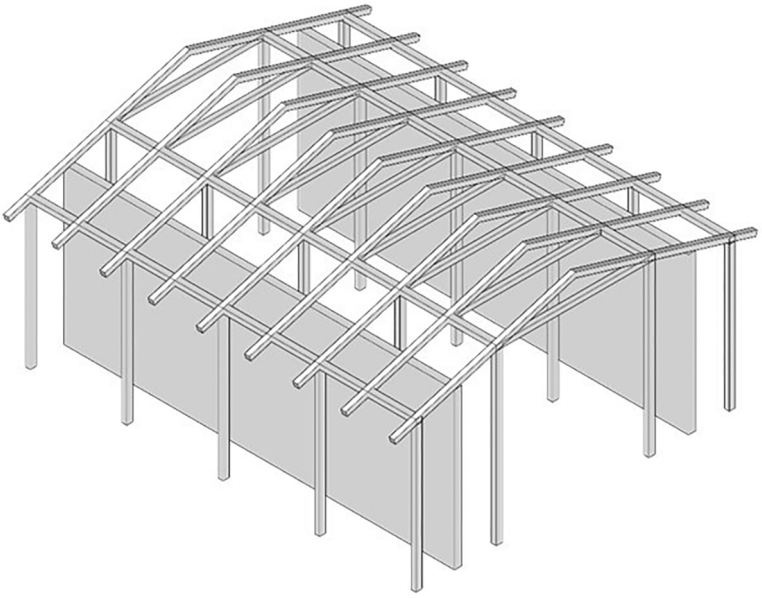

FIGURE 46 Hybrid model used in tropical colonial churches. Here we can see how the central row of columns from the local native system was substituted by two parallel rows that delimitate a free central space and how the "nudillo" was the key factor for that substitution. Also, we can see the walls made by colonizers in order to clearly separate the interior and exterior spaces.
CREDIT: BY FERNANDO LUIS MARTÍNEZ NESPRAL (DRAWING BY JULIÁN FONDACARO)

FIGURE 47 Mission church, Yaguarón, Paraguay. Here we can see the materialization of the previous scheme.
CREDIT: BY HUGO DÍAZ LAVIGNE, PUBLIC DOMAIN HTTPS://ES.M.WIKIPEDIA.ORG/WIKI/ARCHIVO:IGLESIA_YAGUARON_FRENTE_CAMPANARIO.PNG

FIGURE 48 Church of San Atanasio, Villa de los Santos, Panama. Here we can see the same system described for the Guaraní region, but in this case in Panama, showing that all tropical areas share similar construction solutions.
CREDIT: BY GUALBERTO107 – OWN WORK, CC BY-SA 3.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=28089945

FIGURE 49 Church of San Atanasio, Villa de los Santos, Panama. In this case, we can see how the façade, designed following European architectural trends it's like a curtain that only covers the front of a building entirely designed following the hybrid Native-Ibero-Arab system.
CREDIT: BY GUALBERTO107 – OWN WORK, CC BY-SA 3.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=28089945

FIGURE 50 Church of San Xavier, region of Chiquitos, Bolivia. Here, we can see in a third different tropical region, the use of an identical hybrid system.
CREDIT: BY GUALBERTO107 – OWN WORK, CC BY-SA 3.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=28089945

defeated at war and tried to expel from the Peninsula, were, in time, bearers of the Iberian-Arab cultural legacy.

Besides, these conquerors had been born and lived in cities whose infrastructure had been mostly built during the Iberian Islamization. As we mentioned previously in this book, many churches in their Spanish or Portuguese towns had been originally built as mosques and then reconverted.

When conquerors applied "their" solutions and Iberian traditional experiences and knowledge in the Americas, they in fact applied typical Iberian-Arab solutions that were a key part of peninsular customs and ways of life, as an inner component of their own culture and not as a foreign influence, which is the key point of this book.

The final product, that is, colonial churches built in jungle areas, in fact, represents an intercultural system whose two main components are not Occidental European: The wooden structural and construction systems of American people that preexisted the conquest, and the "rafter and collar beam", an Iberian-Arab knowledge that enabled the local solution to adapt to the special requirements of a Christian church.

On the contrary, European features, such as the "screen" façade, are superficial and mainly used to mask a system that, from the spatial and construction aspects, is very differently defined, in a way much more appropriate for the site, when compared with the European models.

Beyond our explanations, that is, that non-European components are key and unavoidable to understanding these cases, historiography, with only a few exceptions, has systematically explained them by relating them to European examples. This interpretation not only does not enable comprehension but also creates important confusion.

The first confusion is minimizing the value of these works by considering them as emergents from need, or from the scarcity of other resources. They were seen as a compromise solution, far from the ideal that the conquerors had to adopt due to the circumstances.

In this sense, Bayón states: "... se trata simplemente de cubrir el mayor espacio posible con los medios más elementales y al mismo tiempo más económicos." (... it is simply about covering the biggest possible space with the most basic and economical resources.)[12] Nicolini mentions the "empirismo de la mano de obra guaraní" (empiricism of the Guarani workforce).[13]

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12 Bayón, D and Murillo, M (1989) *Historia del Arte Colonial Sudamericano*, Barcelona: Polígrafa, p. 201.

13 Nicolini, A (1995) "El mudejar en Paraguay" in El mudéjar iberoamericano, Barcelona: Lundwerg, p. 289.

As regards this, we may find a naive interpretation of the works, as if they were products made by an inexpert Native workforce, who could not administer European design resources and had not fully trained European masters as responsible for the works.

Bayón explains it: "Un repertorio variado y ecléctico tentaba a los artesanos locales, al no existir – por definición – ni un gran programa ni un tiránico maestro de obras que quisiera aplicar las normas de ciertos modelos cultos." (Varied and eclectic options tempted the local artisans, as there was not a big program or a tyrannical work master who would want to apply the rules of certain educated models.)[14]

He later says that the solution defined as faulty was taken due to the authors' ignorance of classic models: "El conjunto da un poco la impresión de las piezas de un enorme rompecabezas reunidas arbitrariamente por alguien que no estuviera al tanto de esa lógica que, en general, se desprende de la arquitectura basada en los principios grecolatinos." (The group looks like pieces of a huge puzzle, arbitrarily joined by someone who did not know the logic that inspires the architecture based on Greek and Latin principles.)[15]

Another aspect of these texts that tries to explain works on the basis of European parameters is the forced relationship with canonical examples. This is the case of the comparison of Jesuit churches in the Guarani region and the current Bolivian East (Moxos and Chiquitos area) with the Mother Jesuit church, il Gesu, built by Vignola in Rome.

This wrong analysis had already been reported and explained by Sustersic in his book, which we consider the first decolonial text about this phenomenon: "La forma forzosamente rectangular de las plantas de estas iglesias (como la de los santuarios guaraníes pre-jesuíticos) llevó a algunos estudiosos a relacionarlas con el Gesú de Roma" (the necessarily rectangular shape of these churches' layout (as in pre-Jesuit Guarani sanctuaries) made some scholars relate them to Gesú church in Rome.)[16]

As we have previously explained, this is a fallacious relationship, since it is based on the apparent nave and aisles in the layout, which are not so, since the slender columns and the unified roof enable a single interpretation of space that has nothing to do with European models.

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14 Bayón, D and Murillo, M (1989) *Historia del Arte Colonial Sudamericano*, Barcelona: Polígrafa, p. 136.

15 Bayón, D and Murillo, M (1989) *Historia del Arte Colonial Sudamericano*, Barcelona: Polígrafa, p. 202.

16 Sutersic, B (1999) *Templos Jesuítico-Guaraníes*, Buenos Aires: Facultad de Filosofía y Letras UBA, p. 38.

But if this comparison with Vignola's work is wrong and provokes a misinterpretation, there is another that has been made several times and is absurdly distorted. It is the relationship between this kind of church and classical Greek temples.

As jungle areas where these churches were built are naturally very wet and rainy, the walls added by conquerors to the original system were seriously affected by water and humidity, even more so when they are made of mud.

This problem, which did not exist in the original model, as it is a consequence of changes made by Europeans, was also solved by an idea based on the local system. As the cover structure is leaned on columns and does not require walls, an extra aisle was added outside the wall, thus making a semi-covered perimeter veranda that protects the walls from rain.

Consequently, the rectangular volume, covered by a big gabled roof and surrounded by a semi-covered perimeter veranda, was linked by many authors to the peripteral classical temple. Nicolini states that: "La analogía más sorprendente que puede señalarse es su semejanza con el Partenón, presunto modelo que se nos impone por tratarse de un templo períptero ..." (The most surprising analogy is its similarity with the Parthenon, an alleged model imposed to us because it is a peripteral temple ...).[17] Bayón states the same: "En cierto modo se recreaba, así, el prototipo del arcaico templo griego: una cella cerrada y una columnata anfipróstila o períptera, o sea a todo alrededor del núcleo central." (In a way, the ancient Greek temple prototype was replicated: a closed *cella* and a peripteral or amphyprostyle colonnade, that is all around the central core.)[18]

This relationship evidences an evidently forced situation since similarities between both cases are just a coincidence based on a very superficial interpretation of their appearance. There is no connection between their motivations and geographical, historical, and cultural contexts. This forced comparison can only be justified by the colonial need to explain the American features on the basis of supposed European referents; meanwhile, the true non-European and non-canonical referents are made invisible or undervalued.

In my opinion, this case study reflects a synthesis of the whole problem, overvaluation of Western influence that has a secondary imprint, and undervaluation of Arab and Native components that are the real key factors that define and differentiate these cases.

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17 Nicolini, A (1995) "El mudejar en Paraguay" in El mudéjar iberoamericano, Barcelona: Lundwerg, p. 287.

18 Bayón, D and Murillo, M (1989) *Historia del Arte Colonial Sudamericano*, Barcelona: Polígrafa, p. 202.

CHAPTER 10

A Twist in the Architectural Relationship between Ibero-America and the Arab Culture: Ibero-American Architects Work in Islamic Countries

Throughout the 20th century and in the first decades of the 21st century, various Ibero-American architects have carried out projects and works in Islamic countries. This has been due to various motivations, depending on the time, the author, or the place of destination of each project. Some have materialized, others were simply proposals, but in both cases, they are generally unknown or, at least, most of them have not received significant interest from architectural critics.

However, all these buildings and projects, understood as a whole, constitute an attractive case study to analyze the global connections and architectural relationships between Ibero-America and the Islamicate World and an opportunity to fill gaps in the knowledge of the architecture of both regions.

The already explained orientalist vision built by the colonial system of the Modern Age that Edward Said defined, described, and denounced almost fifty years ago.[1] has given rise to a false perception of distance between both regions, spaces that are conceived as distant and even opposite, both geographically and, above all, culturally.

Despite this, this book has dealt with numerous connections between both cultures, and, in the next pages, I will develop the study of a new twist in this longue durée relationship, a series of cases of Ibero-American architects and their work in the Islamic countries as a contribution to the understanding of one stage of these links.

I selected some of the most important Ibero-American architects and will explain their almost unknown works in the Middle East and North Africa.

The first case is the Brazilian Oscar Niemeyer, who, after the construction of the Brazilian Pavilion project at the World's Fair in New York in 1939 and the consequent exhibitions at the MoMA,[2] was incorporated into the global "star system" of the mid-20th century. Since that emblematic works by Niemeyer

1 See: Said, E. (1978) *Orientalism*. New York: Pantheon Books.

2 See: Goodwin, Philip L (1943) *Brazil builds: architecture new and old*, 1652–1942, MoMA: New York.

 | DOI:10.1163/9789004756557_012

would be canonized, such as the Ministry of Education and Health in Rio, and the Pampulha complex, among others.

Not many years later, already in the second post-war period, this fame meant his incorporation into the team of architects in charge of the design of the United Nations headquarters building in New York, where he played a central role, overshadowing even Le Corbusier.

Due to a military coup in Brazil, Niemeyer lived in exile in France from the mid-1960s until the end of the dictatorship in the 1980s. From Paris, he designed a dozen projects for Algeria and Lebanon. Some of them were not built, such as a fantastic mosque placed over water with the shape of a bulb dome. However, many others were constructed, such as the Mentouri University in Constantine, which features a cover resembling an open book. Here, the traditional set of white volumes that characterizes Niemeyer's work is not particularly contrasting in the Middle Eastern context.

Also in Algeria, Niemeyer's project for the campus of the Houari Boumediene Technological University was built in the 1970s. In this work, the architect continues with the games of concave and convex arches that he had made in the Palace of Justice of Brasília.

And in the same Algerian territory, his project for a stadium was built in the Olympic complex where the 1975 Mediterranean Games would take place in Algiers. The stadium, named "La Coupole" (the dome in French) as its name indicates, has the shape of a white dome, and refers to the previously unrealized project for a mosque also in Algeria. In both cases, Niemeyer reinterprets the orientalist imaginary of bulbous domes in a modern key, combined with his interpretation of the space for public gathering covered with a large sculptural structure that he had already implemented in his project for the Brasília cathedral.

Niemeyer also projected a fair complex in Tripoli, Lebanon. He was invited by the Lebanese government in the early 1960s in the context of his worldwide fame for the recently inaugurated Brasília. There, they entrusted him with the design of a permanent fairground whose construction began in 1964, and which was unfinished when the civil war broke out in Lebanon in 1975, for which reason it was never completed. In the different pavilions of the Fair, Niemeyer continues with several of the models that he had implemented in Brasília, such as large esplanades together with curved shapes and concrete domes. But particularly noteworthy is the system of prismatic buildings surrounded by porticoes with monumental arches. In this case, the architect uses a shape similar to the pointed arch that had not been observed before in his most emblematic works. Perhaps this implies some allusion to the tumid arch

FIGURE 51 La Coupole, Olympic Complex, Algier, Algeria, Architect Oscar Niemeyer
CREDIT: PHOTO: BY RVINCE – OWN WORK, CC BY-SA 3.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=15920312

or pointed arch typical of the Middle East, as a desire to adapt his system project to the new context in which it would be built.

From this review of Niemeyer's works and projects in the Middle East, a series of preliminary conclusions can be drawn. First of all, there are a large number of Niemeyer's projects in the region, several of them built, but, despite this, they have not been the subject of priority study for critics beyond assigning them a certain "curious" character even though they represent a very important part of his production, more than twenty projects, designed at the zenith of his career, from the mid-1960s to the 1980s, with which the impairment of his work in this region means an impairment of a part very significant of the whole of his work. A second conclusion could indicate that Niemeyer uses in his projects in the Middle East the same forms and logics that define his canonical Brazilian work, although in some cases he makes "concessions" to local aesthetics read from an exoticist key.

Finally, I want to highlight how the use of traditional Brazilian solutions, such as the patio house, the set of white prisms that he uses in several cases, is not alien to the Middle Eastern context. which demonstrates the existence of comparable points in the architectural cultures of both regions from the Arab component of Ibero-America.

Secondly, I will mention Felix Candela (1910–1987). Although he was born and trained as an architect in Spain, he developed the most important part

FIGURE 52 Rashid Karami International Fair, Tripoli, Lebanon, Architect Oscar Niemeyer
CREDIT: BY ROMANDECKERT – OWN WORK, CC BY-SA 4.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=73681999

of his career in Mexico, after having been exiled by the Spanish Civil War, for which he may be considered an Ibero-American architect.

In Mexico, Candela developed a system of lightweight roofs through very thin shells of reinforced concrete, with which he was able to cover very large spans at low cost and at the same time endowing the buildings with attractive and original forms derived from the shape of their vaults that which was the basis of their structural resistance.

Based on this design logic, in the mid-1960s, he designed the Palacio de los Deportes (Sport Palace) that would be used in the 1968 Olympic Games in Mexico City.

Based on this experience, Candela was invited to the project competition for the construction of a sports center in the recently independent state of Kuwait that had just become an independent state in 1961 and, based on the prosperity of oil, planned this type of large-scale construction, intended for

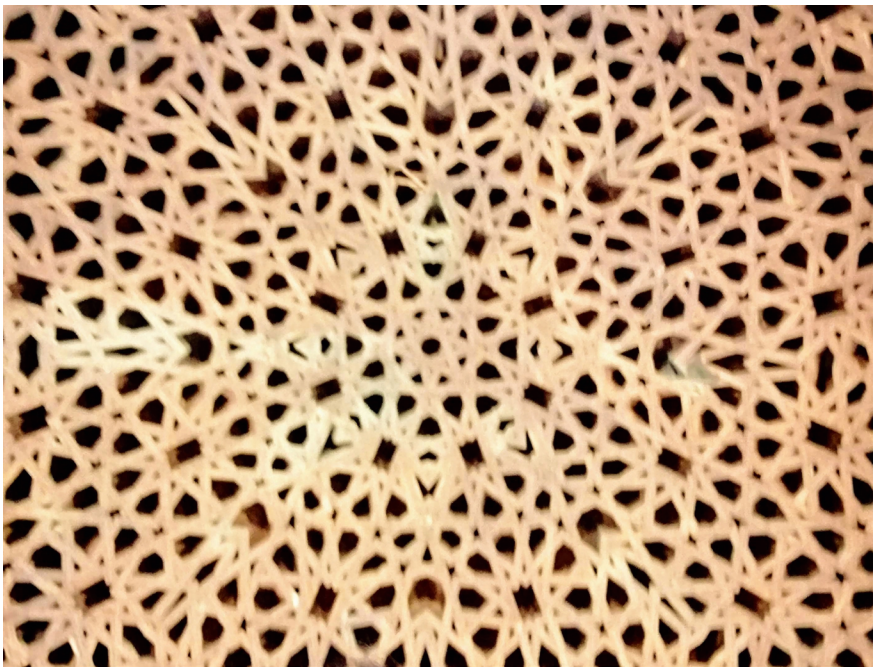

FIGURE 53 St. Francis Convent dome, Lima, Peru
CREDIT: PHOTO BY FERNANDO LUIS MARTÍNEZ NESPRAL

the celebration of the Pan-Arab games of 1974. The main contemporary specialists in the construction of large sports centers were invited to the competition, among them the Italian Pier Luigi Nervi, who had carried out that of the Olympic Games in Rome in 1960, Kenzo Tange who had done the same in Tokyo 1964, Candela who, as we have mentioned, had taken care of the one in Mexico 1968 and Frei Otto who was planning the ones in Munich 1972.

Candela's proposal takes up the morphology of the dome of the Mexican Sports Palace, but in this case, he adapts the geometry to make a set of hexagons visually similar to the star systems in Islamic ornamentation, with which the result in a very similar to the Mudejar domes of the white carpentry, like the one found in the Convent of San Francisco in Lima.

Another of the "adaptations" carried out by Candela for his Kuwaiti project was the resolution of the volumes of the stands with the appearance of a typical fortification of medieval Islamic architecture; thus, the entire complex would look like a great castle in the middle of the desert covered by a gigantic dome of starry and polygonal geometry. Typologically, there are no changes between this project and the one built in Mexico, but in appearance the author

seeks to assimilate the shape to traditional forms of Middle Eastern culture in an orientalist-exoticist key because, due to the monumental scale and use, the materials and constructive logic are very different from those used in medieval Islamic architecture, which acts as a source of inspiration, and the final object is a kind of combination between the illustrations of Aladdin's stories and a futuristic image typical of the time. Finally, the complex was never built.

A decade later, in 1978, Candela met the architect Ziyād Zaydān, who had the possibility of getting work in Saudi Arabia, and set up an office in Athens to take charge of different projects. Initially, Candela's team was proposing to the Ministry of Information in Riyadh. The proposal was raised by Zaydān, who was acting as an intermediary, and there are no records that it has progressed; at least it was not executed with the intervention of Candela.

The following year and in the same scheme, the team based in Athens was in charge of projecting a series of diverse buildings, such as housing complexes, a mosque, and other facilities for the town of Yanbuʿ, also in Saudi Arabia. In this case, the same thing happens as in the previous one, so if any of these ideas were materialized in whole or in part, it did not involve the direct intervention of Candela or his team.

In the case of Candela, some of the considerations that we have already raised for Niemeyer are repeated. In principle, his project production for the Middle East, beyond not having materialized in any case, is still important due to the magnitude of the projects and even due to the fact that he was based in the Eastern Mediterranean area for two years for these job opportunities. Despite this, although this has been mentioned in the bibliography on Candela, the subject appears more as a detail in a text more linked to personal memories and not as an analysis of this part of his work itself.

On the other hand, and going specifically to Candela's projects, it can also be observed, as was the case with Niemeyer, that the author proposes "adaptations" to his usual project logic to approximate the forms and aesthetics that he imagines appropriate for the region.

Now I will develop some reflections about the work of the Mexican architect Ricardo Legorreta (1931–2011) that I have previously mentioned several times in this book. His work has been defined by the global diffusion of the aesthetics conceived by Luis Barragán (1902–1988). His buildings are characterized by the intense colors of the Mexican tradition implemented within the framework of a game of prismatic volumes with rustic textures that refer in the same way to Ibero-American colonial architecture as to that of the Mediterranean. This is how Loredo Cansino explains Barragán's connection to the Mediterranean: "… it is very clearly reflected in his library, where an extensive collection

FIGURE 54 Carnegie Mellon University, Qatar, Architect Ricardo Legorreta
CREDIT: BY FREDERICKNORONHA – OWN WORK, CC BY-SA 4.0, HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=130087327

dedicated to Mediterranean, Moroccan, and North African culture stands out."[3] Also, as a continuation of the colonial legacy and the Barraganian aesthetic, Legorreta's designs use patios, fountains, and latticework that evidently allude to Islamicate architecture and its presence in Ibero-America.

Legorreta's work has focused primarily on large-scale works, being the author of hotels, shopping centers, office buildings, factories, and museums, both in Mexico and in the most diverse regions of the globe. This global work has also led him to produce a considerable number of projects for the Islamic countries that constitute, without a doubt, the least known part of his work.

The architect has a series of very outstanding works dedicated to university campuses in the Middle East. These include the Student Center for Hamad bin Khalifa University, Texas A&M University School of Engineering, Carnegie Mellon University, Georgetown University, all in Qatar, as well as the American University in Cairo campus in Egypt.

3 See: Loredo Cansino, R. (2021) "Más allá de las influencias. Luis Barragán y los procesos interculturales" in: *Anales del Instituto de Arte Americano e Investigaciones Estéticas*, number 51. Buenos Aires: IAA/FADU/UBA p. 132.

In all of them, as in the other projects described above, prismatic volumes, patios, latticework, fountains, and intense Barraganian colors are used, although in these cases they have been converted into large volumes typical of institutional buildings. The successful adaptation in the Islamic culture context is also constant in them.

It could be said as preliminary conclusions that common themes can be observed in Legorreta's work in the Middle East to those already presented previously for Niemeyer. Proposed buildings are based on guidelines remarkably like his Ibero-American canonical work. But in his projects, it is evident how the originally Arabic design strategies of colonial architecture "return" very successfully to their Middle East of origin through the American reinterpretation.

To conclude, I want to highlight that some projects by Niemeyer, Candela and Legorreta are very attractive and show how the application of forms and project systems generated in Ibero-America, works perfectly in the context of the Islamic countries thus demonstrating the multiple architectural links between both cultures originated by the Arab component of the Iberian Peninsula and the impact of this tradition in America from the conquest and colonization.

The naturalness with which Legorreta's Barraganian Mexicanism is inserted in Doha or Cairo, as well as the white prisms and porticoes of the Portuguese tradition reinterpreted by Niemeyer, finds a very appropriate context in Lebanon is proof of this. Also, Candela's experimentations with pointed stars in large structures show how he explored the connections between his works and the Middle East region.

Finally, the fact that an architectural experience such as that of Ibero-Americans in the Islamicate culture, so notorious in volume and significance, is so little known deserves attention. This reveals a central problem of the colonial system still in force, whereby dependency ties with the Western world are systematically emphasized while connections without hierarchies in the South-South context are left aside, ignored, or hidden. One of the main goals of this book is to make a contribution in order to reverse this tendency and explore multiple global and inter-regional architectural connections in the South-South context.

Afterwords: Not Everything Is Explained by the Arab Component, but Little Can Be Explained without It

This book is focused on posing a conceptual problem, the existence of an Arab component in Ibero-American architecture that, from the colonial, Eurocentric, and orientalist point of view, has been greatly ignored or at least undervalued by considering it as a rare exotic and foreign influence.

That is why I highlighted the social and cultural connections based on a linguistic approach instead of giving more and more examples, which would convert this book into a catalog, something necessarily incomplete given the countless number of buildings where this component is visible in Ibero-America.

So, I propose to consider this Arab component in Ibero-American culture, particularly focusing on Architecture as a structural condition, something that impacts almost all architectural production in the area in different ways, since its presence is an essential part of the culture and even of the language, the main cultural vehicle.

With a systemic vision of the matter, I consider that knowing the system rules, its origins, purposes, and tools would be more useful for the reader. That is, unraveling Arab design criteria that are present in Ibero-American culture. Understanding these logics, examples will appear in front of us daily.

It is clear that the Arab component is not the only factor that explains Ibero-American architecture; in fact, it is not even the main one. Among the equally undervalued factors, there are other equally important ones, such as the role of women, disadvantaged classes, American natives, Asian and Afro-descendants, and several more. The traditional historical narrative has always focused on white, rich men, setting aside almost all the rest. This book aspires only to put one more brick in the collective construction of a more accurate and fairer architectural history of the region that necessarily shall include those other forgotten components.

But, back on my focus topic and following the same logic as I have explained, I am convinced that if we ignore the Arab component, any explanation of Ibero-American architecture is not complete. The interpretations that ignore it leave significant gaps since they pass over some of the most important architectures and architects of the region, meanwhile always pointing to the same few canonical works, and only focusing on some of their facets. "A half-truth is a whole lie," as said the proverb.

 | DOI:10.1163/9789004756557_013

For example, the majority of the historiography explaining Ibero-American Baroque focuses on altarpieces or façade ornamentation but omits the plan layout and its spatial impact, the construction processes, or the Arabic roofs in those buildings. Is true that the altar is Baroque, but it's emplaced in a space totally defined by an Arabic roof, with Arab-inspired tiles covering the walls. So, can we honestly identify that church as Baroque?

In my opinion, the only way to build an architectural history that is fairer, more complete, and that encompasses complexities and contradictions[1] natural to our species is to study architectural history as an intercultural process in which several components are crossed, defining hybrid solutions. The case study that I developed in Chapter 9 is a clear example of the importance of these crosses. We need to focus more on all those forgotten components.

That is why I am convinced that the task that I propose in this book is fundamentally oriented toward architectural researchers focused on Ibero-America. Although the topic is connected to Arab culture, it is also of interest to both parties, and I hope that my Arab colleagues and other people interested in Arab culture enjoy this book as a tool to increase the relationship between both cultures. But, apart from that, I consider it essential that those of us who study Ibero-American history rethink our subject, considering this facet. This is to say, knowing more about our Arab component goes beyond connecting us with the Arab culture. It basically explains who we are, and therefore, it is primarily our problem.

The second argument I proposed in this book is based on my point of view as an architect. I am convinced that the "design criteria" of Arab origin are a clue to a better comprehension of Ibero-American Architecture. We need to search in architecture beyond the stylistic approach, and we could see a new universe of design ideas that express clearly what is desirable and what is considered wrong in each culture, and, in my opinion, these ideas or criteria are independent of the styles or the appearance we can see in the surface. In this way, an apparently neo-classical, or even modernist building, cataloged by his stilemas, may include other non-Western design criteria like the Arab one that I developed in this book, but also Native, Afro, Asian, or many different alternatives that widen our analysis.

Finally, I hope this book can invite those readers interested in Ibero-American architecture to discover in each area, each city, and each building how the Arab component is present. I have studied this topic for more than

1 I always refer to Robert Venturi's marvelous book, from which I have learnt a lot and consider it an essential tool, not only to understand architecture but also culture. See: Venturi, R. (1966) Complexity and contradiction in contemporary architecture. New York: MoMA.

three decades and can ensure that there is not a single day that I have not made a new discovery.

The English expression "I wish" is said in Spanish as "Ojalá." This word is an Arabism originated in the Spanish Arabic *law šá' Allāh*, derived from classic Arabic *wa-šā' Allāh* (وشاء الله) that means "If God will."[2] So, to finish, I hope that this book could contribute to a better comprehension of Ibero-American Architecture from the study of one of its forgotten components. *Ojala!*

2 See: https://www.rae.es/drae2001/ojal%C3%A1. Accessed on June 20th 2023.

Architectural Works

Chapter 1

1. Pink Palace, São Paulo, Brazil (1927), Architect Unknown
2. Or Torah Synagogue, Buenos Aires, Argentina (1930), Architect Unknown
3. Larreta house, Buenos Aires, Argentina (1916), Author Enrique Larreta
4. Spanish Casino, Iquique, Chile (1904), Architect Miguel Retornano
5. Sociedad Española de Socorros Mutuos, Río Cuarto, Argentina (1923), Architect Unknown
6. Noel house, Buenos Aires, Argentina (1922), Architect Martín Noel
7. Alhambra Palace, Granada, Spain (first construction from the 7th century, but the most important ones from the 14th century), Architect Unknown
8. Juárez Theater, Guanajuato, México (1903), Architect Antonio Rivas Mercado

Chapter 2

1. Convent of San Francisco, Quito, Ecuador (1535–1650), Architect Unknown
2. Convent of Santo Domingo, Quito, Ecuador (1540–1581), Architect Unknown
3. Church of San Pedro Apóstol in Andahuaylillas, Peru (16th century), Architect Unknown
4. Mission Church of Yaguaron, Paraguay (16th century), Architect Unknown

Chapter 3

1. The Giralda tower, Seville, Spain (12th century), Architect Unknown
2. The al-Kutubiyya Tower, Marrakech, Morocco (12th century), Architect Unknown
3. The Ṣawmaʿat Ḥassān Tower, Rabat, Morocco (12th century), Architect Unknown
4. Ben Youssef's Madrassa, Marrakech, Morocco (14th century), Architect Unknown
5. Pilatos house, Seville, Spain (15th–16th centuries), Architect Unknown
6. Alhambra Palace, Granada, Spain (first construction from the 7th century, but the most important ones from the 14th century), Architect Unknown

7. Royal Alcazar, Seville, Spain (14th century), Architect Unknown
8. Musoleum of Abū Zamāʿ al-Balawī, Kairouan, Tunisia (17th century), abua Architect Unknown
9. Mausoleum of Sīdī ʿAbīd al-Ghiryānī, Kairouan, Tunisia (started in the 14th century but most important spaces built in the 17th century), Architect Unknown
10. Convent of Santo Domingo, Lima, Peru (started in 1536, tiles from 1604–1606), Architect Unknown
11. Convent of San Francisco, Lima, Peru (started in 1535, tiles from 1620), Architect Unknown
12. Convent of San Francisco, Quito, Ecuador (1535–1650), Architect Unknown
13. Church of St. Francis, Salvador do Bahia, Brazil (1708–1755), Architect Unknown
14. Carmo Basilic, Recife, Brazil (1767), Architect Unknown
15. Independence Station, Metro Line C, Buenos Aires, Argentina (1934), Architects Martín Noel and Migue Escasany
16. Otamendi-Miroli Sanatorium, Buenos Aires, Argentina (1928), Architect Unknown
17. Radical Party house, Buenos Aires, Argentina (1938), Architect Martín Noel
18. House in Butanta, São Paulo, Brazil (1964), Architect Paulo Mendes da Rocha

Chapter 4

1. Torre Tagle Palace, Lima, Peru (1735), Architect Unknown
2. Osambela house, Lima, Peru (1803), Architect Unknown
3. del Oidor house, Lima, Peru (17th century), Architect Unknown
4. Goyeneche house, Lima, Peru (1771), Architect Unknown
5. Riva Aguero house, Lima, Peru (1760), Architect Unknown
6. Al Sadat house, Cairo, Egypt (1679–1755), Architect Unknown
7. Gayer Anderson Museum, Cairo, Egypt (1540–1632), Architect Unknown
8. Bayt Al-Suhaymi, Cairo, Egypt (1648), Architect Unknown
9. Alhambra Place, Granada, Spain (first construction from the 7th century, but the most important ones from the 14th century), Architect Unknown
10. Archbishop's Palace, Lima, Peru (1924), Architect Claude Antoine Sahut Laurent

11. Presidential Palace, Lima, Peru (1926–1938), Architects Claude Antoine Sahut Laurent and Ricardo de Jaxa Malachowski
12. New City Hall, Lima, Peru (1943–1944), Architects Emilio Harth Terré, José Álvarez Calderón, and Ricardo de Jaxa Malachowski
13. Caretas building, Lima, Peru (1940), Architect Unknown
14. Union Club building, Lima, Peru (1942), Architect Unknown
15. Royal Guard building, Lima, Peru (1940), Architect Unknown
16. Noel house, Buenos Aires, Argentina (1922), Architect Martín Noel
17. Capuchin nun's convent, Mexico City, Mexico (1953), Architect Luis Barrgán
18. University City of Caracas, Venezuela (1940–1960), Architect Carlos Raúl Villanueva
19. Colina Velha at UNB Campus, Brasília, Brazil (1961–1962), Architect Joao de Gama Filgueiras Lima (Lelé)
20. School of Architecture, Design, and Art, National University of Asunción, Paraguay (2018), Architects Solano Benítez and Gloria Cabral (Gabinete de Arquitectura)
21. Brick house, Rosario, Argentina (2014), Architect Diego Arraigada,
22. Sieve stack house, Camapana, Argentina (2003), Architect Francisco Cadau
23. Alorda house, Rosario, Argentina (1968), Architect Jorge Scrimaglio

Chapter 5

1. Alhambra Palace, Granada, Spain (first construction from the 7th century, but the most important ones from the 14th century), Architect Unknown
2. Aljaferia Palace, Zaragoza, Spain (11th century), Architect Unknown
3. Great Mosque, Seville, Spain (12th century), Architect Unknown
4. Great Mosque, Cordoba, Spain (from 8th to 12th centuries), Architect Unknown
5. Convent of San Juan Evangelista in Culhuacan, Mexico City, Mexico (1607), Architect Unknown
6. Convent of San Nicolás de Tolentino in Actopan, Mexico (1550–1560), Architect Unknown
7. Convent of San Miguel in Huejotzingo, Mexico (1525–1570), Architect Unknown
8. Convent of Santo Domingo de Guzmán in Oaxtepec, Mexico (1530–1540), Architect Unknown

9. Convent of San Andrés Apostol in Epazoyucan, Mexico (1541), Architect Unknown
10. Convent of San Francisco, Santiago, Chili (1562–1618), Architect Unknown
11. Convent of La Merced, Buenos Aires, Argentina (1721–1779), Architect Unknown
12. Convent of Las Catalinas, Buenos Aires, Argentina (1738–1745), Architect Unknown
13. Valdehoyos Marquis's Palace, Cartagena de Indias, Colombia (1765), Architect Unknown
14. Juan Manuel de Rosas' "mansion" in Palermo, Buenos Aires, Argentina (1838), Architect Felipe Senillosa
15. San José Palace, Concepción del Uruguay, Argentina (1848–1860), Architect Unknown
16. Larreta house, Buenos Aires, Argentina (1916), Author Enrique Larreta
17. Acelain ranch house, Tandil, Argentina (1922–1924), Architect Martin Noel
18. Arab Palace Bath house, Buenos Aires, Argentina (1902), Architect Antonio Menéndez
19. González Luna house (1928), Guadalajara, Mexico (1928), Architect Luis Barragán
20. Cristo house, Guadalajara, Mexico (1929), Architect Luis Barragán
21. Luis Barragán studio house, Mexico City Mexico (1947), Architect Luis Barragán
22. "Los clubes", Atizapán, Mexico (1964), Architect Luis Barragán
23. Gilardi house, Mexico City, Mexico (1976), Architect Luis Barragán
24. Environmental Axis Jimenez Avenue, Bogotá, Colombia (1997), Architects Rogelio Saloma and Luis Kopec
25. Illustrious guest house of Colombia, Cartagena de Indias, Colombia (1978), Architect Rogelio Saloma
26. Virgilio Barco Library, Bogotá, Colombia (2001), Architect Rogelio Saloma
27. Vilamajó house, Montevideo, Uruguay (1928–1930), Architect Julio Vilamajó
28. Spain Square, Córdoba, Argentina (2019), Architect Miguel Angel Roca
29. MARCO Museum, Monterrey, México (1991), Architect Ricardo Legorreta

Chapter 6

1. Convent of San Francisco, Lima, Peru (started in 1535), Architect Unknown
2. Convent of Santo Domingo, Lima, Peru (started in 1536), Architect Unknown

3. Convent of San Francisco, Quito, Ecuador (1535–1650), Architect Unknown
4. Convent of Santo Domingo, Quito, Ecuador (1540–1581), Architect Unknown
5. Convent of San Francisco, Santiago, Chili (1562–1618), Architect Unknown
6. Convent of San Nicolás, Actopan, Mexico (1550–1560), Architect Unknown
7. Convent of La Merced, Buenos Aires, Argentina (1721–1779), (Architect Unknown)
8. Torre Tagle Palace, Lima, Peru (1735), Architect Unknown
9. Convent of San Juan de los Reyes, Toledo, Spain (1478), Architect Juan Guas
10. Main Hall, University of Alacalá de Henares, Spain (1516–1520), Architect Unknown
11. Cathedral of Teruel, Spain (12th and 13th centuries), Architect Unknown
12. Royal Alcazar, Seville (14th century), Architect Unknown
13. Experimental house in tapia, San Lorenzo, Bolivia (2020), Architects Kaiser studio
14. Chapel in Jungapeo, Mexico (1986), Architect Carlos Mijares Bracho
15. "El Arca" house, in Maldonado, Uruguay (2002), Architect Giancarlo Puppo

Chapter 7

1. Torre Tagle Palace, Lima, Peru (1735), Architect Unknown
2. Casa Colorada, Santiago, Chili (1769–1779), Architect Unknown
3. Sobremonte house, Cordoba, Argentina (1752), Architect Unknown
4. Convent of Las Descalzas Reales, Madrid, Spain (1557–1564), Architect Unknown
5. Convent of Las Teresas, Córdoba, Argentina (1628), Architect Unknown
6. Santa Casa de Ejercicios Espirituales, Buenos Aires, Argentina (1799), Architect Unknown
7. Anasagasti house, Buenos Aires, Argentina (1870), Architect Unknown
8. Larreta house, Buenos Aires, Argentina (1916), Author Enrique Larreta
9. Church of Fátima, Martinez, Argentina (1954), Architects Claudio Caveri and Eduardo Ellis
10. Ellis house, Pacheco, Argentina (1958), Architects Claudio Caveri and Eduardo Ellis
11. Barragán house and studio, Mexico City, Mexico (1947), Architect Luis Barragán

12. Gilardi house, Mexico City, Mexico (1976), Architect Luis Barragán
13. Fifteen patios house, Mexico City, Mexico (1998), Architect Ricardo Legorreta
14. Ghezzi house, Lurin, Peru (1983), Architect Juvenal Baracco
15. Illustrious guest house of Colombia, Cartagena de Indias, Colombia (1978), Architect Rogelio Saloma

Chapter 8

1. Convento f Santo Domingo, Lima, Peru (started in 1535), Architect Unknown
2. Torre Tagle Palace, Lima, Peru (1735), Architect Unknown
3. Government house, Tlaxcala, Mexico (1545–1711), Architect Unknown
4. Aljafería Palace, Zaragoza, Spain (11th century), Architect Unknown
5. Church of the Holy Virgin, Tobed, Spain (1356–1410), Architect Unknown
6. Independence Station, Metro Line C, Buenos Aires, Argentina (1934), Architects Martín Noel and Migue Escasany
7. "Damero" building, Campana, Argentina (2021), Architect Francisco Cadau
8. Brick house, Rosario, Argentina (2014), Architect Diego Arraigada,
9. Santa Fe Foundation building, Bogotá, Colombia (2016), Architects Mazzanti team
10. Teleton Rehab Center, Asunción, Paraguay (2010), Architects Solano Benítez and Gloria Cabral (Gabinete de Arquitectura)

Chapter 9

1. Mission church, Yaguarón, Paraguay (16th century), Architect Unknown
2. Church of San Atanasio, Villa de los Santos, Panama (1556–1559), Architect Unknown
3. Church of San Xavier, Chiquitos, Bolivia (1691), Architect Unknown.

Chapter 10

1. Mentouri University, Constantine, Algeria (1969–1972), Architect Oscar Niemeyer
2. Houari Boumediene Technological University, Bab Ezzouar, Algeria (1968), Architect, Oscar Niemeyer
3. La Coupole Stadium, Algier, Algeria (1972), Architect Oscar Niemeyer.
4. Rashid Karami International Fair, Tripoli, Lebanon (1962), Architect Oscar Niemeyer.
5. Sports City, Kuwait City, Kuwait (1968), Architect Felix Candela.
6. HBKU-Carnegie Mellon University, Doha, Qatar (2009), Architect Ricardo Legorreta.
7. Student Center, Hamad bin Khalifa University, Doha, Qatar (2011), Architect Ricardo Legorreta.
8. Texas A&M University School of Engineering, Doha, Qatar (2007), Architect Ricardo Legorreta.
9. School of Business, Georgetown University, Ar-Rayyan, Qatar (2011), Architect Ricardo Legorreta.
10. American University in Cairo new campus, Egypt (2008), Architect Ricardo Legorreta.

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Index of Names

Index of Places

This book examines five centuries of Ibero-American architectural history through the lens of its Arabic architectural component. It seeks to illuminate an integral part of Ibero-American culture—one that is frequently ignored and undervalued as merely an exotic influence.

Fernando Luis Martínez Nespral's A History of the Arab Component in Ibero-American Architecture *stands as a landmark contribution to our understanding of the region's architectural heritage, inviting us to see the world through new eyes and to embrace the rich tapestry of cultures that have shaped our shared landscape. It is a book that will resonate with scholars and enthusiasts alike, inspiring us to explore the hidden corners of history and celebrate the diversity that lies at the heart of Ibero-America's architectural identity.*
– Fernando Luiz Lara, Professor of Architectural History and Theory at the Weitzman School of Design, University of Pennsylvania

Fernando Luis Martínez Nespral is Professor of Architectural History at the School of Architecture, Design, and Urbanism, University of Buenos Aires. His research has concentrated on the intersections between the Islamicate world and Ibero-America within the field of architecture.

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