

Mexican architecture of the twentieth century: the intersection of architectural theory and practice.



Enrique del Moral, Mario Pani, Carlos Lazo and others, Ciudad Universitaria, Mexico City, 1946. Image by Guillermo Garma

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The primary data collected in the interviews with Mexican academics and architects will remain confidential and unavailable to the general public. The interviews have been removed from this version of the PhD Thesis.

Declaration

I hereby declare that some portions of the work in this PhD thesis have been published as part of a chapter in the edited book *The Territories of Identity. Architecture in the Age of Evolving Globalization*. In addition, some of the ideas were presented at various conferences in the UK. I am solely responsible for the ideas, data collection and critical analysis presented in these outputs, which were produced under the supervision of Professor Soumyen Bandyopadhyay, Dr. Michelle Pepin and Dr. Ana Souto. I also declare that the work in this thesis was done in accordance with NTU's regulations and that all the material that contributed to the construction of the PhD thesis has been properly identified by references.

Conference Papers:

GARMA MONTIEL, G., 2008. Post-Conflict Mexico City: the Spaces of Globalisation. In the *Society of Latin American Studies conference* at Liverpool University from the 28th to the 30th March 2008.

GARMA MONTIEL, G., 2010. The commemoration of the bicentennial of Mexican independence: a new landmark for the city. In the international conference *The Cultural Role of Architecture* at the University of Lincoln from the 23rd to the 25th June 2010.

GARMA MONTIEL, G., 2011. Constructing symbols of national identity in Mexico City: from La Columna de la Independencia (1910) to the Bicentennial Arch (2010[1]). In the Research Conference at Nottingham Trent University in July 2011.

GARMA MONTIEL, G., 2012. Paseo de la Reforma: Mapping the history of a nation. In the international conference *Theoretical Current II. Architecture and its Geographical Horizons* at University of Lincoln on the 4th- 5th of April 2012.

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A handwritten signature in black ink, appearing to read 'Garma Montiel', with a stylized, cursive script.

Guillermo H. Garma Montiel

5 June 2025

Date

Abstract

This PhD Thesis explores the convergence of architectural theory and practice in Mexico in the twentieth century by examining the influence of European thinking on Mexican architecture. The research aims to determine the status of Mexican architectural theory in the late twentieth century by focusing on the declining connectivity of theory and practice and questioning theory's role in creating Mexican architecture at the beginning of the twenty-first century. Specifically, whether the intersection of theory and practice fosters critical discursive frameworks that mediate architectural thinking and production within broader political, social and cultural contexts. The project's literature review encompasses publications on late twentieth-century architectural theory, Mexican architectural history, and the construction of Mexican identity. Data were collected through semi-structured interviews with prominent Mexican architects and scholars who provide insights into Mexico's theoretical, practical and academic architectural contexts.

The thesis underscores the key role of architectural theory in shaping architecture and contends that it remains vital for developing positions that address contemporary challenges and concerns. In Mexico, European modernism influenced architecture from 1920 to 1960, providing a robust theoretical and ideological framework that defined Functionalism and affected José Villagrán's architectural theory; these two discourses defined Mexican architecture until the 1960s. From the 1970s onwards, European and American postmodernism had a limited impact on Mexican architecture, and multiple perspectives emerged in the country – a new architectural monumentality, regionalism and individual formal tendencies. This investigation reveals that towards the new millennium, the intersection of theory and practice diminished, and the country adopted pragmatic solutions to resolve its needs, leading to considering theory as an accessory. The research findings recognise the importance of the intersection of theory, architecture and practice in the twentieth century. It highlights the importance of adopting a broader definition of architectural theory and reconnecting theory with practice to promote an increasingly reflective and critically engaged architectural culture in Mexico at the beginning of the twenty-first century.

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List of Abbreviations

ASC: Academia de San Carlos

CU: Ciudad Universitaria

ENA: Escuela Nacional de Arquitectura

ENBA: Escuela Nacional de Bellas Artes

ESC: Escuela Superior de Construcción

ESIA: Escuela Superior de Ingeniería y Arquitectura

IIE: Instituto de Investigaciones Estéticas

INBA: Instituto Nacional de Bellas Artes

IPN: Instituto Politécnico Nacional

RASC: Real Academia de San Carlos

SAM: Sociedad de Arquitectos Mexicanos

UAM: Universidad Autónoma Metropolitana

UNAM: Universidad Nacional Autónoma de México

UNM: Universidad Nacional de México

Introduction

i.1 Chapter Summary

The chapter's goal is to contextualise the research by presenting a general explanation of the topic, and to provide the rationale for the project's main focus. Section i.2 begins by stating the problem and providing an overview of the leading arguments to be developed in the thesis. Section i.3 briefly describes the central area of investigation and outlines the research focus within the context of Mexican architecture. The aims and objectives of the project are established in Section i.4, together with the way these have been addressed in each of the chapters of the PhD thesis. The methodology and data collection are outlined and explained in Section i.5; finally, Section i.6 provides an overview of the chapters forming the PhD thesis and connecting them to the primary research objectives.

i.2 Statement of the Problem

This thesis investigates the decreasing role and connectivity between theory, architectural design and praxis in Mexican architecture at the end of the twentieth century and beginning of the twenty-first century, and the adoption of a pragmatic approach to theory that searches for a direct application of a method, rather than the speculative and self-reflective endeavours implicit in architectural thinking. To perform a contemporary investigation of the Mexican architectural context, the PhD constructs a historical understanding of the country's ideological constitution. The historical narrative begins after the Spanish Conquest and finishes with the last armed conflict in the country – the 1910 War of Revolution.

The author's position, and leading argument, is that the intersection between theory and architectural practice is important for the discipline as architectural theoretical thinking mediates the relationship between the world, design and practice. Architectural theory generates self-reflection about the nature of architectural activities, and it contributes to the development of an architectural position *vis-à-vis* the challenges of the

present century. The PhD thesis does not focus on any particular theory, but it deals with the concept of theory as a way to explain and understand the world we inhabit. This is an important clarification as every field of knowledge constructs theories using different approaches, and uses various methods to comprehend the world's natural, cultural and social phenomena. In architecture, theories often emerge from the architect's personal knowledge, experiences and interests, which are articulated as paradigms to help understand larger conditions. Therefore, the thesis will contribute to the debate by arguing that a closer relationship between practice and theory must be promoted to create architecture, as tangible and intangible expressions, that reflects the complex contemporary context and maintains the profession's currency. The project asserts that architectural theory should be considered an interdisciplinary pursuit that forms an integral part of architecture; therefore, the scope of our understanding of architectural theory should increase to accommodate topics dealing with contemporary concerns from theoretical, practical and technological areas of knowledge. Mexico serves as a case study to examine the intersections of architectural theory and practice in the twentieth century. The project argues that architectural theory is a key activity in thinking, designing, and making architecture that fulfils the needs of the twenty-first century.

i.3 Brief Description of the Research Topic and Research Focus

The PhD thesis explains the construction of the current definition of architectural theory by reflecting on European and American sources, and questions whether extrapolating this paradigm into the Mexican context is feasible in the twenty-first century. To address this topic, the PhD thesis will investigate, analyse and critically reflect on the relationship between theory and architecture that emerged in the 1970s from the centres of architectural and theoretical power. These intersections were captured in several architectural theory anthologies (Nesbitt 1996; Leach 1997; Hays 2000), compilations (Sykes 2010; Crysler, Cairns and Heynen 2012) and architectural theory introductory books (Evers 2006; Mallgrave and Contandriopoulos 2008; Davies 2011; Smith 2012) that were published in the 1990s and 2000s. These publications generated a vivid debate about

the relationship between theory and praxis, tracing back the connections of critical theory and architecture to the 1960s. The architectural theory publications used in this PhD thesis were selected based on two criteria: i. their importance in capturing the theoretical debate at the end of the twentieth century, and ii. their well-defined geographical (Europe and USA) and temporal (1960s onwards) boundaries. These characteristics contributed to narrowing down the breadth of the investigation and allowed the PhD thesis to focus on the notion of theory rather than on a specific theoretical position. The PhD thesis relies on existing literature to establish the importance of the intersections between theory and architecture, and it helps to establish our current definition and understanding of architectural theory.

The investigation concentrates on the development of Mexican architecture and the role architectural theory played in its evolution during the twentieth century and into the twenty-first century. The country's historical narrative is constructed by using an interpretive historical account of the development of Mexico's identity and how the discipline reflected its transformations. The historic-architectural account is informed by existing literature by leading architectural historians, academics and architects (Blancarte 2007; Bartra 2006; Burian 1997; de Anda Alanís 2001, 2005 & 2006; Canales 2013; Cosío 2003; Ettinger-Mc Enulty 2008; Florescano 2002 & 2004; Toca Fernandez 1989 & 1990; Villagrán García 1952 & 1962).

The thesis examines the intersections between the socio-political and theoretical approaches in architecture that took place in Mexico in the twentieth century; this is structured by scrutinising and questioning three critical intersections in Mexico in the twentieth century: the adoption of Functionalism in architecture after the Mexican War of Revolution; the influence of José Villagrán García's architectural theory in the middle third of the twentieth century; and the decline of the intersection of theory and practice towards the end of the century. The PhD thesis focuses on two publications anchoring Mexican architecture in the last century: *Pláticas sobre Arquitectura: México, 1933* (1934) and *Teoría de la Arquitectura* (1964). The former captured the architectural discourses battling for dominance in the first third of the twentieth century, whereas the latter

encapsulated the architectural value system of José Villagrán towards the middle of the century. The PhD thesis will conclude with a critical reflection and commentary about the current state of the discipline in Mexico and the attempts made within the discipline to ignite a theoretical conversation that reflects the country's needs and ideals (Katzman 1999 & 2000; Aguilera 2004; López Padilla 2008 & 2011).

The focus on the intersection of theory and practice in Mexican architecture emerged from personal experience and academic interest in the subject area; a point of contingency is the fact that in Mexico, the notion of architectural theory is merged with architectural history, hence resulting in the country importing stylistic discourses rather than developing ideologies based on the particularities and history of the nation. Being Mexican, I experienced the lack of connectivity between architectural theory and practice during my years at university (1994-1999) and as a practising architect (1999-2003).

My interest in questioning architecture's essence and theoretical content is rooted in my final written dissertation: *Is Architecture an Art?* in 1999. The project investigated the well-established paradigm of 'architecture as an art', and it deconstructed the discipline's core principles to establish its true artistic value at the end of the twentieth century. As part of the research undertaken in 1999, I explored the connections between philosophy, aesthetics and Modernism in order to determine architecture's standing heading into the twenty-first century. This research led me to pursue two further years of study: a one-year diploma in Philosophy at the Universidad Iberoamericana in Mexico (1999-2000) and a one-year postgraduate MA in Architecture and Critical Theory at the University of Nottingham (2002-2003). The exposure to theory from outside architecture cemented my belief in the critical role of philosophy and theory in our everyday experience of architecture. Therefore, selecting Mexico as a case study derives from academic and personal interests.

i.4 Research Aims and Objectives

The aims and objectives of the research are as follows:

Aim 01: To determine the definition of architectural theory at the end of the twentieth century and examine the intersections of architectural theory and practice in Mexico post-1920 to understand the development of Mexican architecture in the twentieth century;

Aim 02: To critically reflect on the intersections of architectural theory and practice in Mexico at the start of the twenty-first century and question the role theory plays in the creation of architecture in Mexico.

These aims will be fulfilled by addressing the following objectives:

Objective 1: To investigate the intersection(s) of critical theory and architectural thinking in the construction of the definition of architectural theory at the end of the twentieth century, in order to identify the gaps and shortcomings of the current understanding of Western architectural theory.

Objective 2: To articulate a historical narrative of the formation of Mexico as a nation and examine the crossovers of the socio-political and cultural contexts and architecture, which led into the twentieth century.

Objective 3: To analyse the main publications and architects that developed the theoretical discourse in Mexico in the first half of the twentieth century, in particular, to reflect on the role of *Pláticas sobre Arquitectura* in the institutionalisation of Functionalism in the country.

Objective 4: To examine the heterogeneous context in the middle of the twentieth century and reflect on José Villagrán's architectural theory's impact on Mexican architecture in the second half of the twentieth century.

Objective 5: To critically assess the state of architectural theory in Mexico at the end of the twentieth century and examine its role in the production of architectural practice into the twenty-first century.

These objectives will be achieved through analysing existing literature and the ideas of notable architectural historians and by gathering primary data

through semi-structured interviews. Diagram 01 (overleaf) shows the breakdown of the aims and objectives in the PhD thesis' five chapters.

i.5 Methodology and Data Collection

The methodological approach used in the PhD thesis is composed of three key elements: i. an interpretive-historical reading of available literature collected in Mexico and the UK; ii. semi-structured interviews with well-established Mexican academics/architects; and iii. an auto-ethnographic approach based on the researcher's first-hand experience. This section aims to provide a rationale for how these methods are used to inform and support the development of the PhD thesis and to address the gap in knowledge concerning architectural theory and practice in Mexico at the end of the twentieth century. This section will highlight the benefits and strengths of the methodology, as well as the shortcomings and limitations encountered during the research process.

The PhD project uses qualitative research strategies as these are deemed the most appropriate for carrying out the investigation linked to the main topic of enquiry. At a basic level, qualitative research relies on "nonnumerical evidence, whether verbal (oral or written), experiential (film or notes about people in action) or artifactual (objects, buildings or urban areas)" and it "assumes a *subjective* reality and a view of the researcher as *interactive with the subject of inquiry*" (Groat & Wang 2002:25-26 – Groat & Wang's emphasis). Two key characteristics of qualitative research contribute to the methodological approach of this project: the first is the ability to build an understanding of the research topic based on its specific contextual conditions – cultural, political, socio-economic, physical, etc. The second is that it allows the researcher to identify issues about the topic of enquiry by taking into consideration the views, interpretations and experiences of the phenomena by the subjects embedded within that environment – this is referred to as an interpretive approach (Hennink, Hutter & Bailey 2020:10). The interpretive approach of qualitative research is appropriate for the PhD thesis as it allows to bring together various techniques to shape the understanding of the area of enquiry.

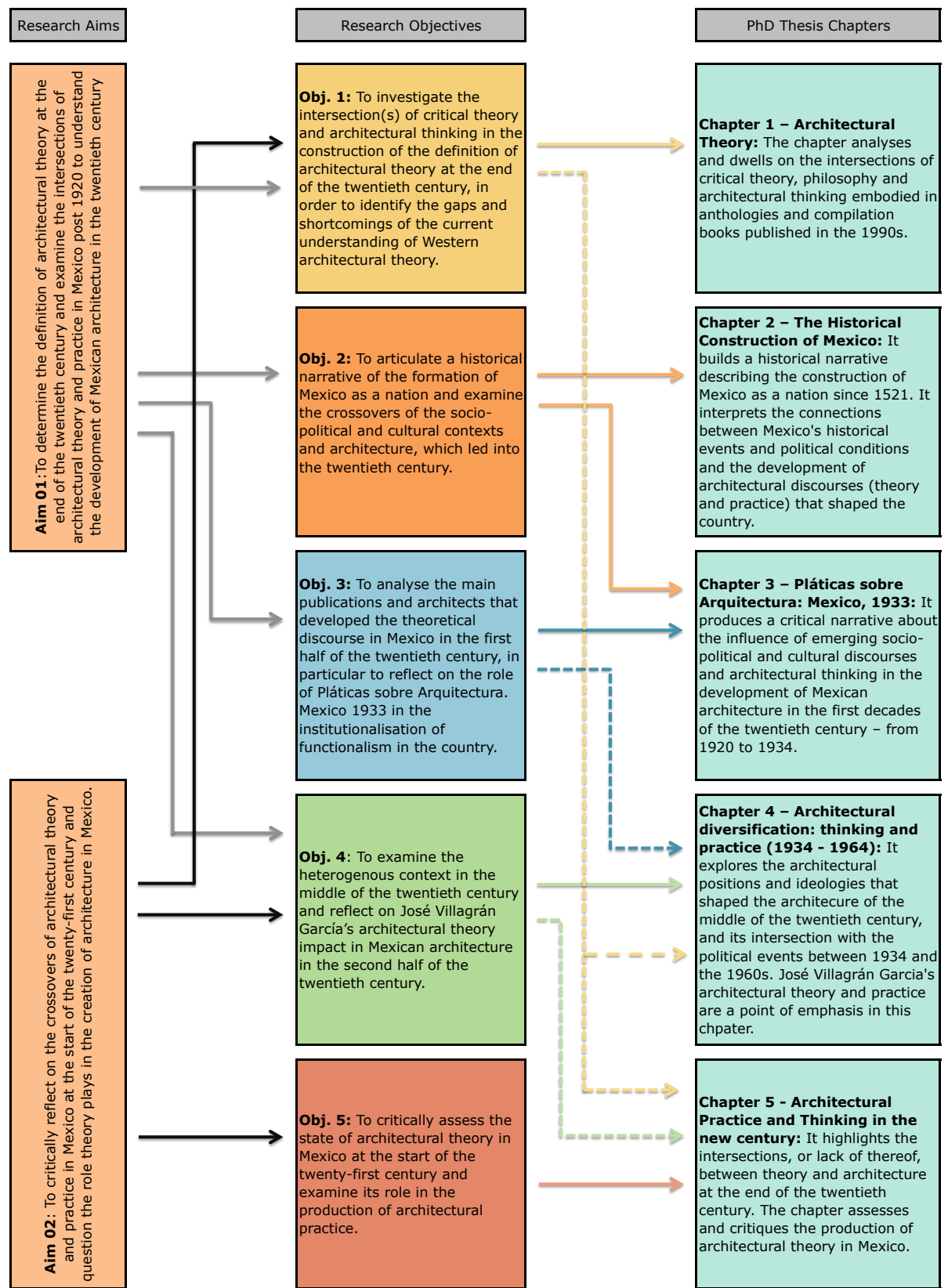


Diagram 01: Figure illustrating the breakdown of the Main Aim into five Objectives and how the objectives relate to each individual chapter.

The adoption of Mexico as a case study provides focus and direction to the project; qualitative research strategies support the construction of a comprehensive understanding and interpretation of the relationship between architectural theory and practice in Mexico in the twentieth century. Qualitative research techniques allowed the researcher to immerse himself in the topic of enquiry by: i. a literature review covering architectural theory literature published in the Anglo-Saxon and European contexts in the last two decades of the twentieth century; and collecting and reviewing architectural theory publications that influenced the development of Mexican architecture in the twentieth century; ii. conducting semi-structured interviews of leading Mexican architects and academics in August 2017 & August 2019; and iii. using the researcher's academic and practice experience in Mexico to shape the initial framework and arguments on the subject area.

It is relevant to note that the PhD's literature review does not rely on journals and magazines, as the majority of the publications from the middle to the end of the twentieth century addressed the professional and practical aspects of the discipline rather than the theoretical inclinations of the architects. Journals and magazines contributed to constructing an understanding of architectural production across the century, as they helped to fill the gaps left by historical accounts in books. This was achieved by publishing the work of less-known architects, forgotten buildings, unbuilt projects, competitions, formal attitudes, initial debates and architectural news. In particular, magazines contributed to the visual expression of architecture through photography and showcased collaborations between architects, artists, and graphic designers (Canales 2013:490-96). Nearly 40 journals and magazines were published in Mexico in the twentieth century, so this abundance of publications captured in a meaningful way the endeavours of the profession and the development of modern architecture in the country.

i. Literature Review:

Groat and Wang "define 'the literature' as a body of information, existing in a wide variety of stored formats, that has conceptual relevance for a particular topic of inquiry" (2002:46). For this PhD thesis, the body of information is related to architectural theory and the connection between

theory, architectural thinking and practice; the data was collected through reviewing anthologies, edited and single author books, conference volumes, academic papers, newspaper articles and magazine texts. The initial stage of the literature review revolved around key sources contributing to the construction of the understanding of architectural theory at the end of the twentieth century. Subsequently, the project focused on literature dealing with the construction of Mexican architectural identity from the 1920s onwards, and how the intersections between theory and practice developed as the century progressed. The last stage of the literature review concentrated on contemporary sources of architectural thinking in Mexico at the end of the twentieth century. The collection of literature about Mexican architecture, and its context, took place in four field trips to Mexico and the capital's main libraries: Biblioteca Nacional de México; Biblioteca Justino Fernández (Instituto de Investigaciones Estéticas); Biblioteca Lilia Guzmán y García (UNAM's School of Architecture); Biblioteca Francisco Xavier Clavigero (Universidad Iberoamericana); and the Biblioteca Vasconcelos (Table 01 – overleaf).

The scope of the literature review was initially broad as it covered publications in the European, Anglo-Saxon and Mexican contexts; subsequently, the literature review concentrated on the development of architecture in Mexico in the twentieth century and the evolution of the connectivity between theory and practice. The use of European and Anglo-Saxon written works highlighted their dominance towards the end of the twentieth century and the influence of foreign ideas in Mexico. As a result, the literature that informed chapter 1 was broad in scope as it dealt with the notion of theory rather than with a specific theory or group of theories. This is an important constraint for the investigation, as the intent of the PhD thesis is not to deal with particular theories, but with the concept of theory and its impact on architecture.

Chapters 3 and 4 were defined by specific publications connected with Mexican architecture at a particular time. In chapter 3, the book *Pláticas sobre Arquitectura: México, 1933* (1934) embodied the wide range of ideas that influenced the architectural debates in the 1920s and 1930s. In chapter 4, *Teoría de la Arquitectura* captured José Villagrán García's theoretical thinking, which influenced architectural thinking in the middle of

the century. Chapter 5 brings together recent literature and publications, as well as data collected from recent interviews; a key aspect highlighted in the chapter is the lack of theoretical publications in Mexico at the end of the twentieth century (Diagram 02 – overleaf and Appendix 1). As stated previously, the PhD thesis does not use journals and magazines, as only a limited number of these publications were concerned with theory and its systematic development.

Library Date of Visit	Biblioteca Nacional de México	Biblioteca Justino Fernández (IIE)	Biblioteca Lilia Guzmán y García (UNAM)	Biblioteca Francisco Xavier Clavigero (UI)	Biblioteca Vasconcelos	Interviews
January 2009			Collect and review initial material to inform the Project Approval.			
March- April 2010	Data collection from main libraries in Mexico City. The data was catalogued and emerging themes were synthesised and organised. Visits to key buildings in the capital, including the historical city centre.					
April 2011	Data collection from main libraries in Mexico City. Address initial gaps highlighted by the literature review. Continue with the organisation of emerging themes. Visits to key buildings.					
July- August 2017				Interviews with Prof. Alejandro Aguilera & Prof. Enrique de Anda Alanis in Mexico City. Data collection to address gaps in the literature. Visits to key buildings in Mexico City		
August 2019						Interview with architect Eduardo Cadaval in Barcelona, Sp.

Table 01: Data and Literature collection in Mexico 2009 - 2019

A historical account of the main journals and magazines could be built around a handful of publications. The narrative's starting point could be the

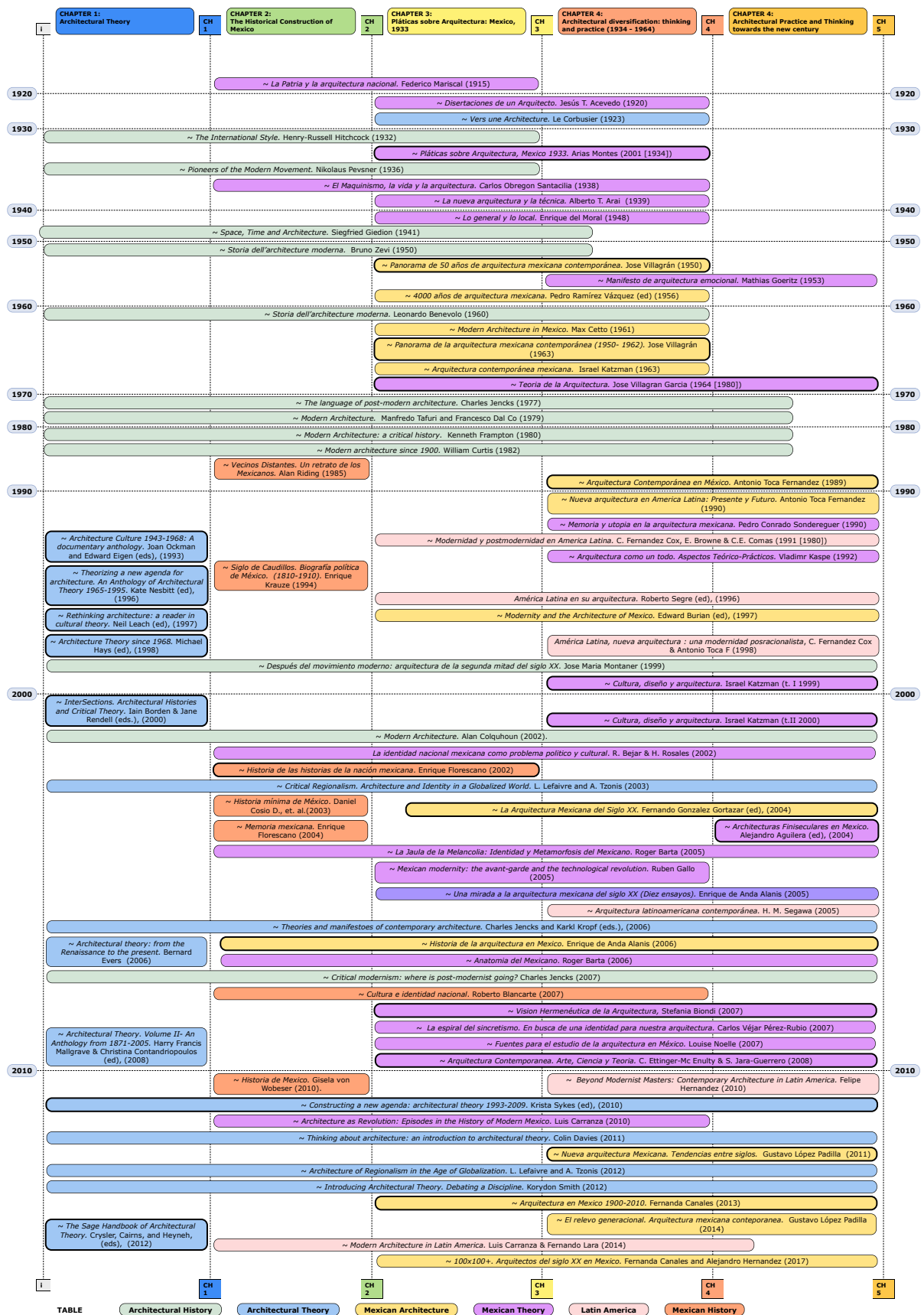


Diagram 02: Literature Review Map

beginning of the twentieth century with the first magazine in the country – *El Arte y la Ciencia* (1899-1911), which Nicolas Mariscal edited, and it embodied the debates defining the national architectural identity. In 1923, the magazine *El Arquitecto* (1923-27 & 1932-36) was founded by the *Sociedad de Arquitectos Mexicanos* (SAM) as a tool to represent and provide a voice to the profession. In the 1920s, Federico Sanchez Fogarty edited two magazines that exalted the simplicity of modern architecture and encouraged architects to use concrete to build the architecture of the future: *Cemento* (1925-30) and *Tolteca* (1929-32). The country's urban ideals were established in *Planificación* (1927-36), founded by Carlos Contreras, and *Edificación* (1934-52), which was published by the Escuela Superior de Construcción (ESC). Mario Pani edited the most influential and longest-tenured journal in the country – *Arquitectura/México* (1938-78), which published 119 volumes over 40 years and was the platform where the image of Mexican modern architecture was constructed (Leidenberger 2012:online). In the middle of the century, other journals explored multidisciplinary intersections between architecture and the arts, for example, Guillermo Rossell and Lorenzo Carrasco's *Espacios* (1948-60) and Carlos Somorrostro's *Arquitecto* (1976-83) (Canales 2013).

The journal *Cuadernos de Arquitectura* (1961-66 & 1970-86) was initially edited by Ruth Rivera and published by the Instituto Nacional de Bellas Artes (INBA) / Secretaria de Educación Pública (SEP); it contributed to creating the architectural culture of the country and to disseminating it nationally and internationally. Several magazines have dealt with the realities of the construction industry, such as *Construcción. Revista de Ingeniería, Arquitectura, Arte, Decoración e Industria* (1943-46), *En Concreto. Planificación, Urbanística, Arquitectura, Ingeniería, Arte* (1960-68), *Kabah: en Arquitectura, Arte, Construcción* (1963-65) and *Obras* (1973-today). The financial crisis of the 1980s impacted the publication of journals and magazines, and it produced a gap in the day-to-day publication of the country's architectural narrative in the decade. The 1990s witnessed a recovery for these publications as some journals returned to print, such as *Cuadernos de Arquitectura – Docencia* (1991-today), edited by the Facultad de Arquitectura de la UNAM. New journals were established, such as *Arquitectura Crítica/ArquiTectónica* (1997-today), edited by the Departamento de Arquitectura y Urbanismo of the

Universidad Iberoamericana, and *Bitácora Arquitectura* (1999-today), which is produced by the Facultad de Arquitectura de la UNAM. These three journals are attached to two of Mexico's most important Higher Education institutions and are academically peer-reviewed. Finally, since 1997, the magazine *Arquine* has been published, and it has aimed to rejuvenate the architectural culture of the country (Canales 2013).

The literature review used for the PhD thesis demonstrates limitations in the availability of books (single or multiple authors, edited volumes and academic publications) that deal with architectural theory in the Mexican context. The majority of the literature published in the last two decades of the twentieth century showcased the work of consolidated architectural figures or historical accounts and cataloguing of the country's architecture. Professor Alejandro Aguilera reinforced this notion as he pointed out that "Mexico's development in terms of theory and history is poor. The profession is at a stage of cataloguing and recording history, rather than analysing and producing theory" (2017). This limitation reinforces the main argument that the intersection of theory and practice in the country has weakened as a pragmatic approach has been adopted by the profession at large. This knowledge gap has been filled by importing ideas from other countries and the limited production of architectural theory publications at a national level.

ii. Semi-structured interviews:

The literature review was complemented by data obtained through semi-structured interviews carried out in 2017 and 2019. Interviews are a popular technique to obtain qualitative data, as they allow the researcher to study the topic from the perspective and experience of the people embedded within the context defining the research topic (Hennink, Hutter & Bailey 2020:116). Semi-structured interviews also offer flexibility by providing a pre-determined framework, or set of open-ended questions, but allowing the interviewer and interviewee to explore alternative topics that emerge as the interview unfolds (Proverbs & Gameson 2008:102). Despite the advantages afforded by this flexibility, semi-structured interviews can be challenging to control because it is easy to ask leading questions, and data collection and analysis are more complex (George 2022:online). To circumvent these disadvantages, the interviews for this

project were conducted using a fixed set of open-ended questions, which were asked in the same order. All the interviews were transcribed, and a thematic analysis was carried out to organise the main points and find relevant patterns within the responses. Subsequently, the emerging themes and new information were integrated into each pertinent chapter to support the development of the main arguments of the PhD thesis. The content and data extracted from the interviews were of particular relevance to chapter 5; hence, much of the knowledge obtained from these sessions is located in the final chapter of the thesis.

The three semi-structured interviews were conducted with leading Mexican academics and architects, who reflected on the current state and context of architectural theory and practice in Mexico. The transcripts of the interviews are included in the Appendices section at the end of the PhD thesis. Professor Alejandro Aguilera is an architect, academic and researcher at the Universidad Iberoamericana's School of Architecture. Aguilera's interests are linked with town planning, social housing and the architecture of the twentieth century. In 2004, he published *Arquitecturas Finiseculares en México*, in which he transcribed and analysed the opinions and ideas of a wide range of architects and academics that participated in the namesake symposium on the 12th May 2000. The edited book reflected on and debated the state of architectural education, production and thinking in the country at the start of the twenty-first century. The starting point for the discussion was the illustrated book *Mexican Architectures* (Aguilera 2000); the book intended to present the wide range of architectures that formed the Mexican context and to debate their role in understanding Mexican architecture in the twenty-first century (Aguilera 2017).

The second interview was with Professor Enrique de Anda Alanís, an architect, architectural historian and researcher interested in Mexican architectural history, in particular modern Mexican architecture, and the preservation of cultural and historical heritage. He has written widely on these areas of the discipline, and his publications have won numerous awards, for example, the Medalla al Merito de Artes 2018 in the area of Cultural Heritage in 2019, the Premio Universidad Nacional 2015 in Architecture and Design and Juan O'Gorman's Award in 2007. He was

appointed Emeritus Professor in 2019 by the Academia Nacional de Arquitectura, which recognised his position as a leading figure in the Mexican architectural scene; his architectural knowledge is transmitted through his academic endeavours as a Professor in UNAM's schools of architecture and philosophy (de Anda Alanís 2021:online).

Finally, Eduardo Cadaval is an architect and academic trained in Mexico and the USA. He graduated from UNAM's School of Architecture and obtained a Master of Architecture in Urban Design from Harvard University. He is based in Barcelona, Spain, and has built projects in Spain and Mexico; he is an Associate Professor in Urbanism at Barcelona School of Architecture, ETSAB/UPC and has been a visiting professor at the University of Pennsylvania and Harvard University Career Discovery Program. He has won multiple awards for his architectural work, which has been widely exhibited in Europe and Mexico (Cadaval 2022: online).

iii. Case Study:

The PhD project adopted Mexico as a case study to examine the development of architectural theory in the twentieth century and review its condition at the start of the twenty-first century. The case study approach is frequently used in architectural research as this strategy is relevant to an industry driven by projects, designs and ideas. The case study method allows the combination of various data collection, such as interviews, documentary evidence and literature collection, all aimed at gaining in-depth knowledge and a contextual understanding of a particular phenomenon or areas of study (Proverbs & Gameson 2008:100). Mexico was selected as the case study because of the researcher's auto-ethnographic experience in practice and academia in the country, as well as his academic experience in the UK since 2004. Furthermore, the availability of information and networking connections due to the researcher's background in Mexico were invaluable and informed the PhD thesis.

Mexico as a case study is justified due to the importance of Mexican architecture and theory in the Latin American context from the start of the twentieth century. Mexico, Brazil and Venezuela were some of the most stable and economically developed countries in Latin America in the 1930s;

they were the first to assimilate modernity's ideas, technologies and artefacts to support the countries' development (Fletcher 1996:1532). In architecture, Mexico was one of the first countries to adopt European Modernist ideals and technologies, which were integrated into a unique functionalist discourse to fulfil the country's social needs and political aspirations. The adoption and implementation of the European discourse across Latin America was uneven and took place at different paces; therefore, it merged with local and cultural conditions rooted in each country (Carranza & Lara 2014:1). Architecturally, it created what Banister Fletcher called "exotic interpretations that represented the assimilation of European modernism's products at the end of the 1920s", and embodied "the desire to emulate occidental prototypes, as well as to develop and affirm the national identity" (1996:1532). These conditions made Mexico an interesting case study as it represented the intersections of Europe with America, as well as new connections between theory and practice.

The ideas and concepts that coalesced from the literature review and field trips were presented at conferences in the UK to test their validity and further the researcher's understanding of the topic. All these events are captured in Diagram 03 (overleaf), which shows the project's timeline.

i.6 Thesis Chapter Breakdown

The chapters of the PhD thesis have been designed to address the aims and objectives stated in section i.4 of this chapter. Chapter 1 analyses the concepts of theory, history, and architectural critique and their relationship with architectural thought. The first chapter dwells on the intersections of critical theory, philosophy and architectural thinking embodied in anthologies and compilation books published in the 1990s. The chapter explores the influence of disciplines outside architecture in the construction of architectural theory. The purpose of the first chapter is to discuss and construct an understanding of architectural theory at the end of the twentieth century, in particular, the role critical theory played in such definition. The first chapter argues for a broader understanding of the concept of architectural theory, as this will allow it to encompass contemporary concerns that fall outside the traditional remit of theory in architecture.

Chapter 2 uses the main armed conflicts since the fall of Tenochtitlan (1521) to build a historical narrative describing the construction of Mexico as an independent nation. The chapter interprets the connections between Mexico's historical events and political conditions and the development of

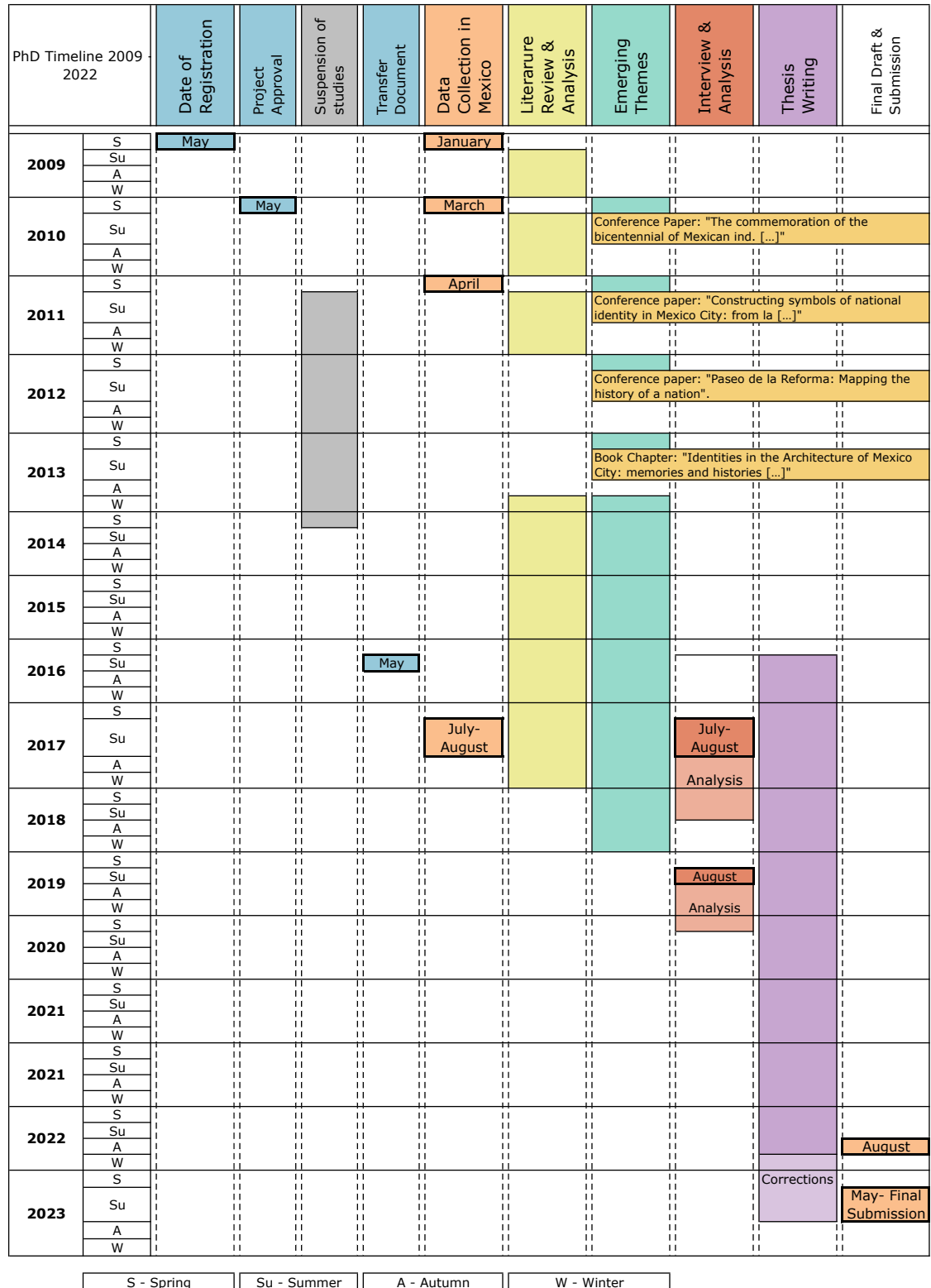


Diagram 03: Thesis Timeline 2009-2023 [part-time studies]

the architectural discourses that shaped the country's built environment. As Mexico was selected as the main case study of the PhD investigation, the second chapter articulates the historical narrative that defined the country's national identity. This historical account is complemented by the architectural discourses that influenced the country's architecture in each era, and it highlights the main ideological strands that subsequently defined the architectural debate at the start of the twentieth century.

The historical events explored in chapter 2 contribute to the debate surrounding the creation of a national and architectural identity in the 1920s. Chapter 3 produces a critical narrative about the influence of emerging socio-political and cultural discourses and architectural thinking in the development of Mexican architecture in the first decades of the twentieth century – from 1920 to 1934. The third chapter emphasises the importance of *Pláticas sobre Arquitectura: México, 1933* (1934) in defining the debates about neo-Colonial, neo-indigenous and Functionalism. It set the foundations for the establishment of Functionalism as the new architectural agenda of the country and its adoption by the government as the official style. After the War of Revolution, Functionalism was used by the government to embody modernity's ideals in the built environment and to provide Mexico with the necessary infrastructure to take the country into modernity. The intersection of the political, ideological and architectural (theory and practice) discourses aligned to create a modern national identity.

Chapter 4 explores the architectural positions and ideologies that shaped the middle of the twentieth century, and it constructs a picture of the relationship between political events and their architectural manifestations between 1934 and the 1960s. The architectural discourses of the middle of the century ranged from architecture embodying the socialist agenda of the 1930s, the adoption and crisis of Functionalism, the development of Regionalism and the emergence of an architectural multiplicity that foreshadowed the arrival of postmodernism in the 1980s. These discourses were complemented, and enriched, by the arrival of foreign architects and artists who influenced the national architectural debate and production with an international perspective. In this context, José Villagrán's architectural theory and practice developed and eventually became

accepted by the profession at large. The fourth chapter dwells on the influence of Villagrán's architectural discourse in Mexican architecture and how his theoretical discourse created a school of thought through his disciples and collaborators. His theory of architectural values was embodied in the edited book *Teoría de la Arquitectura* (1964).

Chapter 5 maps the development of Mexican architecture from the 1970s to the twenty-first century and analyses the overlap of theory and praxis in contemporary Mexican architecture. The chapter highlights the intersections, or lack thereof, between theory and architecture in Mexico, and it assesses and critiques the production of architectural theory at the end of the twentieth century and the start of the current one. The data in Chapter 5 were obtained through semi-structured interviews and the literature collected during various visits to Mexico. The interviews contribute to the currency of the discussion and expand the critical appraisal of architectural theory in Mexico. Lastly, the PhD thesis will conclude by summarising its findings, addressing its limitations and presenting possible areas for future research.

1. Architectural Theory

1.1 Introduction

The first chapter of the PhD thesis analyses the concepts of theory, history, and criticism in architecture, and it elaborates on their relationship with and roles within the discipline. The chapter explores the intersections of critical theory, philosophy, and architectural theory, which have been embodied in several anthologies, compilations, and introductory books published since the 1990s. The work on the intersections of these disciplines started in the 1960s due to the increasing interest in Europe and the USA in architecture's interdisciplinary connections, which eventually contributed to defining the concept of 'critical architectural theory'. Critical architectural theory dominated the discipline at the end of the last century, and its influence was meaningful at the start of the new millennium; however, the overarching concept of 'criticality' has been recently questioned due to its insularity, and that has resulted in a crisis of confidence about the term and its possibilities. Chapter 1 examines the understanding of critical architectural theory, and it questions the narrow definition of architectural theory at the end of the twentieth century by opening the discussion to produce a broader conceptualisation of what architectural theory should be.

In order to generate a critical debate about the essence of architectural theory, the chapter will analyse several anthologies (K. Nesbitt 1996; N. Leach 1997; M. Hays 1998;), compilations (K. Sykes 2010; Crysler, Cairns and Heynen 2012) and introductory volumes (Evers 2006; H. Mallgrave and C. Contandriopoulos 2008; C. Davies 2011; K. Smith 2012). All these publications created a lively debate on the role of architectural theory in design and academia towards the end of the last millennium. However, chapter 1 argues that the publications, and academic activities around them, had the unintended effect of separating theory from practice; they drove theory into the specialised academic realm and away from the everyday practice of architects. Some of these edited volumes (Davies 2011; Smith 2012) emerged from the desire to demystify architectural

theory and bring it closer to architects, academics, students and non-specialists. This is an important point, as one of the main arguments of the thesis is that the knowledge and criticality provided by theory should help architectural practices to create more reflective architecture.

The chapter acknowledges that the literature in this subject area cannot be taken as proof of qualitative improvement on architectural projects. It is not feasible to demonstrate the correlation between readership, texts and projects; however, the proliferation of these theoretical publications indicates a growing appetite for the subject matter. It can be argued that the availability of the increasing body of literature provides architects with better access to knowledge and information; additionally, the contributors to these publications are not only academics and theorists but also architects and architects/educators, which illustrates the intersections between theory, practice, and education. Chapter 1 argues that the availability of theoretical literature outside of Anglo-Saxon and European contexts and audiences is reduced; for example, in Mexico, the anthologies, compilations and introductory books have not been translated, so the language barrier limits their reach.

The anthologies and compilations embody the intersections of theory, design and practice taking place during a particular era, and within geographical limitations, hence chapter 1 will use an example of an architectural project that concretises the connection between theory and practice – Bernard Tschumi's Parc de la Villette and Peter Eisenman and Jacques Derrida's collaboration. The chapter sets the foundations for the subsequent discussions about the architectural crossovers of theory and practice in Mexico in the twentieth century – these are developed in chapters 3, 4 and 5. The objective of this chapter is to investigate the relevance of the intersection(s) of theory and architecture in the construction of the definition of architectural theory in the twentieth century and to identify the gaps and shortcomings of the current understanding of Western architectural theory.

1.2 Theory, History and Criticism in Architecture

The role of theory in architecture in the twenty-first century cannot be overstated, as architectural theory should lie at the heart of architecture. This premise is supported by Korydon Smith, who stated that “[...] architectural theory underpins all facets of the discipline – history, technologies, and design. Architectural theory is the discipline” (Smith 2012:xi). This is a vital assertion for the project because it encompasses the notion that architectural theory is essential to the discipline as it supports the reflection, conceptualisation, design, and production of architecture. Despite the decreasing connectivity between architectural theory and practice towards the end of the twentieth century, the importance of architectural theory and its intersection with practice has been re-evaluated in the twenty-first century. The opportunities and challenges brought by technological advances in architectural design, production and representation have generated new connections between architectural theory and practice. In the twenty-first century, architectural theory is developing new ways to support, define and contribute to the creation of architecture (Sykes 2010:14-21).

The Oxford Dictionary defines theory in three ways: i. as “a supposition or a system of ideas intended to explain something, especially one based on general principles independent of the thing to be explained”; ii. as “a set of principles on which the practice of an activity is based”; and iii. as “an idea used to account for a situation or justify a course of action” (Oxford Dictionary of English 2017). Throughout history, humankind has developed theories to explain and understand the world it inhabits; each field of knowledge has constructed theories using different approaches and looking at different methods to comprehend the world's natural, cultural and social phenomena. Therefore, the natural sciences will differ in approach, strategy and process from the social sciences and the humanities, each of them looking at the world using a different lens (Groat & Wang 2002:41; Murray 2017:25).

In architecture, theories often emerge from the individual knowledge, experiences and explorations of architects, which are articulated as individual paradigms, and subsequently used to understand larger

conditions; this is in contrast with other disciplines where the exploration and explanation of phenomena relies on rigorous objectivity (Smith 2012:4-5). To bring clarity to this project, it is crucial to understand the remits of theory, history and criticism within architecture, as they have specific aims and address different aspects of the discipline. To build a clear understanding of these three areas since the 1960s, the investigation will rely on the ideas postulated in three key architectural anthologies: Kate Nesbitt's *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995* (1996), Neil Leach's *Rethinking Architecture: a reader in cultural theory* (1997) and Michael Hays' *Architectural Theory since 1968* (1998). Kate Nesbitt's was the first anthology that attempted to organise the theoretical debates that developed since the 1960s, and in that sense, it is seminal for the development of architectural thinking. Nesbitt defined these three concepts as:

[...] theory is a discourse that describes the practice and production of architecture and identifies challenges to it. Theory overlaps with but differs from architectural history, which is descriptive of past work, and from criticism, a narrow activity of judgment and interpretation of existing works relative to the critic's or architect's stated standards. Theory [...] *poses alternative solutions* based on observations of the current state of the discipline, or offers new thought paradigms for approaching the issues (1996:16 – Nesbitt's emphasis).

Architectural theory can be defined as a critically speculative discourse engaged with new ways of thinking, creating, reflecting, practising and producing architecture. It looks simultaneously at the past for inspiration and guidance, and to the future by proposing novel ideas, approaches and procedures. However, Leach argues that architecture's self-awareness and self-reflectiveness diminished towards the end of the century, hence the need to engage with "[...] theoretical debates traditionally perceived as being 'outside' its domain" (1997:XIV) to become more rigorous in its self-criticism. The intersection of architectural thinking with 'outside' disciplines highlights in Hays' views, that "cultural production in its traditional sense [...] can no longer be expected to arise spontaneously, as a matter of social

course, but must now be constantly constructed, deconstructed, and reconstructed through more self-conscious theoretical procures" (1998:X).

In order to understand culture and society, we must comprehend their historical journey, social conditions, and meaningful processes; our interpretation of the past must incorporate cultural meanings, agency, intentions, and purposes (Hodder 2009:6-12). As architectural theory looked outside the discipline for alternative methods to reflect on the discipline, architectural history continued to gaze into the past to study and understand the current position of the architectural debate. However, if we envisioned history as a rigid pursuit of facts, the endeavour would be sterile in producing a complex and rich understanding of our cultural ground. Nesbitt's comment about architectural history as "[...] descriptive of past work" (1996:16) reinforces that narrow view. However, we can envision a different way of defining history by following Alexandra Stara's notion that, "the real focus of history is not an unattainable objectivity, nor an elusive compensation for temporal distance, but recognition of that distance as the space of understanding" (2010:32), where cultural specificity is developed, shaped and instituted. The material culture of the past should be studied through the social agency brought by the individual/group that produced it. In the same way, this PhD argues that architectural history needs to engage with the past as a complex cultural grounding, which will construct a more comprehensive understanding of architecture and culture in our search for relevant answers.

Finally, Nesbitt's definition of architectural criticism as "a narrow activity of judgement and interpretation of specific existing works" (1996:16) is limited, as it neglects the notion that it is an essential activity that generates reflection, awareness and questions about the profession's assumptions, principles, methods, practices and outputs. Architectural criticism has a unique purpose: commenting on a precise cultural artefact – this can be understood as a building, discourse or paradigm. The nature of such commentary is based on the socio-cultural and historical contexts, and it often produces a value judgment or explanation of the artefact itself, that then can serve as a response or point of departure for an architectural discussion or debate (Rendell et al. 2007:4). In the words of Raman and Coyne, "the authority of a particular work of criticism rests in its function

as a narrative. In so far as a criticism seeks to 'prove' the worth or otherwise of a work of architecture, or settle the matter through 'reason'" (2000: online). The narrative falls within a network of narratives that come together to constitute the context under which a piece of architecture, a book or a paradigm is examined, developed and commented upon.

Architectural criticism has several challenges: i. the erroneous assumption that a critique must be negative, hence considering a constructive or positive critique as a weakness on behalf of the critic; ii. the assessment of criticism as an ineffectual and irrelevant endeavour that will not lead to any change in the discipline; iii. the notion that criticism should be exclusively about objective judgements forgoes the reality that everyone has preconceptions and prejudices that shape their position and voice (Stead 2007:78-83). These critiques remain valid, and self-aware critics will account for these prejudgments, as the best critics will "[...] read the work as an exemplar of larger issues, identifying and locating these in the architectural object, while also placing it within a broader physical and intellectual context" (Stead 2007:82). This project argues that architectural criticism remains key to the discipline as it provides a critical description, evaluation and positioning – a narrative, of the cultural artefact it examines.

Theory, history and criticism have expanded and shaped architecture's body of knowledge and have produced meaningful territorial intersections. Nevertheless, a key difference between them is that architectural history and criticism are exercised *a posteriori*, and on reflection upon a cultural artefact(s), movement or personality, whereas architectural theory's essence is speculative and anticipatory. Nesbitt contended that architectural "theory operates at different levels of abstraction, evaluating the architectural profession, its intentions, and its cultural relevance at large" (1996:16). Therefore, architectural theory can be defined as a system of ideas used to manage the realities, aspirations and accomplishments of the discipline while evaluating the existing conditions, to construct and propose new ways of reflecting, understanding, developing and explaining architecture. This project does not intend to separate these three activities, as they all inform the discipline, but to stress the impact of place, time and culture in the production of

architecture. As Stara contends, history should read “architecture as a deeply situated cultural phenomenon” (2010:31). This research uses this holistic understanding of architecture as a fundamental statement. Architectural history, theory, and criticism are woven together in the reflection, conceptualisation, development, praxis, and construction of the built environment; despite studying and contributing to different territories of the discipline, they create interdisciplinary connections and intersections along the way.

1.3 Architectural Theory: the intersection of ideas towards the twenty-first century

In the field of architectural theory, there are different ways to categorise the body of knowledge pertaining to the construction of speculative and theoretical knowledge. For example, Korydon Smith argues that there are three areas into which theories can be organised: i. theories of architectural technology; ii. theories of architectural history; and iii. theories of architectural design (2012:5). Smith’s categorisation provides a structure that attempts to order the vast field of architectural knowledge; however, it can be argued that the categories’ boundaries are rigid, and they result in the exclusion of knowledge which do not fall directly into one of those designated categories, for example, sustainability, critical regionalism or Phenomenology. Despite recognising the overall positive and practical effects of providing a taxonomic system to organise an area of knowledge, architects, academics and critics must be cautious when providing totalising categorisations. It would be advisable to maintain an open-minded position that allows permeability between boundaries. This intellectual position should help capture theories and ideas located in-between or across categories that cannot be accommodated exclusively in one group or class. For example, Smith’s categorisations could be re-interpreted into a broader range of themes: i. theories of architectural technology *and the environment*; ii. theories of architectural history *and thinking*; and iii. theories of architectural design *and practice*, which would facilitate the inclusion of broader interdisciplinary subjects.

The PhD thesis does not propose to modify Smith’s categorisation, but it is an example illustrating that there are no perfect systems to categorise

architectural knowledge; as the discipline progresses, innovates and connects with other disciplines, new categories will be required to accommodate emerging knowledge. It is also important to acknowledge that this research will use various types of categorisations to bring order to the body of knowledge, and currently, this research is positioned between Smith's second and third categories. The thesis will use the understanding of architectural theory emerging from the literature analysed here, and it will question its validity in the contemporary architectural discourse; hence, this research project will explore the connections between architectural theory and practice, and the role the former plays in influencing the latter. In particular, the thesis' aim focuses on the intersection between architectural theory and practice in Mexico at the end of the twentieth century.

The author understands the limitations of the approach used here, as the geographical origins of the literature included in this chapter implied the exclusion of a range of sources from other cultures and geographical locations, such as Latin America, Asia and Africa. However, the initial literature review demonstrated that this body of work was representative of the discourse(s) emerging from Western dominant centres of power, which defined architectural production and thinking in the second half of the twentieth century. It is important to emphasise that European and American architectural discourses were the main influences in Mexican architecture in the twentieth century. These arrived through the work of Le Corbusier, the interwar migration of artists and architects, and the trips to America and Europe of key Mexican architects.

It is maintained that architectural theory began with *The Ten Books on Architecture* by Marcus Vitruvius in the first century BCE (Evers 2006; Smith 2012). Vitruvius' book was a practical guide on how to design and build towns, public buildings and infrastructure. In Vitruvius' work, there was no separation between theory and practice; his book discussed key ideas such as materials' properties and usage, geometry and proportions, the education of the architect and architecture's fundamental triad: *firmitas, utilitas et venustas* (firmness, utility and delight). Vitruvius' theory served as the model for Renaissance authors such as León Battista Alberti and Andrea Palladio, yet it differs from the contemporary

understanding of architectural theory. At the end of the twentieth century and beginning of the twenty-first century, architectural theory is predominantly understood as an area of knowledge that attempts to revitalise architecture through the use of concepts and ideas from other disciplines (philosophy, Structuralism, Post-structuralism, sociology, anthropology, Phenomenology, etc.), in order to connect architecture with the social, political and cultural realms (Sykes 2010:14-15).

The richness of ideas emerging from disciplines beyond architecture created territorial overlaps and intersections, which are reflected in the postmodern debates that defined the last third of the previous century and the current one (Nesbitt 1996:16). Nevertheless, Michael Hays argues that despite the multiplicity of sources, one strand of thinking has dominated the development of architectural theory from the 1960s and into the end of the twentieth century. This is the pairing of Marxist critical theory and Post-structuralism with readings of architectural Modernism, which has subsumed and rewritten earlier narratives and texts (2000:X-XiV). This approach to architectural theory is defined as 'critical', and is a descendant of the intellectual constructs and paradigms explored and developed by the Frankfurt School intellectuals. These discourses are commonly known as critical theory. A helpful definition of critical theory comes from Krista Sykes who in 2010 defined it "as an overarching and ideologically grounded practice that strives to interrogate, elucidate, and thus enhance the world in which we live" (2010:15). Sykes' definition is based on the idea of critical inter-disciplinarity as a way to obtain, understand and process information from the world to question it and improve it.

We can sustain the argument that since the 1960s, there has been an increasing interest in Europe and America (USA) in reading, questioning and elaborating on the intersections of critical theory, architectural theory and architectural design. The crossovers of disciplines, themes and critical paradigms contributed to shaping critical architectural theory, which dominated the architectural discourse at the end of the twentieth century; however, in the twenty-first century, the overarching concept of 'criticality' has been questioned, resulting in a crisis of confidence on the term and its possibilities.

The outcome of this crisis is a transitioning paradigm accommodating the challenges and concerns of the new millennium, while attempting to adjust the previously held concepts and ideas into a post-critical context (Crysler, Cairns and Heynen 2012:5). Some of the strongest criticisms are the increased divorce between theory and practice at the end of the twentieth century; the impact of technological advances in the way architecture is designed, produced and thought off; and the growing environmental concerns (Sykes 2010:19-23). Architecture in the twenty-first century cannot stay immovable and occupy itself with the same concerns as in previous decades; hence, critical architectural theory must shift in order to support and influence the discipline. This project does not subscribe to the notion of critical architectural theory, but to the notion of architectural theory as the way to give gravitas to architecture and to propose new ways to understand, explain and experience architecture.

1.4 The Crisis of Criticality: questioning critical architectural theory

In the last fifteen years, the insularity of critical architectural theory and the increasing specialisation of its knowledge, resulted in academics and practitioners scrutinising the links between critical theory and architecture, as questions about the relevance of critical theory for architectural practice were raised. In *Design Intelligence*, Michael Speaks suggested that the dominant paradigm of the current century is the use of intelligence to survive the demands of a globalised world. He asserted that the vanguards of the early twentieth century were defined by philosophy, and the vanguards of the late twentieth century relied on theory; however, the intellectual territory of twenty-first century post-vanguards is defined by *intelligence* (2002:208-11). Speaks argues that “[...] visionary, utopian ideas have given way to the ‘chatter’ of intelligence. Philosophical, political, and scientific truths have fragmented into proliferating swarms of ‘little’ truths appearing and disappearing so fast that ascertaining whether they are really true is impractical” (2002:209). For Speaks, contemporary architectural practice can only be innovative and succeed in the global arena through the use of intelligence, and not by using the visionary paradigms of the past (2002:214 & 2006:03-04).

Robert Somol and Sarah Whiting adopt a different path, whereby the dominant paradigm of 'criticality' has been exhausted and superseded by the idea of *projective practice*. For them, *projective practice* proposed that architecture should turn to the specificity of its own discipline (material, programme, atmospheres, form, technology, etc.), as well as acknowledging the adaptive synthesis of architecture's multiple contingencies (Somol and Whiting 2002:191-98). Despite Speaks', and Somol's and Whiting's opposing views on the diminishing impact of criticality, other authors have re-evaluated the notion of criticality and have argued for its development and re-interpretation.

Reinhold Martin argued in *Critical of What? Towards a Utopian Realism* for an alternative form of practice based on the notion of *utopian realism*, which is in itself critical, and it opens new avenues to think and design architecture. Martin defined utopian realism as an open-ended evaluation of reality and stated that "[...] it is utopian not because it dreams impossible dreams, but because it recognizes 'reality' itself as -precisely- an all-too-real dream enforced by those who prefer to accept a destructive and oppressive status quo" (2005:361). Martin's idea is to allow architects, and architecture itself, to develop and surpass the established notion of criticality, which is traditionally connected with fulfilling modernist ideals, by proposing an alternative route where architecture's socio-political significance is reconsidered (2005:352-61). Likewise, Arie Graafland criticised Speaks' argument on 'intelligence' as he considered it emerges from an enhanced focus on international practices and their global needs for innovation; instead, he called for a reinterpretation of criticality by proposing a *reflexive architecture* that develops through the collaboration of academia and architectural practices (2004:397-401). For Graafland, architecture cannot be separated from its connection to the ground and context, as much as it cannot do without critical thinking. Reflexive architecture must address "its own foundations reflexively" and use theory and praxis to create architecture with more permanence (2004:415-16)

All these debates evidenced an active discussion surrounding the intersection of critical theory, architectural thinking and practice. In some instances, the critique implies we have superseded the value of critical theory; however, in other cases there is a desire to reevaluate and

reinterpret the role of criticality in architecture. In either pathway, the debate highlights theory's importance for the discipline, as it is located at the centre of its thinking and should contribute to strengthening its connections with practice. An important point that emerged from the review of the available literature is the dominance of the English language in architectural theory's literature, debates and events and the overall cultural hegemony of Anglo-Saxon and European-based institutions, which results in other parts of the world, such as Latin America, Asia and Africa to be under-represented (Crysler, Cairns and Heynen 2012:6-7). This research acknowledges the critiques levelled towards architectural theory, and its weakened relationship with architectural practice, yet the investigation's starting point is the belief that theoretical thinking is at the core of architects' endeavour, thinking, teaching and practising.

In the preceding paragraphs, we have seen the notion of criticality applied to theory; however, the term critical has also been used in the discipline at large. In 2007, Jane Rendell, Jonathan Hill, Murray Fraser and Mark Dorrian edited the book *Critical Architecture*, which captured a selection of texts from the namesake conference held in November 2004. In the publication, Rendell argued for the importance of critical practices in architecture and pointed out that the term critical architecture was "[...] an attempt to examine the relationship between design and criticism, by placing architecture in an interdisciplinary context and considering its various activities as forms of critical practice" (2007:6). For Rendell, interdisciplinarity helped architecture to question and build a critique of existing standards, methods, norms and practices. For her, critical architecture was about critical practices that explored architecture through various modes, such as buildings, drawings, texts, and/or actions. The connections with other disciplines should generate a self-reflective approach to architecture's social and cultural positions. These various modes of critical practices emerge from practitioners, academics and researchers across the globe, rather than just from the USA, hence making it a more representative collection of knowledge and approaches. Critical architecture encapsulates the argument that design and criticism are essential intellectual and creative endeavours that explore and bring to the surface social, cultural and ethical concerns at the heart of contemporary architecture (2007:1-7).

Critical Architecture was not the first instance in which Jane Rendell approached the subject of interdisciplinarity, critical theory, and criticality. The relevance of these terms was evident in the 2000 publication *InterSections: Architectural Histories and Critical Theories* with Iain Borden. In the edited volume, they stressed the importance of theoretical thinking in architectural history; Borden and Rendell focused on the significance of current exchanges between philosophy, critical theory and architectural thinking in the western world and aimed to explore systematically the nature of the intersections between theory and architectural theory and history (2000:xvii). They contended that we cannot approach history relying on old ideas, but we should use mediating concepts to negotiate the intersections between the substance of the past and the conditions of the present (Borden and Rendell 2000:6); hence, theory is a negotiating tool that instils awareness into history and makes it conscious of its doings.

In line with Nesbitt (1996), Leach (1997) and Hays (2000), Borden and Rendell affirmed that architecture must draw from other disciplines to remain current and be critical of its practices, discourse and production. For architectural history "to provide a critical interpretation of architecture, its theoretical grounding *must* come not just from within the architectural discourse" (2000:7). In *InterSections*, Borden and Rendell coined the idea of a 'critical and theorised architectural history', whereby the crossovers between disciplines are beneficial in promoting cross-fertilisation by bringing together and fusing different territories of knowledge, methods of interrogation, intellectual perspectives and analytical frameworks. They elaborate nine ways in which critical theory relates to architecture: i. as the object of study; ii. to new architectures; iii. to framing interpretive questions; iv. to the critical nature of history; v. to interdisciplinary debates; vi. to disclosing methodologies; vii. to self-critical development of the discipline; viii. to re-engagement with theory; and ix. to praxis (Borden and Rendell 2000:6-15).

These intersections provide the opportunity to challenge established paradigms and practices, encouraging a vital intellectual debate and creating supporting frameworks for exploring and developing architectural thinking. The literature discussed so far addresses architectural theory

using a wide range of perspectives and organises it chronologically, thematically or geographically; however, it emphasises the crossovers between architecture and disciplines outside its immediate disciplinary arena. Architectural theory, either critical or not, provides architects and scholars with the means to situate their ideas in the world and position themselves in the wider context. The position may be theoretical, practical, environmental, technological or aesthetic, and its importance lies in the ability to clarify and explain the architect's line of thinking. As such, theory is part of the everyday endeavours of architects, and it should not be constrained to the rooms of academia (Smith 2012:4) or forced to select one type of approach, e.g., critical.

1.5 Architectural Anthologies: a collection of ideas

As demonstrated in the preceding sections, the connections between theory and architecture developed in the twentieth century in Western centres of influence, and they created a rich field of interdisciplinary reflections and collaborations. The end of the previous century was dominated by debates and discourses emerging from the intersections of critical theory, Post-structuralism and architectural theory, which were encapsulated in three anthologies published in quick succession in the 1990s. Nesbitt (1996), Leach (1997) and Hays (1998) attempted to consolidate and order the knowledge that had been developed in architectural theory since the 1960s. All of them took the 1960s as the starting point of their narrative, as the authors considered the 1960s a decade where political theory and practice were re-evaluated by the shifting balance of geo-political power, changes to philosophy, economic instability affecting the world and the heterogeneity of cultural production (Hays 2000:x); furthermore, since the middle of the 1960s, architectural theory became interdisciplinary, pluralistic and depending "upon a vast array of critical paradigms" (Nesbitt 1996:16).

The three publications used the momentum generated by the 1960s' upheaval to crystallise the profession's theoretical thinking and attempt to summarise the intersections influencing architectural thinking in the twenty-first century. The first anthology to be published was Nesbitt's *Theorizing*, in which she showed the proliferation of different perspectives

to explain and understand architecture. Her postmodern approach resulted in a book with a complex structure organised in five ideological frameworks (Phenomenology; aesthetic; linguistic theory; Marxism; and feminism) that were crossmatched with six postmodern cultural theory themes (history and historicism; meaning; place; urban theory; political and ethical agendas; and the body). Nesbitt's anthology postulated a break with Modernism, arguing that postmodern theory "is critical, optimistic, and intellectual; it challenges and celebrates the capacity of the mind, and it offers models of critical and ethical thinking" (1996:65).

Nesbitt's anthology highlighted the proliferation of a multitude of voices engaged in the production of architectural theory in the last three decades of the twentieth century, while striving to maintain a balanced engagement whereby no single narrative is given priority. She emphasised the increase in architectural theory publications, events, and exhibitions, yet painted a skewed picture of multiplicity based on American and European sources. This volume could be criticised for the lack of inclusion of voices from peripheral countries and the concerns they might bring to the debate, as well as for missing important areas of the debate, such as Phenomenology, psychoanalysis and identity politics. The anthology explored the connections between some areas of postmodern thinking and architecture, and it was written for academic and practising architects based in the dominant centres of power.

The second anthology, Neil Leach's *Rethinking Architecture*, included several well-known texts, as well as essays that were on the outskirts of the established architectural debate. In the book's introduction, Leach described his intention to publish a volume demonstrating that "a consistent body of critical thought on architecture [...] exists outside the mainstream architectural discourse" (1997:xiii), and he emphasised the capacity for architectural theory to provoke critical reflection. Leach acknowledged that culture was undergoing a crisis, which he termed "post-modernity" (1997:xiii). His anthology dealt with the collapse of confidence in the Modern movement, which led architects into a process of self-examination rooted outside the discipline, in the realm of theory.

Leach contended that for architecture to become more rigorous in its self-critique, it must engage "with the theoretical debates traditionally

perceived as being 'outside' its domain" (1997:xiv). The anthology is organised thematically in five sections (Modernism; Phenomenology; Structuralism; Postmodernism; and Poststructuralism), and some of these overarching themes overlap with Nesbitt's framework. The anthology is constituted by contributions from thinkers primarily from outside architecture, hence providing a number of external methods and strategies to rethink architectural theory (Leach 1997:xvii).

One of the critiques Leach levelled against the dominant architectural discourse at the time was that it "has been largely a discourse of form [...] and dominated by debates that revolve around questions of style", hence operating "at a superficial level" (1997:xiv). It is by its exteriority and connectivity with other fields of knowledge that Leach's book invites us to rethink the discipline's principles and ideas, highlighting the importance of architecture for a range of twentieth-century thinkers. However, the book's brief biographical introductions on each author do not elaborate or explain the main ideas embodied in their texts, nor those behind the theoretical paradigms within which the essays are included. At that level, Leach's book requires a priori specialised theoretical and architectural knowledge and knowledge from other fields of human endeavours. *Rethinking Architecture* acknowledges architecture's dependency on other disciplines, as "buildings are designed and constructed within a complex web of social and political concerns" (Leach 1997:xiv); hence, it is unusual that the anthology does not contain voices from architects debating the way these external ideas can find their way into buildings. The anthology created intersections with paradigms outside architecture, yet neglected to include the perspectives of architects.

In the introduction to *Architectural Theory since 1968*, Michael Hays postulates that "since 1968, 'architecture *theory*' has all but subsumed 'architecture *culture*'" since "cultural production in its traditional sense [...] can no longer be expected to arise spontaneously as a matter of social course" (2000:x). His stand contended that cultural production must instead be created, examined and reconfigured through "self-conscious theoretical procedures" (Hays 2000:x). In his view, architectural theory is a practice of mediation, whereby relationships are produced between the formal analysis of a work and its context; Hays argued that in this

relational process of critically understanding architecture, the work of architecture has “autonomous force with which it could also be seen as negating, distorting, repressing, compensating for, and even producing, as well as reproducing, that context” (2000:x).

In contrast with Leach’s disregard for architectural form as a stylistic endeavour, Hays’ anthology built a critical discourse of form that creates connections between the theoretical field and design undertakings. Hays’ anthology mapped out the historical development of architectural theory, giving it a sense of autonomy, yet responding to a chronological sequencing of texts weaving themes and authors (from within and outside the discipline) and showing the intersections of key ideas. Notably, Hays mixed among the texts several built and unbuilt projects, bestowing the anthology a different level of complexity by connecting ideas and theories to practice and realised projects. As with the previous two anthologies, there are theoretical strands not addressed in Hays’ publication, despite the reliance on recent past examples, such as the role of digital technologies and multimedia at the end of the twentieth century.

The three anthologies played a key role in disseminating interdisciplinary connections; however, it is relevant to acknowledge Joan Ockman’s and Edward Eigen’s *Architecture Culture 1943-1968: A documentary anthology* (1993). Ockman’s book influenced Hays’ publication, as Hays described *Architectural Theory since 1968* in the book’s introduction as “a companion volume” (Hays 2000:xiv) to Ockman’s and Eigen’s book. Nevertheless, and despite preceding the three anthologies cited above, Ockman’s and Eigen’s selection of texts is focused on the middle of the twentieth century, with a focus on Modernism and its various paradigms, hence having little impact on the discourse and practice developed towards the end of the century. The book’s selection of manifestos, critiques and writings does not fall within the contemporary notion of theory stipulated here; furthermore, the book explores the historical aspect of these texts, creating a theorised architectural history (Lavin 1999).

Despite the usefulness of anthologies to map the architectural theory landscape towards the end of the twentieth century, architectural theorist Sylvia Lavin criticised the nature of this type of publication in her 1999 paper *Theory into history: or, the will to anthology*, and in particular, she

focused on the four aforementioned anthologies. Lavin's critique on anthologies and compendia centred on how these volumes aim to group texts in order to bring order and closure to a landscape that is in permanent upheaval and, therefore, constantly resistant to closure; by organising theory through a set of thematic, geographical or chronological frameworks and principles, anthologies transform theory into history (Lavin 1999 497:498).

In the case of Leach, Lavin described his anthology as "generic" and questioned his decision to disqualify architectural theory's interest in architectural form (1999:495). Lavin continued her revision by delivering strong comments about Nesbitt's volume and maintaining that despite its pluralistic approach, *Theorizing Architecture* missed key theoretical debates concerning "theories of everyday life, psychoanalysis, or identity politics" and that "the majority of texts reprinted [...] were written before 1985" (Lavin 1999:496). Finally, she considered Hays' anthology the most complex of the three volumes and the only one that gives architecture the "status of a theoretical formulation" (Lavin 1999:496). Despite these positive affirmations, she regrets Hays' omissions of specific theoretical trajectories that have impacted architectural theory towards the end of the twentieth century, such as "media studies and digital technology [...] and the emergence of a new materialistic thinking in architecture" (Lavin 1999:496). Lavin's critique and articulation of the flaws of each volume are valid; however, this research acknowledges the impossibility of producing a complete or all-encompassing architectural theory anthology, as the field of study is constantly transforming and elaborating a wealth of new material.

For this PhD thesis, the use of anthologies and compendium provides an ensemble of the ideas and concepts that have influenced and defined our era; anthologies serve as the materialisation of the zeitgeist of the time, constructing the intellectual scaffolding and context that have influenced this investigation, and highlighting the interdisciplinary nature of architectural endeavours. Despite being an incomplete representation of the current situation (due to increasing developments in the field of knowledge), by collecting a wide range of authors and perspectives, the discipline can be self-reflective and engage in a debate and discussion around the relationship between theory and practice. The volume of

publications does not guarantee readership, but it demonstrates a growing appetite in the area of study, and it provides the opportunity for the development of readership and access to a range of lines of thinking. Access to relevant literature to cultivate readership and the production of theoretical volumes were missing in Mexico.

Architectural theory should have a relationship with architectural design and practice. As mentioned before, architectural theory is a critical tool for understanding, critiquing, and developing architectural thinking and projects, and it represents the way architects, academics, and thinkers position themselves in the world. The three main anthologies used postmodern theory and philosophy as the theoretical base to inform architectural theory; however, in the process of defining the territorial intersection, each volume marginalised other traditional propositions. This is supported by other authors such as Crysler, Cairns and Heynen, who contend that “architecture’s engagement with post-structuralist theory [...] meant that more established conceptions of architectural theory were increasingly seen as unsatisfactory” (2012:4), and a more serious concern is the lack of voices from outside the European and Anglo-Saxon contexts.

These three influential anthologies set the stage for other publications at the start of the twenty-first century that, despite their European and Anglo-Saxon orientation, opened the door to questioning our understanding of theory and its role in architecture in the present century. Krista Sykes’ *Constructing a new agenda: Architectural theory 1993-2009* (2010) and Greig Crysler, Stephen Cairns and Hilde Heynen’s *The Sage Handbook of Architectural Theory* (2012) are two compilations that followed the path set by their three predecessors; these volumes complemented the architectural theory landscape by included texts covering contemporary debates and concerns, and in particular Crysler, Cairns and Heynen’s volume produced a more inclusive representation of the debate by adding authors from geographical locations outside the dominant northern hemisphere.

In the introduction to *Constructing a new agenda*, Sykes’ understanding of architectural theory is constructed using ideas elaborated by Nesbitt and Hays in their anthologies. Sykes used Nesbitt’s pluralistic postmodern thinking and the definition of a speculative critical theory (1996:16-18)

and fused it with Hays' assertion of the domination of the pairing of critical theory and Post-structuralism in defining critical architectural theory (Hays 2000:xiv). Following these ideas, Sykes contended that the notion of critical theory at the start of the twenty-first century should be defined as "an overarching and ideologically grounded practice that strives to interrogate, elucidate, and thus enhance the world in which we live" (2010:15).

She maintained that the architectural theory discourse that prevailed in the second half of the twentieth century had been scrutinised, and consequently, critical architectural theory "is now in transition, if not in crisis" (Sykes 2010:16). Sykes connected her book with Nesbitt's anthology and affirmed that her "collection builds on the foundation established by [...] Nesbitt" (Sykes 2010:12); however, Sykes did not use the thematic framework favoured by Nesbitt to order the texts, but she organised them chronologically in an effort to evidence a multiplicity of perspectives without the existence of a single dominant discourse or paradigm. *Constructing a new agenda* is a collection of reprinted essays, book chapters, interviews and manifestos authored by practising architects, academics, theorists, historians and critics, all of them demonstrating that theory is undergoing a process of reevaluation.

One of the key aspects of Sykes' publication is the inclusion of contemporary debates related to practice, such as: the challenges to the profession by technological advances and digital architecture; environmental concerns and sustainable green architecture; realism and the everyday; and iconic buildings, starchitects and capitalism. Sykes' anthology achieved a better balance between the theoretical debates and the practical issues faced by the discipline in the twenty-first century, and it demonstrated a shift from a purely abstract understanding of theory to a discourse closely connected with the everyday task of the architect.

Crysler, Cairns and Heynen's *Handbook* departed from previous volumes as it presented original texts of significance to the field of architectural theory today rather than compiling existing essays and texts. The authors covered a range of contributions guided by four themes (interdisciplinarity; cross-cultural frameworks; the economy of reflection and action; and provisional and open-ended investigations). The editors shared the same temporal

period as Nesbitt, Leach and Hays; however, the *Handbook* dealt with themes relevant to the twenty-first century's first decade, such as memory/history/tradition; sustainability and late capitalism; and urban models and territory. These discussions are established with "a sense of [...] dialogue with the past, rather than a periodizing break with it" (Crysler, Cairns and Heynen 2012:11). For Crysler, Cairns and Heynen, the last four decades represent a period of heightened activity and change, in which the world has become more divided and polarised; therefore, architecture must respond to an increasingly complex geo-political, socio-cultural and financial context, which "requires an impure, inclusive approach enlivened by the possibilities produced by the critical intersection and juxtaposition of competing positions" (Crysler, Cairns and Heynen 2012:11).

In contrast to the preceding anthologies, the book aspires to achieve a balance between architectural theory and practice. As Hays' anthology, the *Handbook* not only includes papers dwelling on and developing theoretical positions, but the four themes engage with how the profession acts, how architects build projects and how users engage with the built environment. The editors intended to explore "the interaction between architectural theory and architectural projects" (Crysler, Cairns and Heynen 2012:11), and in line with Sykes, the *Handbook* presented a more inclusive picture of the debate by including authors from a larger global context. Despite this intention, most of the authors teach in Anglo-Saxon and European academic institutions, as well as practising architecture in that same context. The value of the *Handbook*, and its contributions, lies in the discussion of theory in the post-structuralist era, which leads to reconsidering architectural theory as a field anchored in global concerns questioning the hegemony of the perceived centres of the discipline. Architecture is envisioned as a material practice that emerges from the fusion of technique, technology, materials, experiences and people's social interactions (Crysler, Cairns and Heynen 2012:112-13).

The anthologies and compilation volumes analysed above illustrate the key limitation of these types of publications – there is no perfect volume that can provide a complete picture of the architectural theory landscape of the late twentieth and early twenty-first centuries. Each volume captured a snapshot of a particular time; the authors belonged to a well-defined

background and used a specific methodological approach to select and organise the chosen texts. The nature of architectural theory, and its response to contemporary concerns, means that all of the volumes are incomplete and imperfect in that sense. Nevertheless, the anthologies and compilations studied here embody the debate around the connections between architecture, theory and practice.

For example, the 35 contributors to Nesbitt's anthology were split into 15 academics (43%), 1 architect (3%), 17 architects/scholars (48%) and 2 theorists (6%); 21 (60%) of these authors were from North America, 13 (37%) from Europe and 1 (3%) from Australia. Sykes compilation had 35 authors divided into 11 academics (30%), 6 architects (19%), 13 architects/scholars (38%) and 5 theorists (13%); the geographical origins of the contributors were formed by 20 (57%) from North America, 13 (37%) Europeans and 2 (6%) from Australasia. Hays' volume contained a larger pool of contributors, so the 43 contributors were divided into 17 academics (40%), 4 architects (10%), 13 architects/academics (30%) and 9 theorists (20%), together with 12 architectural projects descriptions; hence, his publication showed a more balanced approach to capture the intersections between academics and practitioners.

Crysler, Cairns and Heynen's compilation contained the largest gathering of authors with 47, which were divided into 42 academics (90%) and 5 architects/academics (10%); this compilation showed the most balanced composition in terms of geographical origins as 19 (40%) came from North America, 17 (36%) from Europe, 10 (21%) from Australasia and 1 from South America. Chrysler, Cairns and Heynen's volume reflected the increasing impact of post-colonial thinking in architecture in the 2010s. An exception was Neil Leach's book, which collected excerpts of the works of 23 philosophers and thinkers from a range of philosophical strands, yet no architect or architectural academic was included; the philosophical nature of Leach's book meant that all the authors belonged to Europe.

These figures highlighted the enthusiasm for architects/ academics to write about the discipline, as the percentages of their contributions are very similar to those of academics who write as a professional endeavour. The volumes captured the discussions at the intersections of these fields of knowledge and encouraged a debate centred on ideas emerging outside

the discipline and further afield from the usual centres of architectural hegemonic power. Architectural anthologies exemplify the complex, heterogeneous and interdisciplinary contexts that inform architecture in the twenty-first century.

1.6 Introductory Texts and Pedagogic Perspectives

The complexity encapsulated by anthologies in the 1990s and early 2000s, together with the need to possess a prior knowledge in other disciplines, produced additional publications that complemented the history of architectural theory and were devoted to introducing and compiling texts outlining architectural theory discourses. Bernd Evers' *Architectural theory: from the Renaissance to the present* is an overview of "the major positions in architectural aesthetics prevalent in different countries" (2006:7). He organised the texts geographically and in chronological order, but it touches on a limited selection of European countries (Italy, France, England and Germany) which are complemented by key western architectural figures (Tony Garnier, Le Corbusier, Walter Gropius, Frank Lloyd Wright, Archigram, Robert Venturi and Rem Koolhaas among others). A key feature of the book is the use of illustrations to represent a visual guide of the development of architectural theory, which is a departure from previous publications which focused solely on texts (Nesbitt 1996; Leach 1997). Nevertheless, its narrow geographical focus and brief critical introductory texts contrast with the open-ended nature of its title. The book's content is similar to precursory anthologies by implicitly highlighting the dominance of Western models and ideas in contemporary architectural thinking and discarding the range of ideas existing outside Western culture.

Another example of historical accounts of architectural theory is Harry F. Mallgrave and Christina Contandriopoulos' *Architectural Theory. Volume II- An Anthology from 1871-2005* published in 2008. In their view, the history of architectural theory could be traced to the geopolitical and social changes brought about by the Franco-Prussian War and the American Civil War (2008:xxix), and they rooted the twentieth century's narratives in European and American nineteenth-century historicism. The anthology is formed by a wide range of abridged texts that underscore "general theoretical tendencies" (Mallgrave and Contandriopoulos 2008:xxviii), and

serve as a provocation to read the texts in full and concurrently with architectural history books.

According to the editors, anthologies outlined the theoretical debates of the era, yet there is no “substitute for a visual understanding of buildings themselves” (Mallgrave and Contandriopoulos 2008:xxviii), which emerges from studying history books and lived experience. The anthology has a wider temporal window than other volumes (Nesbitt 1996; Leach 1997; Hays 2000), covering a wider range of themes and texts that have been organised historically. However, the material included in Mallgrave and Contandriopoulos’ book created a limited understanding of the development of architectural theory, and it underscored the Euro-American origins of architectural theory debates. A byproduct of the interaction between architectural theory and critical theory was the creation of a niche and specialised area within the discipline; hence, architectural theory became increasingly isolated from practice and discussed by academics and postgraduate students who nourished, consolidated and developed it through publications, events and teaching (Crysler, Cairns and Heynen 2012:8-9). The specialisation of the discipline reinforced a colonial perspective that cemented Western dominance and control over other discourses.

The majority of the publications materialise Euro-American influence; however, there are increasing initiatives in academic institutions to adopt a more inclusive and diverse position in the development of the curriculum. Since the early 1980s, postcolonial thinking has developed a growing body of knowledge aimed at shifting the balance of power between Western and non-Western perspectives and validating the worldview of the latter. Postcolonial theory has provided a platform to analyse, question and contest the dominance of Western paradigms, which are embodied in political, philosophical, material and cultural relationships between Western and non-Western countries (Young 2003:2-4). Postcolonial theory is not a unified field, as suggested by using the term ‘theory’, but a set of principles and perspectives brought together to dispute dominant narratives and relationships between ideas and principles. It is argued that Edward Said’s work *Orientalism* (1978) is the seminal publication that opened the academic inquiry and critique of colonialism; subsequent

authors have drawn from other theories to expand postcolonial thinking, for example, Homi Bhabha (1994) utilised psychoanalysis, Gayatri Chakravorty Spivak used deconstruction, Chandra Mohanty adopted a feminist approach, and Aijaz Ahmad used Marxism (Williams & Chrisman 1994:5-6).

Postcolonial thinking is of great interest to Latin America, including Mexico, as it contributes to understanding the formation of Latin American countries and provides an avenue to construct a new history of colonialism, nationalism and the nation-state. It provides the tools to insert the intellectuals of the 'Third World' into the broader narratives of the West in order to represent 'minority histories' and to generate a 'non-hierarchical cross-regional dialogue' that can situate the Latin American experience in the global context (Amin in Thurner & Guerrero 2003:xii-xiii).

In architecture, academic institutions have started to address the post-colonial debate and have looked to Latin America, Asia and Africa to understand the development of architectural theory through other lenses. Postcolonial theory is not about static ideas and practices but of dynamic relationships: "relationships of harmony, relationships of conflict, generative relations between different peoples and their cultures" (Young 2003:7). That is why, from a postcolonial perspective, buildings are not static cultural artefacts, but "they express those narratives of conflict between peoples (users), power, technology and social change" (Hernández 2010:21); hence, we must learn to read them as part of a network of narratives and stories, and not only from an Euro-American centric view.

The publication of anthologies created a vivid debate on the role of architectural theory in design and academia, yet it had an unintended effect by producing a separation between theory and practice. It drove theory into an increasingly specialised academic realm away from the everyday practice of architects. Colin Davies' (2011) *Thinking about architecture: an introduction to architectural theory*, and Korydon Smith's (2012) edited volume *Introducing Architectural Theory. Debating a Discipline* emerged from the desire to demystify architectural theory, and the authors of each publication aimed to bring theory closer to architects, academics, students, and non-specialists.

In the introduction of Davies's book, he identifies four key problems for architectural theory at present: i. overvaluing of novelty and constant overhaul of the discipline; ii. emphasis on named philosophers rather than themes; iii. obscurity of the discipline, hence providing intellectual authority and prestige; and iv. remoteness of theory and practice (2011:8-10). These four challenges elaborated on the distancing of theory and practice, contending that as architectural theory became a specialised field aimed at architectural theorists and postgraduate students, it moved away from the discipline at large.

To overcome these difficulties, Davies' book is structured on themes and ideas, aiming to "re-establish a line of communication between theory and practice, to re-ground theory and prevent it from floating off into the intellectual stratosphere", hence "the book is addressed directly to architectural readers" (2011:10). The book is not organised chronologically, geographically or biographically, but it is arranged thematically (representation; language; form; space; truth; nature; history; and city) and used concepts that intersect the discipline across time and geographical location. The themes are useful for practising architects, students and laypeople interested in thinking and reflecting about architecture; however, Davies' book does not provide in-depth specialised knowledge as the one encountered in Nesbitt, Leach or Hays publications, but a general approach to the discipline. As its title suggests, it remains an introductory book striving to explain key aspects of architectural thinking.

On the other hand, Smith's *Introducing Architectural Theory. Debating a Discipline* emerged from his pedagogic experience of teaching architectural theory at university. His central premise is that "architectural theory is the discipline" (2012:xi). Smith's statement highlights the importance he bestowed on theory, as he contended that it "underpins all aspects of architecture- technology, cultural, economic, aesthetic" (2012:4). Architectural theory is a critical tool to understand, critique and develop architectural thinking and projects; it represents the way architects, and architectural scholars and students, position themselves in the world, providing a discursive framework to embody an architectural value structure (Smith 2012:4).

Similar to Davies' and Nesbitt's books, *Introducing Architectural Theory* is organised thematically, with three major topics (tectonics, use, and site) and each one has four chapters. Smith's unique approach rests on a dialectical structure, whereby each chapter has three texts (i. original [thesis]; ii. reflective [antithesis]; and iii. philosophical [synthesis]), which he uses to generate debate and critical engagement with the discipline. Smith's approach reflects an affinity for teaching, and the book is in line with an introduction to architectural theory. He acknowledged that the edited volume has a diminished "number of texts", hence "forfeiting a deep understanding of the cultural, economic, and technological context in which a particular architectural idea arose" (2012:xiii). The dialectic approach adopted by Smith is unique when compared with the other volumes covered here, and it is developed as a teaching methodology; his pedagogical strategy develops the debate around particular themes, and it is well suited for academia, as it supports the development of architectural thinking even if it is not the development of theory per se.

The intention of reviewing these publications was to show the wide range of interpretations, approaches and uses of theory within the discipline in the twenty-first century. In the last forty years, the publications have moved from specialised and complex books dealing with large intellectual constructs and themes, to concentrating on ideas common to the wider community interested in architecture and architectural theory. In some cases, theory is understood in its pure speculative and abstract theoretical sense, whereas other authors attempt to bring the notion of theory closer to practising architects and laypeople. The extremes of the architectural theory debate demonstrate the complex and diverse situations architecture faces in today's world. The twentieth-century paradigms have been repositioned in an interconnected global village where ideas travel faster than ever, and new solutions need to be formulated. Irrespective of the changes to the intellectual framework adopted by these books, it is clear that the appetite for and use of theoretical thinking is current and evolving to respond to the needs of the new millennium.

However, despite the proliferation of ideas globally, there is a critical issue of availability and accessibility to the theoretical material in non-European/Anglo-Saxon countries (Ettinger-Mc Enulty and Jara-Guerrero 2008:11).

This contention is proved by the search in Mexico City's public and academic libraries, publishing houses and book stores for the translations of the main publications used in this chapter – Ockman 1993; Nesbitt 1996; Leach 1997; Hays 2000; Evers 2006; Mallgrave and Contandriopoulos 2008; Sykes 2010; Davies 2011; Crysler, Cairns and Heynen 2012; Smith 2012. The search revealed a lack of general availability, as there are minimal Spanish translations, and it is difficult to access the books. As Table 02 demonstrates, only Evers' (transl. 2015) and Davies' (transl. 2011) books have been translated into Spanish, nevertheless, their availability is limited as only one public library and one bookstore have their publications. Overall, the ten books are available in English versions in either academic libraries attached to universities, or can be purchased online at a significant cost. Therefore, access to the literature

<div>Publications</div>	Public and Academic Libraries						Book stores & Publishing Houses			Online Source
	Biblioteca Nacional de Mexico	Biblioteca Vasconcelos	Biblioteca Justino Fernández - Instituto de Inv. Estéticas	Biblioteca Lilia Guzmán y García (UNAM - ENA)	Biblioteca Francisco Xavier Clavigero – Uni. Iberoamericana	Biblioteca de la Universidad Anahuac del Norte	Arquine	Fondo de Cultura Economica	Libreria Ghandi	Amazon.com.mex
Anthologies										
OCKMAN, J. and EIGEN, E. (eds.), 1993. Architecture Culture 1943-1968 [...]	N/A	N/A	N/A	en	en	en	N/A			en
NESBITT, K., (ed.), 1996. Theorizing a new agenda for architecture [...]			en							
LEACH, N., (ed.) 1997. Rethinking architecture [...]			N/A							
HAYS, M., (ed.), 2000 (1998). Architectural Theory since 1968.										
Introductory Books										
EVERS, B., (ed.), 2006. Architectural theory [...]	N/A	sp	N/A	en	N/A	N/A	N/A		N/A	en
MALLGRAVE, H. & CONTANDRIOPOULOS, C., (eds.) 2008. Architectural theory v.II [...]		en								
DAVIES, C., 2011. Thinking about architecture [...]		sp								
SMITH, K. (ed.), 2012. Introducing Architectural Theory [...]		N/A								
Compiations										
SYKES, K.A., (ed.), 2010. Constructing a new agenda [...]	N/A	N/A	N/A	en	N/A	en	N/A			en
CRYSLER, G., CAIRNS, S. and HEYDEN, H., (eds.), 2012. The Sage [...]					N/A					
	en	Available in English				sp	Available in Spanish			

Table 02: Translation from English to Spanish of architectural theory books and their availability in Mexico.

can be achieved by three means, highlighting the country's strong socio-economic division: i. those attending a higher education institution and speaking a second language, specifically English; ii. those with the means to study abroad in European or American institutions, hence accessing the material in either its original or translated status; or iii. those with the financial means to purchase the books as part of their professional endeavours. These avenues significantly reduced access to the literature and placed it in the hands of a minority.

1.7 Architectural History: interpretation and publications

The anthologies, edited books and introductory texts discussed above highlight an increasing interest in mapping, defining, understanding, and expanding the scope of architectural theory in the last five decades; nevertheless, architectural theory anthologies should be supported by studying architectural history publications. A dual reading of architecture – theory and history, will generate a comprehensive understanding of the discipline. Despite this important assertion, it is not the scope of this research to review, critique and synthesise the relevant publications that have covered architectural history in the twentieth century, as this endeavour falls outside the remit of the investigation and would merit a separate research altogether. However, it is appropriate to acknowledge key authors who published seminal architectural history books in the twentieth century, as these publications traced, explored and connected the development of the modern and postmodern movements and elaborated their intellectual and architectural manifestations.

Among the various histories of modern architecture written in the last century, the seminal books by Nikolaus Pevsner, *Pioneers of the Modern Movement* (1936), and Siegfried Giedion's *Space, Time and Architecture* (1941) are the most significant; both authors explained the impact of modernity in architecture at the start of the twentieth century. An influential pre-World War II text was Henry-Russell Hitchcock's *The International Style* (1932), in which he examined the aesthetic impact of new ideas and technologies in architecture. In the second half of the twentieth century, Bruno Zevi's *Storia dell'architettura moderna* (1950) and Peter Collins' *Changing Ideals in Modern Architecture* (1965) expanded

on the complex lineage of the modern movement and the key paradigms that defined it. In Leonardo Benevolo's *Storia dell'architettura moderna* (1960) and Manfredo Tafuri and Francesco Dal Co's *Modern Architecture* (1979), architecture is understood through the social, political and ideological conditions surrounding it.

In the last third of the twentieth century, seminal texts by Charles Jencks, *The language of post-modern architecture* (1977) and Kenneth Frampton, *Modern Architecture: a critical history* (1980), together with the insightful scholarly work by William Curtis' *Modern architecture since 1900* (1982) traced the emergence, maturing and transitioning of modern architecture and modernist thinking into the intellectually pluralistic context of Post-modernism. In contrast to the availability and accessibility of theoretical text shown in Table 02, all the architecture history books listed above—Pevsner 1936; Giedion 1941; Zevi 1950; Benevolo 1960; Collins 1965; Jencks 1977; Tafuri & Dal Co 1979; Frampton 1980; and Curtis 1982, have been translated into Spanish and are available in the academic libraries.

At the turn of the century the work of José Maria Montaner's *Después del movimiento moderno: arquitectura de la segunda mitad del siglo XX* (1999) and Alan Colquhoun's *Modern Architecture* (2002) proved an essential bridge into the twenty-first century. Each of these books embodies a defined cultural, socio-political and intellectual perspective and understanding of the historical development of Modernism and Postmodernism, as well as the architecture generated from those discourses. Therefore, as a complete body of work, these publications consolidate the core ideas and interpretations that informed and influenced architecture in the last century, and continue to define contemporary architecture today (Curtis 1996:12-17). A critique of these publications is how they highlighted the dominance of European and North American academia and practice in the discussion around the development of modern and postmodern architecture.

A defining characteristic of history is the constant need for reinterpretation based on emerging facts, documents, artefacts, buildings, personalities, etc; history is not immutable and fixed, it is in continuous evolution and it must be interrogated and reconsidered frequently (Curtis 1996:11). This led us to a key recognition about architectural history publications: the

construction of historiographic analyses and architectural narratives is filtered through the author's professional background, intellectual positioning and disciplinary knowledge, which in turn are influenced by the works and discourses of the present (Benevolo 1999:11). As with the architectural theory anthologies, each of these architectural history books portrayed a particular depiction of the context, influences and practices of the discipline, which are based on the authors' interpretations of a selected number of conditions, principles, projects and architects. As Andreas Huyssen contends, "every act of memory carries with it a dimension of [...] forgetting" (2003:4), hence, the selection of material implies the omission of alternative information, data and facts which may be judged irrelevant, of no value or out of the remits of the work.

An example of the subjective nature of architectural history publications is the fact that despite Mexico being the first Latin American country to have incorporated modern architecture's language through the architecture of José Villagrán and Juan O'Gorman (Canales 2013:126), Leonardo Benevolo made only an abridged reference to the arrival of modern architecture in Mexico in the 1920s and its development in the subsequent two decades; Benevolo's approach stressed Mexico's architectural debt to Europe (1999:723-724), with inconsequential mention to the syncretism of modern principles and regional conditions achieved by some Mexican architects. In contrast, Henry-Russell Hitchcock's assessment of Mexican architecture in the catalogue for the MOMA exhibition *Latin American Architecture since 1945* was more positive; he affirmed that Mexico was the only country in Latin America to consciously maintain a continuity with the Colonial and indigenous pasts in its modern culture (Hitchcock 1955:27). Despite his positive attitude towards Mexican architecture, he issued a sober critique to Luis Barragán, by stating that he is "not trained as an architect, indeed with no technical training at all" (1955:183).

In the seminal book *Modern Architecture: a critical history* (1980 [1985 & 1992]), Kenneth Frampton devoted two pages in the section on Critical Regionalism to discuss the work of the Mexican architect Luis Barragán (2000:318-19); Frampton pointed out the sensuous and tactile characteristics of Barragán's work, while acknowledging the influences of Islamic architecture and the ideals of the International style. He clarified

that by 1947, "Barragán had already moved away from the syntax of the International Style. And yet his work [...] remained committed to that abstract form which had characterised the art of our era" (2000:319). Liane Lefaivre and Alexander Tzonis included in their book *Architecture of Regionalism in the Age of Globalization: Peaks and Valleys in the Flat World* (2012) a more detailed exploration of the development of regionalism in Mexico in the 1940s and 1950s, and complement it with a brief commentary about the work of Juan O'Gorman and Mathias Goeitz (2012:155-57)

This interpretive approach does not disagree with the present research; furthermore, it highlights the subjective nature of architectural history, as well as of architectural theory, and it reinforces the notion that neither are linear processes whereby events follow each other in an even and carefully orchestrated sequence. Architecture, on its historical and theoretical aspects, is constituted and defined by events occurring in different places, moments and disciplines, all intersecting at particular points in time. Despite historical narratives and theoretical paradigms being controlled and shaped by a dominant tradition or paradigm, they will include variations due to internal strands, regional conditions, discursive disjunctions, formal continuities and strong personalities (Curtis 1996:15); this is why we can discuss several histories of modernity and postmodernity, which fuse with contemporary agendas and new paradigms.

When authors are still actively researching, practising and publishing, architectural history books tend to have multiple editions and revisions to accommodate new perspectives and emerging knowledge, hence reinforcing the notion of history as an active and developing interpretation. In William Curtis' opinion, an architectural history book "is by definition an evolving project, a working hypothesis, that must be tested, recorded and refined" (1996:9). As defined by Groat and Wang, the interpretive historical approach investigates "social-physical phenomena within complex contexts, with a view towards explaining those phenomena in narrative form and in a holistic fashion" (2002:136). In this method, the phenomena remain a past condition that requires collection, organisation and evaluation of data and evidence to create a narrative; this process requires the 'interpretation' of such data to construct a holistic and confident

narrative or story. The act of interpretation is an active endeavour irrespective of the research stage, and it can take place through four strategies: i. Causal explanations of history; ii. History as the movement of the Absolute Spirit; iii. Structuralism; and iv. Poststructuralism (Groat & Wang 2002:135-151).

The present project builds on the notion of interpretive historical research and uses the strategies of causal explanation of history and the *zeitgeist* to read the conditions and development of Mexican contemporary architecture and, in particular, the intersection of theory and practice in the twentieth century. Chapter 1 argues for establishing a wider definition of architectural theory that can accommodate not only the speculative aspects of the discipline but also other ideas that can contribute to the construction of an intellectual position addressing the challenges of the twenty-first century.

1.8 Intersections of Architectural Theory and Design

The twentieth century had a range of intersections between theory and architectural design and practice that showcased how architecture is informed and questioned by theoretical discourses. The list of crossovers is extensive so it is not the aim of this PhD thesis to enlist them all; amongst the twentieth century crossovers we can list: the early writings and projects of Le Corbusier (Charles Edouard Jeanneret-Gris) who summarised the challenges faced by modern society in the 1920s and 1930s and its possible solutions; the work of Mexican architect José Villagrán, which was influenced by the nineteenth century French theorists Leonce Reynaud and Julien Gaudet; the work of the Bauhaus, which married industry, craft and architecture in the pursuit of new ways of thinking and designing architecture and everyday objects; Christopher Alexander's work with patterns and his application to empower ordinary people to build their own spaces and environment; the work of Archigram that promoted a futurist vision for high-technology housing and urban planning (Braham & Hale 2007); the work (speculative and built projects) and writings of Bernard Tschumi, Daniel Libeskind and Peter Eisenman and their connections with critical theory thinking and the philosophy of Jacques Derrida; the work by OMA and its mirror think tank AMO; the

impact of Christian Norberg-Schulz's and Juhani Pallasmaa's writings in developing a phenomenological understanding of architecture and the world.

This list of intersections is not exhaustive, but it is a means to reinforce the argument that theoretical discourses can manifest themselves in built form, and it has done so at various points in the twentieth century. In order to strengthen the case, we will analyse Bernard Tschumi's Parc de la Villette and the collaboration between Peter Eisenman and Jacques Derrida. The impact of Jacques Derrida's ideas in Western architecture in the last third of the twentieth century was considerable, as his term 'deconstruction' was used to define one of the most formally daring architectural approaches of the end of the twentieth century. The term 'Deconstruction' was first used in Philip Johnson's and Mark Wigley's catalogue of the 1988 show at the Museum of Modern Art (MoMA), New York, entitled 'Deconstructivist Architecture' (Frampton 2000:313). Johnson's and Wigley's intention was not to launch an architectural movement, but to gather the "confluence of a few important architects' work of the years since 1980 that shows a similar approach with very similar forms as an outcome. It is a concatenation of similar strains from various parts of the world" (1988:7). The exhibition showcased the work of architects Frank O. Gehry, Daniel Libeskind, Rem Koolhaas, Peter Eisenman, Zaha M. Hadid, Coop Himmelblau and Bernard Tschumi, who subsequently became dominant figures in Western architecture from the 1980s to present day. Deconstructivist architecture took inspiration from the Russian constructivism of the 1920s and 1930s; it used "the diagonal overlapping of rectangular or trapezoidal bars" (Johnson & Wigley 1988:7) to structure compositions defined by sharp angles and complemented by disjointed spatial narratives. In the words of Wigley: "this is an architecture of disruption, dislocation, deflection, deviation, and distortion, rather than one of demolition, dismantling, decay, decomposition, or disintegration. It displaces structure instead of destroying it" (1998:17).

Neil Leach described Derrida's philosophical Deconstructivism as a "project which seeks to expose the paradoxes and value-laden hierarchies which exist within the discourse of Western metaphysics" (1997:317), and his association with the namesake architectural style is

problematic, as it has been proven to be removed from the deconstructivist architectural expression; nevertheless, the real impact of Derrida's philosophy can be found in "the way architecture is practiced, thought about and taught, rather than the forms and spaces produced" (Coyne 2011:xiv) by architects aligned with the style. Derrida's textual analysis and search for internal paradox within defined structures influenced and produced tight connections with the writings of several architects, such as Peter Eisenman, Daniel Libeskind and Bernard Tschumi.

One of the most tangible intersections between architecture and critical theory was the 1985-87 collaboration between Peter Eisenman and Jacques Derrida to design a section of 'Parc de la Villette' in Paris. The Swiss architect Bernard Tschumi won the 1982-83 competition to design a twenty-first century urban park to revitalise the market district on the outskirts of Paris. In Tschumi's view, the project represented:

an open-air cultural centre, encouraging an integrated programmatic policy related to the city's needs and to its limits [...] The park could be conceived as one of the largest buildings ever constructed - a discontinuous building, but nevertheless a single structure, overlapping in certain areas with the city and existing suburbs (Tschumi 2000:55).

The park was populated by a number of structures scattered around the site but connected by a complex system of three overlapping grids. These grids were: i. points; ii. lines; and iii. surfaces (Image 01 – overleaf). The first grid is marked by a series of 10 meters cubes located at 120 meters intervals, each holding particular functions. The cubes are known as *folies*, and they create a recognisable image of the park. The second grid provides a set of classical axes and embodies an orthogonal system of high-density pedestrian routes that create movement across the site and between the gardens. Finally, the third grid is composed of pure geometric forms (circles, squares and triangles) and provides the horizontal areas for all the programmatic needs of the park to be fulfilled. Each grid system is distorted by the interaction with the other systems and by the internal needs of the system itself (Tschumi 2000:57); the three-grid system helped to

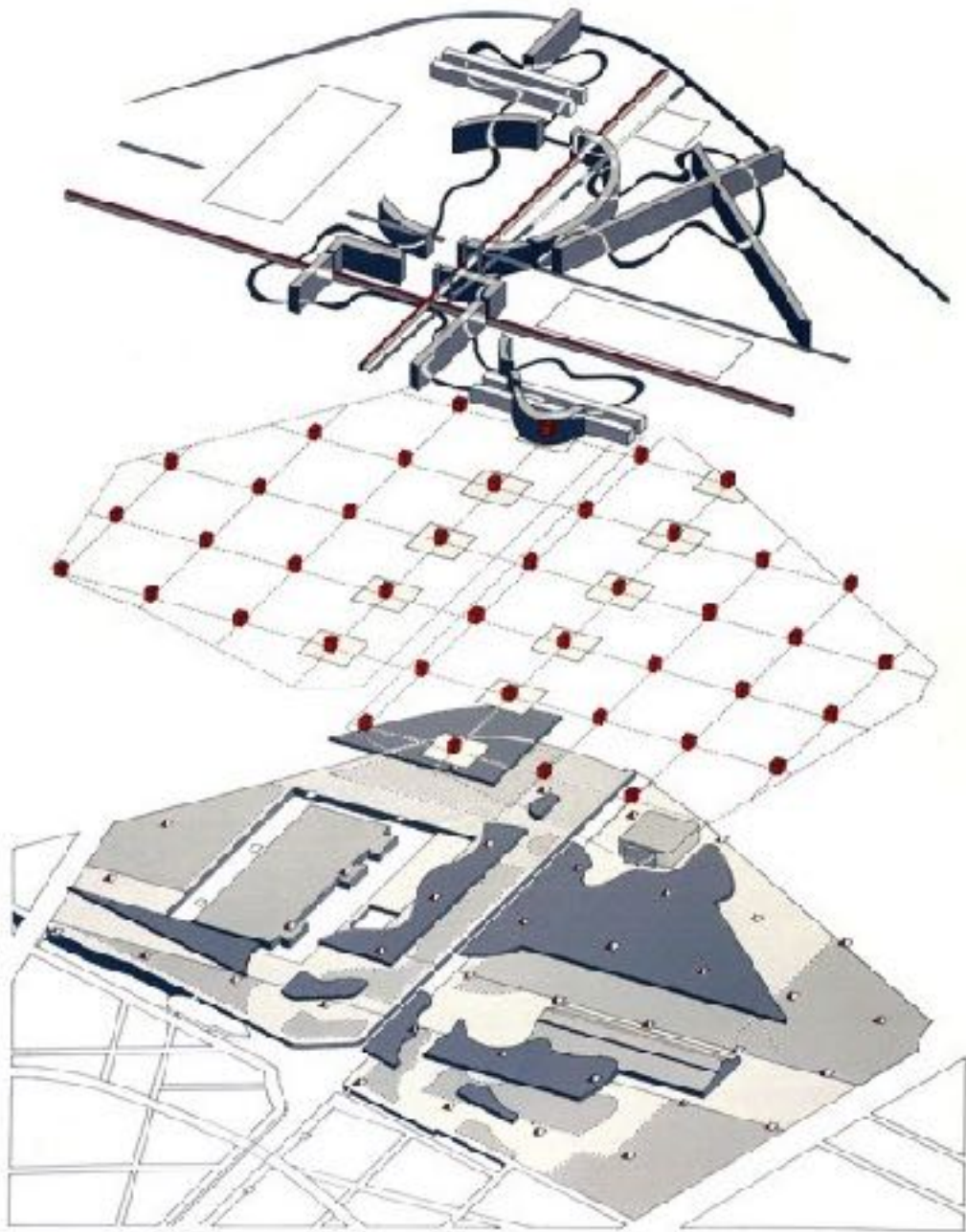


Image 01: Parc de la Villette – System of overlapping grids, Paris, Bernard Tschumi, 1982-83.

connect the park with its immediate context, and it divided and structured the user's experience of the park. In the words of Bernard Tschumi, it is "an elaborated essay in the deviation of ideal form" (Tschumi in Johnson & Wigley 1988:92).

Tschumi's vision for the project was to bring together various disciplines, such as artists, writers, philosophers and designers, to design different sections of the park. His desire for a multidisciplinary

approach encouraged him to pair up Peter Eisenman and Jacques Derrida in the design of a section of the park. At the time, the pairing was controversial as Eisenman was known for his formalist approach to architecture; in contrast, Derrida's philosophy was anti-formal, anti-hierarchical and anti-structure, hence engendering a creative debate between the two individuals. Derrida and Eisenman met several times to discuss the conceptual development of the project and its architectural expression. A record of their correspondence, meetings, drawings and articles was published in 1997 as the book *Chora L Work: Jacques Derrida and Peter Eisenman*, edited by Jeffrey Kipnis and Thomas Leiser. The book intimated an uneasy relationship between the two personalities, as both were at cross-purpose in the architectural project (Coyne 2011:43-47).

The initial meeting took place on the 17th of September 1985 in New York and marked the beginning of the conceptual development of the project. Of particular interest to Derrida was the concept of Chora, as expressed in Plato's *Timaeus*, which was understood as a third space: a space between the realm of ideas and the sensible world of experiences. Eisenman viewed the concept as a potential outline for the garden's programme, nevertheless, the idea of embodying it in a physical expression raised concerns for Derrida. Some of the characteristics Derrida explored about Chora were contained in an essay that Derrida started prior to their collaboration and completed during their discussions. In the subsequent meeting in Paris on the 8th of November 1985, both of them read widely on each other's work and engaged in a productive discussion about the material expression of the Chora. Eisenman suggested using sand and water as elements to leave/delete imprints in the garden (Kipnis and Leiser 1997:34), as well as dividing it into three sections: a quarry, a palimpsest and a labyrinth.

The collaboration continued in subsequent meetings, and the project developed a formal imprint on the site. Eisenman stressed the importance of connecting the project with Tschumi's design for the Parc de la Villette and the site's history, as well as referring to his previous schemes, particularly the unbuilt Cannaregio project. The concept of the quarry gained traction, as it implied the premise that ideas could be

'quarried' from other sources, e.g. previous projects and essays, in order to inform the present scheme (Coyne 2011:50-51). The quarry also alluded to the passing of time, which aligned with the notion of the site as a palimpsest of memories, conditions and elements of its own history - a study of time: past, present and future. In the words of Eisenman, "the site contains its own presence as well as the absence of its own presence (the past and future) in a set of superpositions" (Eisenman 1987:online). The intersection between theory and architecture became formalised, and the design materialised using voids and holes configured through walls, embankments and battlements. The project plays with the levels at which the garden can be accessed so that visitors can be above, on or below the garden, yet with restricted access to the whole (Coyne 2011:52) and with a central element that disrupts and breaks the fabric of the project (Image 02 – overleaf).

The crossover between these two personalities resulted in a rich debate about the nature of architecture, its broader impact and the way it can define the visitors' experience; nevertheless, the opposing intellectual positions and cultural differences, as well as their own personalities, influenced the way the scheme was finally resolved. Some of the design propositions from Derrida were barely acknowledged by Eisenman, who was interested in a cross-referential approach towards a set of built and unbuilt projects from a reduced circle of authors. In contrast, Derrida was interested in an aspect beyond the immediate formal expression and impact of the garden. Their relationship was caught between the conflicting demands of architecture's practical and poetic values, as well as theoretical idealism and its materialisation on a concrete object.

The case of Derrida and Eisenman showed a creative intersection between architecture and philosophy that was captured in the publication *Chora L Works: Jacques Derrida and Peter Eisenman* (1997); despite the exchange of ideas, the construction of the garden they imagined together never took place, as a different version was constructed. The anthologies and compendiums captured other productive intersections, for example, the work of Bernard Tschumi on the ideas of disjunction and paradoxes, Rem Koolhaas' proposals about the city and Samuel Mockbee's community engagement and place-



Image 02: Model of Chora L Work garden design for Parc de la Villette, Paris, Jacques Derrida and Peter Eisenman, 1985.

making interventions. These are a small selection of examples dealing with the intersection of theory and practice; however, some of these volumes, for example, Neil Leach (1997) and Crysler, Cairns and Heynen (2012), are formed mainly through theoretical texts.

In the case of Mexico, José Villagrán's theoretical discourse was influenced by the teachings of his professor Guillermo Zárraga (1892–1978) and the oeuvre of Le Corbusier; however, the most influential theoretical discourses were the treaties of European architectural theorists, such as Jean-Nicholas-Louis Durand (1760–1834), Leonce Reynaud (1805–80) and Julien Gaudet (1834–1908) (González Pozo 2004:154). Villagrán simplified Gaudet's principles, which determined his core beliefs of i. architectural and material honesty; ii. unity

between the parts and the whole; iii. and the correspondence between architecture and its era (González Franco 2007a:230-31). Villagrán aligned architecture with the constructive methods and technologies of the time, allowing aesthetic values to emerge from within the building rather than through the copy of historical styles. In his theory, the composition, design and execution of projects were guided by the programmatic resolution of the scheme and the application of tectonic ideas. These ideas were expressed in his functionalist masterpieces, the 1929 Hospital para Tuberculosos in Huipilco – we will dwell on Villagrán's theory and work in chapters 3 and 4. In Mexico, the architects/authors of the twentieth century were limited by the increasing and evolving needs of the country and the pragmatist approach adopted by the government in sponsoring public architecture. Therefore, after an initial burst of architectural theory and construction after 1920 and into the 1930s, in the 1950s and 1960s, architectural publications were produced by practising architects who had a theoretical inclination, yet their vocation remained anchored in practice, and they lacked a rigorous approach to research (Aguilera 2017). This indicates that in the twentieth century, the context and conditions in the country either facilitated the production of architectural publications or demanded the construction of architecture.

1.9 Architectural Theory: The crossovers in Mexico

At the end of the nineteenth century, Mexican architecture was modelled after European eclectic ideals, in particular those styles coming from the French and Italian Beaux-Arts academies. As the new century began, Mexico developed meaningful crossovers between theory and architectural practice with the emergence of a nationalistic identity; these socio-political and cultural agendas looked at the Colonial and pre-Hispanic periods for inspiration. The rise of nationalism was concurrent with the arrival of modernity's precepts and ideas, which generated a vivid and passionate architectural debate in the 1920s and 1930s. These discourses unfolded, matured and integrated into the architectural thinking and buildings of the 1920s and 1930s. The final outcomes of these intersections were the institutionalisation of Functionalism as the government's official style and

the adoption of José Villagrán's architectural theory. The ideas and proposals of these two perspectives were contained in two seminal publications: *Pláticas sobre Arquitectura: México, 1933* (1934) captured the debate surrounding Functionalism and *Teoría de la Arquitectura* (1964) encompassed the teachings and ideas of José Villagrán. The development of Functionalism was informed by the work and writings of Le Corbusier; he strongly influenced the architectural thinking of Juan O'Gorman and Juan Legarreta. On the other hand, Villagrán constructed his theoretical edifice using the ideas of the French architect Perrault and the treaties of Jean-Nicholas-Louis Durand, Leonce Reynaud and Julien Gaudet. The PhD thesis will devote chapter 3 to *Pláticas sobre Arquitectura: México, 1933* and chapter 4 will dwell on Villagrán's discourse.

The development of Functionalism and the adoption of Villagrán's theory would come to define the country's architectural discourse until the 1970s; however, from the 1970s onwards, there was a decrease in the quantity of Mexican architectural discourse and the production of literature to complement it. The influence of foreign texts and ideas was meaningful in the first half of the twentieth century; however, the decrease in the availability of theoretical translations towards the end of the century was evident, as shown by Table 02 (p.67). By the 1970s, Villagrán's concepts, which were disseminated through his chair of architectural theory at the ENA in UNAM, were transformed into a stylistic proposition in line with the international style and leaving aside its social content. The defining architectural discourse in the 1980s and 1990s retreated into importing foreign stylistic influences and reinterpreting ideas from the past to develop a Mexican architectural theoretical discourse (Ingersoll 1996:6-16).

A defining characteristic of the 1980s was the publication of illustrated monographs, architectural catalogues and architecture history books, leaving the architectural debate in the pages of a handful of books, magazines and architectural journals such as *Arquitectura / México* (1938-78), *Arquitectura y Sociedad* (1970-80), *Arquitecto* (1976-83), *Arquitectura a* (1991-93), and *Arquine* (1997- today) (Canales 2013:483-87). At the end of the twentieth century, the books that addressed the country's theoretical concerns and dealt with the concept of

architectural theory in Mexico were minimal; among them we have José Villagrán's *Teoría de la Arquitectura* (1964 [1980]), Pedro Conrado's *Memoria y Utopía en la Arquitectura Mexicana* (1990), Edward Burian's edited volume *Modernity and the Architecture of Mexico* (1997), and Israel Katzman's *Cultura, diseño y arquitectura* (1999 & 2000). In the 2000s, Alejandro Aguilera's *Arquitecturas Finiseculares en México* (2004), Carlos Véjar Pérez-Rubio's *La espiral del sincretismo. En busca de una identidad para nuestra arquitectura* (2007) and Catherine Ettinger-Mc Enulty and Salvador Jara-Guerrero's *Arquitectura Contemporánea: Arte, Ciencia y Teoría* (2008) concentrated on architectural theory in Mexico.

The importance of these books and publications is that they anchored the network of architectural narratives related to the historical development of theory and practice in Mexico. The shift from architectural theory books at the start of the century to illustrated monographs and catalogues at the end of the century shows a transition from the establishment of a theoretical debate and position, to disseminating new projects and, subsequently, consolidating the key figures of the architectural scene (Canales 2013:486-98). These publications dealt with architecture as an intellectual act that could be read in the discourses postulated by architects and the buildings of the time. As Iain Borden and Jane Rendell contended, theory can serve as a mediating tool to negotiate the knowledge of the past and the conditions of the present (2000:6), and it is essential in maintaining architecture's currency, as well as helping the discipline to be critical of its own practices, discourse and production. This line of thinking was adopted by the Mexican-American architect and historian Catherine Ettinger-Mc Enulty and Professor Jara-Guerrero when they stressed the importance of theory in architecture by asserting that "theoretical reflections are essential for architectural practice" (2008:12) as architecture is an activity connected with its context, hence never a 'neutral' endeavour.

Architecture not only has been influenced by science and philosophy, but it has an active and fertile relationship with them. In line with the interdisciplinary paradigm embodied in the anthologies (Nesbitt 1996, Leach 1997, Hays 1998 & Sykes 2010) and compilations (Davies 2011 & Smith 2012) examined here, Ettinger-Mc Enulty and Jara-Guerrero argued

that interdisciplinary intersections are critical to enrich the profession and have the potential to improve architecture, urban space and the built environment in general. Theory is essential to the creative development of architectural design, and theoretical texts produced in other disciplines are influential sources that enrich the discipline (2008:11-14).

Ettinger-Mc Enulty and Jara-Guerrero's book was structured into three sections: i. *Antecedentes de lo Contemporáneo*, ii. *Inquietudes Contemporáneas* and iii. *Reflexiones para la praxis*. Every section was subdivided into three chapters, each dealing with a particular theme. Overall, the book emphasises the role of theoretical texts emerging from critical theory, Phenomenology and Post-structuralism in architecture; it also explores how these discourses connect with each other and with architectural theory and practice (2008:11-14). The book served as a compendium of ideas that attempted to reignite the debate on architectural theory in Mexico. The selection of themes and thinkers embodied the influence and impact of European and Anglo-Saxon authors in the century; however, these are combined with concerns and authors belonging to countries at the periphery, such as the local/global debate contained in critical regionalism.

One of the most significant critiques made by Ettinger-Mc Enulty and Jara-Guerrero is the lack of availability of the interdisciplinary body of work in Mexico. The publication of anthologies, compilations and introductory books, such as the ones published in Europe and the USA, did not occur in Mexico. These publications were not available for Mexican students, academics and architects as they were not translated into Spanish (2008:11). Table 02 (p.67) reinforced this notion and highlighted the issues surrounding access to architectural theory material. Ettinger-Mc Enulty's and Jara-Guerrero's book is not an anthology or compilation, but an introductory text following the structure and ethos of Davies' (2011) and Smith's (2012) publications. Its goal is to introduce these debates to a broader audience. It outlines key connections between philosophy, theory, architectural theory and practice that are taking place in the centres of architectural power, encouraging Mexican architects to use the knowledge that emerged from these convergences.

Despite the latest attempts to re-engage with the theoretical debate in Mexico, it is evident that the theoretical gravitas achieved after the War of Revolution increasingly lost momentum towards the end of the twentieth century; the discipline capitulated to the production of buildings that followed the paradigms of architectural styles, rather than attempting to build a new direction for the discipline in the new millennium. As this chapter suggests, the importance of the convergence of these territories of knowledge is supported by the publication of numerous books, anthologies and edited volumes, together with conferences and academic events that fleshed out the field of architectural theory by covering the convergence of architectural thinking and philosophy/critical theory.

It is important to note that the cultural, socio-political and economic conditions in twentieth-century Mexico complicated the production of a purely theoretical debate; after 1920, the country's pressing need to create a built environment that reflected a modern national identity shifted architectural endeavours towards a pragmatic approach, where theory became less about speculation and thinking and more about application and resolution. Chapters 2 to 5 will explore and detail the country's architectural journey, starting in chapter 2 with the historical narrative of the construction of the nation, its national identity and its relationship with architecture.

1.10 Conclusions

Chapter 1 analysed the literature related to theory, philosophy, and architectural thinking at the end of the twentieth century; it cemented our understanding of the development of architectural theory in the last five decades. In that period, architectural theory was influenced and shaped by ideas emerging from other disciplines, in particular from the school of thought known as critical theory; the intellectuals of the Frankfurt School and thinkers from other philosophical positions such as Structuralism, Post-structuralism and Phenomenology developed this intellectual discourse. Paradigms originating from these philosophical schools of thought fused with Western architectural thinking and impacted the development of a 'critical architectural theory' into the twenty-first century. The anthologies, compilations, introductory volumes and edited books analysed in this

chapter encapsulated the key intellectual debates that defined the late-Modern and Postmodern movements in the twentieth century. It also emphasised how theory connected with emerging architectural tendencies at the beginning of this century.

The chapter was structured around the concept of critical thinking, as it was considered one of the central paradigms that informed architectural theory since the 1960s; nevertheless, chapter 1 questioned and critiqued the notion of critical thinking as some thinkers considered the concept to be superseded (Somol and Whiting 2022), whereas others postulated the need for its reinterpretation, to create closer collaboration between theory and praxis (Graafland 2004). The insular nature of critical thinking meant that architectural theory was increasingly separated from practice, and it became increasingly anchored in academia. After studying the available literature, the author argues that theory is essential for the discipline, as it provides architects and scholars the intellectual means to situate their ideas in the world. The architect's intellectual positioning can be aligned with a theoretical, practical, environmental, technological, aesthetic or a combination of these perspectives. Nevertheless, the intersection of architectural theory and practice does not imply the production of better architecture.

As with the anthologies and compilations studied here, the scope of this chapter became a partial attempt to study a large field of knowledge that has been shaped by literature produced by western hegemonic centres of architectural and theoretical thinking; this hegemonic approach brings limitations to the research, as it implies leaving aside alternative ways of approaching architecture and theory from alternative sources, such as Latin America, Africa and Asia. Furthermore, the chapter did not propose a taxonomic categorisation or favour a particular strand of theoretical thinking as essential for architecture, but it aimed to build an appreciation of the key role theory should play in developing architecture. Chapter 1 defines architectural theory as how an architect, academic or architectural author situates him/herself in the world by using a particular line of thinking to resolve the challenges presented by reality. The inclusion of ideas and paradigms from other disciplines attempted to revitalise the role of architecture in society, as architectural theory is envisioned to permeate

all facets of the discipline: conceptualisation and designing, construction and technology, and debate and reflection. The volume of theoretical publications demonstrated an appetite for this type of knowledge, but it did not imply readership; the publishing of publications highlighted an increasing widening of access to information and the willingness of architects and authors to engage with the intellectual development of architecture. However, the anthologies, compilations and edited volumes materialised the dominance of European and Anglo-Saxon discourse as these publications did not include Latin American, African or Asian authors or texts emerging from those territories; hence, this research will explore the omission of alternative sources by focusing on the intersection of theory and practice in Mexican architecture in the twentieth century.

The chapter has referred to the Mexican context in an attempt to introduce relevant publications that emerged in the country prior to and in parallel to the books examined here; however, an analysis of the country's architectural theory publications showed a decrease in output as the twentieth century unfolded. To develop this argument, the PhD thesis will focus on three particular books: *Pláticas sobre Arquitectura: México, 1933* (1934) in chapter 3; *Teoría de la Arquitectura* (1964) in chapter 4; and finally, *Arquitecturas Finiseculares en México* (2004) in chapter 5. Chapter 1's objective was to reinforce the argument that theory is crucial for architecture's development and that our understanding of architectural theory must evolve to become an open proposition that accepts ideas from other disciplines and areas within and outside architecture. Chapter 2 will build Mexico's historical narrative in order to understand the development of society and culture and its impact on the architectural thinking of the twentieth and twenty-first centuries.

2. The Historical Construction of Mexico

2.1 Introduction

Mexico is used as the main case study of the PhD thesis. Hence, it is important to establish the historical narrative that gave birth to the country and to determine the pre-Hispanic, European and contemporary influences and events that shaped the nation. Chapter 2 will map the ideological construction of Mexico based on five key historical events: The Colonial period after the Spanish Conquest, the War of Independence, the War of Reform, the *Porfiriato* and the War of Revolution. These five episodes set the foundation for constructing the country's national identity and define the debates linked to adopting modernity in the twentieth century. The socio-political, economic, and cultural circumstances that defined each period had a profound impact on architectural practice and thinking, as they curtailed and determined architectural production in the country.

The rationale for selecting the Spanish conquest as the starting point of the PhD project's narrative is based on the belief that Mexican national identity (cultural, social, political and religious) can be traced back to the clash of the European and indigenous civilisations that took place in the sixteenth century (de la Peña & Vázquez León 2002; Bartra 2006; Blancarte 2007). Directly or indirectly, the juxtaposition of foreign and local ideological edifices and discourses played a key role in the violent events that shaped the country after the arrival of the Spanish conquistadores in 1519. Architecturally, the encounter between these two worldviews defined the architectural discourses formulated by academics and architects searching to develop Mexican architecture after the War of Revolution. Therefore, to understand Mexican architecture at the start of the twentieth century, it is essential to acknowledge the syncretism between Europe and the New World, which was embodied in the neo-Colonial and neo-indigenous revivals of the 1920s.

The arrival of the Spanish conquistadores to the New World, and the imposition of a European worldview, gave birth to a country in constant search for its identity. After nearly 300 years of control, the syncretism of the Spanish and indigenous cultures produced a *Criollo* patriotism that led the country into the War of Independence (1810-1821). The fight for independence accomplished the long-sought freedom from the Spanish crown's domination, forming a united and independent nation. Three decades later, the newly formed independent nation experienced a political civil war – the War of Reform (1858-1861)- representing the divergent and contrasting religious, socio-economic and ethnic positions among the Mexican ruling classes. The two fighting factions adopted opposing views about the country's future relationships: the conservatives wanted to regain Europe's influence, while the liberals sought to develop a new future along the USA.

After a long period of violence in the nineteenth century, the country found nearly 40 years of peace and development under the dictatorship of General Porfirio Díaz. The *Porfiriato*, as this period is known, provided the country with political stability, economic growth and material development; however, the advances these conditions brought were outweighed by the regime's abuses of power and political transgressions. The breach of the people's trust brought the nation into its final armed conflict: the War of Revolution (1910-1920). The Revolution sought social justice and equality for all Mexicans, regardless of race, religion and social level. The movement attained political and economic dimensions, which, together with its social core values, made it a transcendental reform of the country.

At the end of the War of Revolution, the country transitioned into modernity; it used its advances to attempt to become a 'modern' nation and gain stature among the leading Western countries. Modernity was appropriated and adopted by the ruling classes, yet the nation struggled to achieve the levels of progress and prosperity experienced in the other industrialised countries. The construction of Mexico's built environment embodied the events, memories, ideologies and truths of each époque, creating a built palimpsest of ideas that can be read in the urban and rural environments of the country. The ongoing construction of Mexican identity has taken more than 400 years to develop, and it occupied a prominent

place in the political agendas of the ruling classes up until the last third of the twentieth century.

2.2 The Colonial Times

Mexico was born in the sixteenth century from the confrontation of two worldviews: the European Spanish empire and the American native cultures. The Nueva España's cities, and its architecture, are expressions of a society produced by the processes of conquest, colonisation and syncretism that took place after the fall of Tenochtitlan in 1521. As historian Enrique Florescano described it: "the European invasion decapitated the autonomous project of the American civilisation and imposed on the native population a new language and the religious, social and political values of the western worldview" (2002:137). The Spanish conquistadores systematically destroyed the indigenous' traditions and the historical records contained in pictographic codices, murals and artefacts; however, some scholar missionaries, such as Andrés de Olmos and Bernardino de Sahagún, used codices and oral accounts as the basis to produce their historical chronicles and ethnographic accounts, which aided to preserve the indigenous traditions subsumed in the Nueva España (Florescano 2004:312).

The Spanish imposition of the European worldview was achieved through sword, language, religion and architecture. However, both cultures reached a level of syncretism that combined local and foreign idiosyncrasies, which subsequently were informed and defined by the diverse natural environments of the newly discovered territories. The bonding of the Spanish and Indigenous worldviews formed the basis for the Mexican identity and culture (Véjar Pérez-Rubio 2007:9). The Spanish conquest and colonisation of the country engendered an identity that was neither Indigenous nor Spanish; it was a hybrid construct constantly evolving and captured in cultural expressions such as art and architecture. The *mestizaje* of the country was a historical outcome that encompassed multiple cultural and social processes linked to the legitimization of the state and the definition of social relationships (Tenorio Trillo 2003:60).

A powerful example of the tangible imposition of a new ideological project was the destruction of the main Aztec temple at the heart of Tenochtitlan, and the ensuing construction of the Catholic Cathedral on top of its ruins. The Metropolitan Cathedral (Image 03 – overleaf) symbolised and embodied the new religion at the heart of the Nueva España, and it served as the locus to teach the natives the new traditions, rituals and socio-cultural behaviours. Architecturally, it physically erased the spiritual heart of the Aztec culture – the Templo Mayor, replacing it with a building representing the Spanish religious ideology (Image 04 – overleaf). The pantheon of gods spoused by the indigenous civilisation was obliterated and replaced by the Catholic monotheist view of the world.

The quest to consolidate the national identity slowly gained momentum and strength during the sixteenth century, maturing throughout two hundred years of Spanish governance and climaxing in the eighteenth century. The *Criollos*, or people born in the Nueva España of pure Spanish ancestry, developed a sense of belonging and identity based on a self-examination influenced by the country's ancient origins. The result of this existential scrutiny was three-fold: firstly, *Criollos* linked identity with the land they inhabited, creating a sense of inhabited territoriality; secondly, they recovered the indigenous past as the legitimate foundations for the construction of the new country; and finally, they created new symbols and traditions to embody the nation's new values and ideals (Florescano 2002:270). The three expressions of national identification led to the development of a *Criollo* patriotism connected with the Nueva España and resentful of the privileges of the *Peninsulares*, who were Spanish-born Spaniards residing in the Nueva España; the tension and conflict between these two groups provided the foundations for the Mexican movement of independence in 1810 (González 2003:87-88).

Architecturally, the three centuries between the Conquest and the War of Independence were defined initially by the destruction of indigenous constructions in the middle of the sixteenth century and then by the imposition of European discourses, programmes and styles in the colonial territories. The architectural production during Colonial times was varied, yet initially reflected the need of the conquistadores to indoctrinate and control the indigenous population. After the fall of Tenochtitlan, more than



Image 03: Mexico's Metropolitan Cathedral built between 1573 - 1813.



Image 04: Architectural juxtaposition of the pre-Hispanic ruins of the Aztec's Temple Mayor, the Colegio de San Ildefonso (1588) and the Museum of the Templo Mayor (1987)

90% of the constructions were linked to religious orders, who incidentally were in charge of indoctrinating the native population. In the sixteenth and

seventeenth centuries, churches and palaces were erected using the Renaissance and Baroque styles, which created a built environment inspired by the conquerors' cultural and architectural backgrounds. At the end of the eighteenth century, European neoclassical ideals were crystallised by the establishment of the Royal Academy of San Carlos (RASC; e.1783) in the capital of the Nueva España; this was the first institution devoted to the arts in America, and it educated artists and architects based on the European models and ideals (Souto 2004:80-93).

2.3 The War of Independence (1810-1821)

The War of Independence (1810-1821) accomplished the long-sought freedom from the domination of the Spanish crown, forming a united and independent nation. It set the basis for an autonomous and united country, free of foreign intervention, with a political organisation endorsed by widespread consensus and concerned with the nation's needs. It produced a proud national conscience, with the understanding that national sovereignty resides within the people and is supported by territorial identity, a common language, a mutual religion, and a shared past (Florescano 2004:528-29). After the War of Independence, the country's national identity was cultivated from within the country and in an autonomous way, rather than defining it in relation to and opposition to Spain. As Lawrence J. Vale points out, "national identity [...] is not a natural attribute that precedes statehood but a process that must be cultivated for a long time after a regime has gained political power" (2008:49).

The movement of independence began the ideological development of the country as an independent nation-state; it initiated the construction of the state's cultural, social, and political projects, all of which were connected with a new interpretation of the country's past, a renewed understanding of its present, and the inclusion of the communities living within the territorial boundaries of the nation (Guedea 2010:147-62).

The armed conflict affected the construction of new buildings and impacted the completion of ongoing projects; therefore, except for some projects like the Palacio de Minería (1797-1813), all architectural endeavours halted

during the war. The effect of the War of Independence on the artistic and architectural life of the country was felt in the following decades, as the Academy of San Carlos (ASC) struggled financially after losing its royal patronage. As a result of its struggles, the Academy was restructured in 1843, and state funds were assigned to the institution in 1847 so it could continue operating. The institution's financial dependency on the government meant that it adopted conservative values matching its new patron, and it embraced European neo-classical principles and style as the vehicle to translate conservative ideals into architecture. A decade later, the ASC's architectural curriculum was modified by the Italian architect Francisco Javier Cavallari, who was appointed as its director; Cavallari brought into the institution an emphasis on historicism in architecture and moved away from the neo-classicism that defined the previous decade (de Anda Alanís 2006:144-145). Despite the patronage and curricular changes, the innovations in art and architecture between 1821 and the start of the General Porfirio Díaz regime in 1876 were minimal; the work produced in those decades continued to use the ideals of the previous century and was inspired by European models (Souto 2004:94).

2.4 The War of Reforma

Four decades after the War of Independence, the country was consumed by the War of Reforma (1858-1861). The civil war embodied the divergent and contrasting religious, socio-economic and ethnic positions among the Mexican ruling minorities. The armed confrontation set the conservative party– formed by politicians, clergy and military from wealthy backgrounds, against the liberals– who were politicians, civilians and the military from modest backgrounds and mostly under forty years old (Krauze 1994:228-29). Don Lucas Alaman led the conservative faction with the support of General Miguel Miramon; they searched for the return of Spanish power and to reincorporate European influence into the country. The conservative manifesto had seven points: i. We wish to maintain Catholicism as the country's main religion and for the government to forbid any impious and immoral works; ii. The government should have the strength to prevent abuse of power; iii. We are against the federal regime and a representative system based on popular elections; iv. We believe the

country needs a new territorial division to facilitate its administration; v. There should be a large enough military to address the country's needs; vi. No more Congress, just a selected number of planning advisors; vii. We call for Europe to come to our aid (González 2003:109).

The liberal opposition was led by Benito Juárez, Melchor Ocampo and Miguel Lerdo de Tejada, who denied the Spanish, indigenous and catholic traditions, aspiring to define the country through new ideas and supported by the United States of America (USA). The liberals wanted freedom of work, trade, education and literacy. Their ideological discourse included: i. the search for religious tolerance and the submission of the Church to the State; ii. a representative democracy as the country's political system and the nation constituted as a federalism; iii. the independence of the three political powers and the weakening of the military forces; iv. the colonisation of new lands with foreigners; v. to cultivate the sciences and increase education infrastructure; vi. and finally, to foster ideological proximity with the USA. After three years of battling for control of the country and to implement their ideological discourse, the liberals prevailed, creating a secularised society where the political power was autonomous from any religious and military influences (González 2003:108-11). The War of Reforma embodied two opposing worldviews: one looking back at the European past for guidance and support; the other looking to the future and the influence of our closest neighbour, the USA.

In January 1861, Benito Juárez was elected president of Mexico. However, his administrations faced grave financial difficulties, resulting in a moratorium on loan-interest payments to France and England in July 1861; these actions resulted in the French, English and Spanish armies landing in Mexico between December 1861 and January 1862, as they searched for payment of the nation's outstanding debts. The three armies occupied the port of Veracruz, but after diplomatic negotiations and payment reassurances, England and Spain left the country. On the other hand, France waged war with Juarez's regime and eventually imposed Maximiliano of Habsburg as the emperor of the Mexican Empire in April 1864. Maximilian's regime lasted barely three years as he was defeated in Queretaro on the 15th of May 1867, subsequently court-martialled and shot

on the 19th of June 1867. This ended Europe's involvement in the country (Krauze 1994:26).

The War of Reforma had significant consequences on architecture and urbanism, as Juarez's government issued laws to expropriate the clergy's land and property across the nation. As a result of this mandate, more than 45% of the urban land in Mexico City was made available, allowing architects, urban planners and engineers to develop residential districts and to build new infrastructure. In addition, several religious buildings changed their programmes to accommodate civic functions, such as schools, barracks and hospitals, to support the government's liberal agenda. In other instances, convents were partially demolished to create streets and avenues to improve movement in the city centre. For example, the Convent of Capuchinas was partially demolished to give way to Calle Palmas (formerly known as Calle de Lerdo) and the Convent of San Bernardo was partly destroyed to open the avenue 20 de Noviembre (de Anda Alanís 2006:148-149).

2.5 The Porfiriato

After such a long period of violence, the country found nearly 40 years of peace and development under the dictatorship of General Porfirio Díaz, who governed Mexico from 1876 to 1880 and 1884 to 1911. This historical period is known as the *Porfiriato*. In Díaz's first two terms (1876-1880 and 1884-1888), he brought peace to the country and organised the political apparatus by adopting a dominant patriarchal approach in all political matters. He was an advocate of progress, therefore he supported the country's material development by expanding the telegraph and postal service, extending the country's railroads, mining and new industries, as well as fostering the growth of an internal economic market linked to international ones (Krauze 1994:305-09).

During Díaz's regime, society and culture were defined by intellectual and philosophical positivism, whereby the country's pressing problems were resolved by applying the empirical sciences and knowledge derived from the scientific method (Arriaga 2007:170-71). The president's agenda was guided by three principles: peace, order and progress. These guiding

principles helped him to open the country to capitalism and to provide the country with political stability, creating economic growth and fostering the nation's material development (Krauze 1994:304-309). The country's social hierarchy was expanded by the constitution of a new social order – the *Bourgeoisie*, who attempted to showcase their newly found power and wealth by constructing sumptuous French-style villas in the capital (Souto 2004:94).

During the *Porfiriato*, architecture supported the government's goals of material progress and infrastructural development; the political power aimed to modernise the country by building roads, railroads, ports and public buildings, which created ample opportunities for architects and engineers to construct a modern vision of Mexico (Gallo, 2005:4). Architecture and the arts were defined by an eclectic style that drew inspiration from the architectural historicism that dominated Europe in the middle of the nineteenth century. Its theory was taught at the Academy of San Carlos, which became in 1867 the Escuela Nacional de Bellas Artes and was devoted to forming the country's architects and artists. Architects learnt to combine elements from various artistic styles and aimed to reproduce the European models emerging from the Beaux Arts academies in Paris, London and Rome. In particular, President Díaz favoured French style and ideals (Rodríguez Viqueira 2009:87).

The peace and order of the *Porfiriato* provided a fertile ground for the private sector, which, together with the government, embarked on ambitious and extensive construction projects in the country. In order to achieve his goals, architects imported European and American modern building techniques to complement existing local traditions, and they introduced new materials to dress the constructions in the prevailing eclectic French style. Therefore, steel frames and reinforced concrete appeared across the cities and were dressed in Italian marble and Nordic granite (de Anda Alanís 2006:149-51). The use of an architectural eclectic style in the *Porfiriato* did not last long because the profession rejected it as it represented an imposition by the government (Souto 2004:96). These new materials and techniques eventually defined the development of Functionalism in the decades that preceded the War of Revolution, as eclecticism was not suitable for the twentieth century.

The government commissioned foreign architects with projects of national stature such as the Teatro Nacional (completed after the War of Revolution and renamed the Palacio de Bellas Artes; 1904-1934; Image 05 – overleaf) and the Palacio de Correos (1902-1907; Image 06 – overleaf) both by the Italian architect Adamo Boari and the Palacio de Comunicaciones (1902-1908; Image 07 – p.98) by the Italian Silvio Conti (Rodríguez Viqueza 2009:88-89). The traditional *parti* for schools, hospitals and prisons, which had been based around the Colonial cloistered yard, changed to accommodate European and North American ideas. The new public buildings were constructed following the architectural paradigm of pavilions erected amid green areas and connected by a system of covered circulations, such as the Hospital General de México (1896-1905) and the Escuela Normal de Toluca (1907-1910). Cultural buildings, in the form of theatres, were constructed in the country's most prosperous cities and were used to introduce European taste in Mexico and assimilate its cultural expression into society. Finally, domestic architecture flourished during the *Porfiriato* with the construction of grand palaces for the bourgeoisie and more modest homes to accommodate the emerging middle and working classes (de Anda Alanís 2006:153-159).

2.6 The War of Revolution

At the beginning of the twentieth century, the *Porfiriato's* four decades of stability and progress were outweighed by the regime's abuses of power, constant re-election, and abolition of individual and political freedom; these transgressions brought the nation into its final armed conflict: the War of Revolution (1910-1920). The Revolution searched for the implementation of true democracy in the country; eventually, it became a social movement in search of justice and equality for all Mexicans, regardless of their race, religion and social level (de Anda Alanís 2006:163). One of the most essential ideological intentions propagated by the leaders of the Revolution was to link the 1910 armed movement with its two predecessors: the War of Independence and the War of Reform. Francisco I. Madero, one of the early figures of the Revolution, argued that the Revolution of 1910 was the continuation of the popular ideological movement that had started with the independence from Spain in 1810 and



Image 05: Palacio de Bellas Artes circa 1940, Mexico City, Adamo Boari, 1904-34.



Image 06: Palacio de Correos, Mexico City, Adamo Boari, 1902-07.

was subsequently continued by the War of Reforma. At the end of the War of Revolution, the movement had attained deep political and economic dimensions, which, together with its social core values, made it a transcendental reform of the country (Florescano 2002:382-84).



Image 07: Palacio de Comunicaciones circa 1934, Mexico City, Silvio Conti, 1902-08.

The re-evaluation of the connection between these three historical moments produced a national identity discourse disseminated and ingrained in texts, books, traditions and institutions from 1920 onwards. Post-revolutionary nationalism attempted to create an identity that valued national ideals in contrast to foreign paradigms; in its political and cultural dimensions, it searched for the essential historical and racial traits of Mexican-ness (Blancarte 2007:519). The official ideology aimed to create political unity and homogeneity; however, it was shaped at the expense of territorial diversity, social heterogeneity and cultural and political plurality (Florescano 2004:558-59). The national identity should try to develop a "synthesis of history, culture, and traditions that could be presented as both unique and universal. [...] Nonetheless, modern national images are far from being the product of a homogenous and stable 'dominant' ideology" (Tenorio Trillo 2003:60). Instead, national identity is a complex construct defined by the nation's ideological affirmations and negations embodied in contradictory concepts such as tradition and modernity; popular and elitist; and local and universal.

Architecture was paralysed between 1910 and 1920, as architects and engineers produced limited projects and publications due to the armed conflict. Several projects were completed at the start of the 1910s decade, and before the war gained momentum, such as Antonio Rivas Mercado's

Monumenta a la Independence (1910); Luis Bacmeister and Aurelio Ruelas' Museo Nacional de Historia Natural (1910); Mauricio de Maria y Campos' Camara de Diputados (1910); the Edificio Condesa (1913) by Thomas S. Gore; Conjunto Habitacional El Buen Tono (1913) by Miguel Ángel de Quevedo; and the Teatro Esperanza Iris (1917) by Federico Mariscal. The books of note in this decade were Federico Mariscal's *La Patria y la Arquitectura Nacional* (1915) and Agustín Basave's *El Hombre y la Arquitectura* (1918). The reduction in architectural production was a reflection of the country's prevailing conditions, and as Patrice Elizabeth Olsen pointed out, "the revolution of 1910 provided the opportunity for a radical severance from the prior domination of European styles" (2008:2). At the end of the War of Revolution, Mexico emerged into modernity hoping to use its ideological, socio-cultural and technological 'advances' to resolve the challenges the country faced in matters of urban infrastructure, education, health, economy and social equality.

To achieve these aims, architects adopted different architectural discourses and pathways in the 1920s; most of them reflected on the search for a national identity based on a historical understanding of the nation's past. Among them, Federico Mariscal and his book *La Patria y la Arquitectura Nacional* (1915) and Jesús T. Acevedo with *Disertaciones de un Arquitecto* (1920) worked on the re-valorisation of the neo-Colonial style. Manuel Amábilis developed a neo-indigenist architectural discourse that he labelled 'maya-tolteca' and used it to design the country's international pavilion in the *Exposición Iberoamericana de Sevilla* in 1929 (Souto 2009). Amábilis elaborated the basis for his approach in the books *Pabellón de México en la Exposición Iberoamericana de Sevilla* (1929) and *La arquitectura precolombina de México* (1956). Lastly, the architect Juan Segura used Art Deco to create exemplary buildings in the country's capital. These three architectural pathways (neo-Colonial, neo-indigenous and Art Deco) represented the various post-Revolution nationalistic discourses; however, their functional, representational and aesthetic limitations were recognised promptly by architects towards the end of the 1920s, and these discourses were gradually abandoned in favour of functionalist architecture.

Functionalist architecture emerged in the middle of the 1920s, and it was championed by a group of young architects, among them were José

Villagrán (Image 08 – overleaf), Juan O’Gorman (Image 09 – overleaf), and Juan Legarreta. The discourse implied the use of new methods, technologies, and materials in the construction of buildings, which produced time and cost efficiencies and reflected honesty in materials and aesthetic simplicity. It was an architecture that embodied the zeitgeist without borrowing elements or styles from the past. Functionalism strengthened its influence towards the end of the 1920s, and the government eventually adopted it as the official style to embody the new revolutionary identity. It became the main architectural style from the 1930s onwards (Olsen 2008:15-24) and represented the hopes, wishes and accomplishments of an emerging modern society.

2.7 Modernity in Mexico

Carlos Véjar Pérez-Rubio established in his book *La Espiral del Sincretismo* that Mexico’s complicated relationship with Europe goes back to its colonial past and the construction of a complex national identity shaped by many influences throughout the centuries. In the nineteenth century, modernity arrived in Mexico via French thought during Porfirio Díaz’s regime, and subsequently through the influence of the USA at the start of the twentieth century. In the twentieth century, the country slowly transitioned into a modern state, and it became a ‘Westernised’ nation positioned at the fringe of the leading Western countries’ influences (2007:15-17). Modernity was appropriated and adopted by Mexico’s ruling classes, yet the nation never reached the level of progress and prosperity experienced in the other industrialised countries of the West. The country’s transformation from an agrarian into an industrialised economy was uneven, and it took place at different speeds within the nation, resulting in more significant socio-economic disparities and political challenges (Hernández 2010a:8-9). Mexico imported modernity’s ideas, techniques and materials and applied them to resolve the country’s challenges. Hence, it produced a different type of modernity – an incomplete, fragmentary and broken process.

A key reason for this incomplete modernity was that Mexico imported, adjusted and implemented Modernism’s paradigms in a short period, which hampered its chances to develop a well-established critical position about modernity’s internal socio-political, economic and cultural mechanisms. The



Image 08 & 09: Architects José Villagrán García (1901-82) portrait in 1936 (left) and Juan O'Gorman (1905-82; right).

socio-political, cultural and technological development that took centuries in other nations, hence providing time to create a critical acceptance of the changes brought by modernisation, was compressed into three decades in Mexico (Fernandez Cox 1991:11-14).

The influence of European modernist paradigms and principles was significant in post-Revolutionary architectural thinking and praxis. In the three decades that followed the 1920s, the cross-fertilisation of Modernist ideals and local traditions supported the construction of new architectural discourses embodying an emerging national identity. These debates and ideas were explored in depth in the conferences known as *Pláticas sobre Arquitectura: México, 1933* (1934), and they informed the thinking and teachings of José Villagrán, which were subsequently captured in *Teoría de la Arquitectura* in 1964.

The emergence of modernity, including its manifestation in the ideals of Functionalism and Villagrán's theory, was complemented in the 1940s by the injections of ideas from foreign architects and artists escaping the Spanish Civil War (1936–39) and the devastation of World War II (1939–45). Exemplary cases are the Spanish architect Félix Candela (a.1939; Image 10 – overleaf), the German architect Max Cetto (a.1939; Image 11 – overleaf) and artist Mathias Goeritz (a.1949), also of German origin, and the Russian architect Vladimir Kaspé (a.1942; Image 12 – overleaf); all of

them brought to the country fresh ideas and collaborated with Mexican architects in the creation of innovative architecture. Additionally, Le Corbusier exercised a strong influence on Mexican architects through his books and projects. Juan O’Gorman, Luis Barragán (Image 13), Mario Pani (Image 14), Juan Sordo Madaleno, Pedro Ramírez Vázquez and Teodoro González de León found in Le Corbusier new ways of thinking about architecture, adapting his ideas to the local context and conditions (Adria 2016:17-22).

The decades following the War of Revolution were defined by the political will to construct a national identity and ideology for the country and to fulfil the social and economic reforms championed by the conflict. The country



Images 10 – 14: Architects Felix Candela (1910-97; top left); Max Cetto (1903-80; top middle); Luis Barragán (1902-88; top right); Mario Pani (1911-93; bottom left); & Vladimir Kaspé (1919-82; bottom right).

adopted new paradigms to develop a modern consciousness and elevate the nation's cultural, educational and health standards. In the second half of the century, the country's impulse to continue such endeavours was impeded by the financial crises of 1976, 1982 and 1994, which affected Mexico's growth in all areas of human activity. If a dynamic influx of ideas and influences determined the country's theoretical thinking post-Revolution in the first half of the century, a lack of development in architectural theoretical thinking became the trademark of the second half of the twentieth century. The majority of the architectural literature published in the second half of the twentieth century revolved around the country's historical development. In the last third of the century, architectural publications focused on promoting and consolidating the key Mexican modernist figures through illustrated monographs and catalogues of their buildings and historical books (Canales 2013).

In the 1980s, 1990s and early 2000s, a number of publications traced the complex conditions, influences and circumstances that contributed to the development of Modernity, and Functionalism in Mexico. These were *Apuntes para la historia y crítica de la arquitectura mexicana del siglo XX: 1900-1980, Vol 1 & 2* edited by INBA (1982), *Evolución de la arquitectura en México: Épocas prehispánica, virreinal, moderna y contemporánea* by Enrique de Anda (1987), *La arquitectura mexicana del siglo XX* edited by Fernando González Gortázar (1994), *Arquitectura en México: diversas modernidades* (1996 & 1998) by Antonino Toca Fernández; *Modernity and the Architecture of Mexico* (1997) edited by Edward Burian and *Ciudad de México: Arquitectura 1921-1970* (2001) by Enrique de Anda Alanís et al.

In particular, Burian's publication centred on several Mexican architects of the first half of the twentieth century who had been ignored in Anglo-Saxon literature but played a key role in the development of architecture in the country. The book is a compilation of essays by academics and architects that analysed the projects and manifestoes of architects such as Carlos Obregón Santacilia (1896-1961), Francisco Serrano (1900-1982), Juan O'Gorman (1905-1982) and Mario Pani (1911-1993) among others. The book elaborated on the intersection of architecture and modernity by looking at architects, buildings and the prevailing discourses; therefore, the essays acted as critical commentaries of architects and projects in

order to untangle modernity's ideological influence in the country and the profession (1997:7-10). An important component of the book is the interview with the Mexican architect, architectural historian and theorist Alberto Pérez-Gómez, who asserted that, at the turn of the nineteenth century, theoretical thinking in Mexico transformed from a source of ethical action akin to philosophy into an instrumentality linked to applied science (Pérez-Gómez in Burian 1997:22-24). Pérez-Gómez asserted that in previous centuries, theoretical discourses explained

how certain things make sense in the realm of practice. It's not about *how* to do things nor about a *method* to do things, is not about the direct applicability of the discourse. Instrumentality signals the desire for a direct applicability of the discourse (1997:22-24 – Pérez-Gómez's emphasis).

The shift to a pragmatic understanding of theory with direct applicability to the discipline eroded the speculative and self-reflective nature of theoretical thinking. It also explains the decreasing connectivity between theory and practice towards the last third of the twentieth century, as the emphasis was placed on directly implementing a discourse rather than questioning the discipline's practices, paradigms and ethos. Professor Alejandro Aguilera expressed a similar view in a 2017 interview, where he mentioned that in Mexico, architectural development has been defined by a pragmatic approach and the lack of a critical reflection within the discipline, as ideas and forms are adopted from other countries (2017). Aguilera's views reinforced Pérez-Gómez' argument, and one of the key contentions of this PhD thesis – the disconnection of theory and practice at the end of the twentieth century.

The analysis and discussion of the conditions and ideas that shaped the architectural debate from the middle of the twentieth century to the beginning of the twenty-first century are allocated in chapters 4 and 5 of this thesis. However, the development of architectural thinking and the theoretical debates shaping Mexico's Functionalism at the start of the twentieth century are connected with key theoretical debates and publications in the 1920s. Chapter 2 will concentrate on the discussion surrounding modernity and Functionalism, particularly how these debates

were captured and developed in the 1933 events known as *Pláticas sobre Arquitectura* and the subsequent edited book of the same name (1934).

2.8 Conclusions

The objective of chapter 2 was to provide a historical narrative that wove Mexico's socio-political and cultural conditions in constructing an independent modern nation. The chapter examined the crossovers of the socio-political and cultural contexts with architecture by splitting the historical narrative into five episodes: The Colonial period post-Spanish Conquest, The War of Independence, The War of Reform, The *Porfiriato* and the War of Revolution. These armed conflicts highlighted the birth and development of the nation and its desire to define its national identity, which was embodied in the architectural expression of each era. It was from these formative époques that the socio-political and cultural elements that defined the national identity project emerged after the War of Revolution. From the 1920s to the 1950s, the cross-fertilisation of local traditions and Modernist ideals supported the construction of a Functionalist architectural discourse to embody an emerging national identity.

The Conquest generated the violent fusion of two civilisations, resulting in the syncretism of European and indigenous cultures and values; the War of Independence was the genesis of a free and independent nation searching for its social, political and cultural voice separated from Spain. The War of Reforma was a political battle between conservatives and liberals that concluded with the separation of the government from the Church; it generated a laic government and the appropriation of the Church's estate. The *Porfiriato* stability and prosperity developed the country's built environment, however, its corruption and inequalities led to the revolution. Finally, the War of Revolution was a social and agrarian project that brought together the claims of the previous two conflicts into the implementation of a democracy with a social-political proposal rooted in equality and justice.

After the War of Revolution, the nation turned to modernity's paradigms to improve the conditions of the country and to create a sense of

progress across the nation. Chapter 2 provides an overview of the intersections between the socio-political events and their influence on the architecture of each era; it concludes by highlighting the importance of architecture in constructing a national identity project to embody the new aspirations of the country. Therefore, the two cultural expressions – a national identity project and an architecture that represents it – had a symbiotic relationship in constructing Mexican identity in the twentieth century. Chapter 2 explored the socio-political challenges of each era and highlighted the connections between the political agendas and key urban or architectural developments in the pursuit of a national identity.

The debate surrounding Mexican identity would dominate the architectural discussions up until the 1930s, and it was the leading theme of the conference and lectures known as *Pláticas sobre Arquitectura: México, 1933* (1934); the discussions about national identity, modernity, and Functionalism were the principal threads that lead the evolution of architecture in the early twentieth century. By examining the overall crossovers of the socio-political contexts and architecture, chapter 2 articulated a historical narrative of the formation of Mexico. It sets the foundations for understanding the discussions embodied in *Pláticas sobre Arquitectura*, which will be the central theme of chapter 3.

3. Pláticas sobre Arquitectura: Mexico, 1933

3.1 Introduction

In 1933, the *Sociedad de Arquitectos Mexicanos* (SAM- Society of Mexican Architects) organised a series of public lectures, talks and debates on the influence of modernity and the emergence of Functionalism in Mexico; the outcome of these events was Alfonso Pallares' edited book entitled *Pláticas sobre Arquitectura: México, 1933* (Conversations about Architecture; 1934). The publication included most of the texts from the lectures and presentations. It was subsequently reprinted in 2001 with introductory texts by Carlos Ríos Garza, J. Víctor Arias Montes and Gerardo G. Sánchez Ruiz. The events did not aim to propose a unified and coherent future vision for Mexican architecture, but they reflected the prevailing paradigms in the country after the War of Revolution. The book presented a vivid picture of the various architectural perspectives in Mexico and their relationship to the tenets of Functionalism. Hence, *Pláticas sobre Arquitectura: México, 1933* can be read as the compilation of the zeitgeist in Mexican architecture at the start of the twentieth century; the embodiment of the productive intersections between theory and practice in Mexican architecture at the time.

To understand its importance, and to examine the influence of the various architectural perspectives in the first decades of the twentieth century, chapter 3 will undertake an interpretive-historical approach by studying the socio-political and cultural circumstances of the 1920s and 1930s. The analysis will emphasise the connections between the socio-political developments of the country and the architectural production at the time. The construction of a historical narrative will allow us to position the talks, lectures and debates of 1933 within a context defined by the search for a national identity and characterised by society's responses to changes brought in by modernity.

The political debate in the 1920s and 1930s was supported by three key principles: unity, progress and freedom (Florescano 2002:381-382). These

principles were the founding political pillars and essential elements for constructing a national identity project suited for a modern society. Chapter 3 will explore how the cultural and architectural debates that emerged after the War of Revolution searched for inspiration in the country's indigenous and Colonial pasts; these historical positions were complemented by the adoption of an emerging modern narrative to represent a progressive nation. In the early 1920s, the government of Álvaro Obregón proposed neo-Colonialism as the primary vehicle to concretise the ideals of the Revolution; this position was supported in architecture by Federico Mariscal's and Jesús T Acevedo's publications and projects. These two architects professed an appreciation for the architecture of the viceroyalty and encouraged a re-interpretation of the country's colonial past. A second historicist discourse, the neo-indigenous, was initially an intellectual position in opposition to neo-Colonialism, and it developed in architectural terms towards the end of the 1920s with the work of Manuel Amábilis.

In parallel to these historicist architectural styles, politicians and architects started to adopt the paradigms of modernity as a manner of creating a modern nation. These modern ideals led architects to embrace an architecture oriented towards resolving the nation's social, political and cultural needs. It was referred to as Functionalism, and it produced projects that were functional while following a simple plastic expression underpinned by European Modernism's ideals and rooted in the social role of architecture. Functionalism became the symbol of the country's future, strengthening the profile of the revolutionary doctrine and portraying Mexico as a modern and progressive nation.

The objective of chapter 3 is to narrate and analyse the connections between architectural theory and practice in Mexico after the War of Revolution. The emergence of Functionalism was the cultural trigger for the event *Pláticas sobre Arquitectura: México, 1933* as it embodied the prevailing positions at the time: Traditionalists, Moderate Functionalists and Radical Functionalists. The chapter emphasises the importance of the intersections between theory and practice in the 1920s and 1930s and how these connections contributed to the creation of an architectural culture based on a theoretical background. The chapter will study the key

architects, buildings and publications that shaped and embodied these intersections; the leading argument will be that at the onset of the twentieth century, the connections between theory and practice were strong as both areas were intertwined. However, these intersections progressively weakened as the century unfolded until a disconnection between the two endeavours was reached in the twenty-first century.

3.2 The Search for a National Identity (1920-1934)

At the end of the War of Revolution, the towns and cities of Mexico needed reconstruction; the built environment revealed the destruction and scars of a decade of armed conflict, while the remaining architecture that remained standing embodied the traces of the nineteenth-century eclectic French style and the country's Colonial inheritance. Since the Spanish Conquest, Mexico has been defined by the interaction and hybridisation of different types of knowledge, practices and ideas emerging from local and foreign sources (Véjar 2007:17). The syncretism of the European Spanish 'project' and the native's worldview in the eighteenth and nineteenth centuries produced a nationalism defined by a cultural identity connected with the territory, language and religion. The emerging Mexican nationalism was supported by the country's increasing political and economic autonomy, which generated a national sense of belonging and pride in the history of the country (Martínez Gutiérrez 2007:19-20; Véjar 2007:19-26). These sentiments led the country into the War of Revolution at the start of the twentieth century.

The revolutionary movement challenged key paradigms from the nineteenth century, such as i. the country's social structure; ii. the distribution of the land; iii. the relationships between means of production and power; and iv. the distribution of economic profits. Those fighting in the Revolution were interested in implementing essential socio-political changes, such as the appropriation and defence of natural resources, the role of education in helping the population to emerge from poverty and the overhaul of the political electoral system to address the key issue of the presidential re-election (Blanquel 2003:137-150).

The revolutionary discourse was considered a continuation of the popular struggles that started in the War of Independence and the War of Reforma. The Independence movement severed the Spanish colonial control in the country, creating an autonomous nation, and the War of Reforma vindicated and incorporated the rights of the people into the political Constitution of 1857. The nation's construction continued with the Revolution, which built upon these socio-political achievements and became an economic and social transformation aimed at reconstructing the country with three guiding ideas of unity, progress and freedom (Florescano 2002:381-382).

These three principles were founding pillars of the new political doctrine and were essential elements in the construction of national identity; the cultural identity emerging after the War of Revolution re-evaluated and fused the country's indigenous and Colonial pasts with the country's emerging modern narrative (Martínez Gutiérrez 2007:23). These lines of enquiry and expectations formed the post-revolutionary discourse and were responsible for dissecting and challenging the *Porfiriato's* worldview, including the architectural postulates and artistic discourses rooted in the nineteenth century's eclecticism (Rodríguez Viqueira 2009:100). Therefore, the French eclectic style favoured by Díaz's regime gave way to the revival of the Colonial style (neo-Colonial) and to some degree the use of the neo-indigenous style (neo-prehispanic), both attempting to embody a nationalist paradigm rooted in the country's past.

In the five decades that followed the War of Revolution, the government used architecture to construct, embody and consolidate the national identity project. Politicians and architects were instrumental in shaping the country's identity by fulfilling the population's social needs, while designing and constructing the built environment between 1920 and 1970. The architectural boom in those fifty years happened in state-sponsored public architecture, which embodied the political agendas of each administration and responded to the country's infrastructural needs and social demands (de Anda Alanís Alanís 2001:25-33). Architecture was instrumental in materialising the socio-political discourse, and in the 1920s and 1930s, Mexican architecture used the ideas of four architectural styles to respond to two different national expectations.

On the one hand, neo-Colonial and neo-indigenous styles were viewed as aligned with the nationalism emerging immediately after the war. They were concerned with maintaining Mexico's values and traditions and opposing foreign influences. On the other hand, towards the end of the 1920s, the effect of European Modernism in the country produced a functionalist discourse projecting the ideals of progress and modernity. These principles were fundamentally embedded in the government's agenda (Méndez-Vigatá, 1997:61-63). Finally, Art Deco (the term was coined by historians in 1966 in reference to the 1925 *Exposition International des Art Decoratifs Modern* in Paris) developed in Mexico in the middle of the 1920s as a hybrid style which gathered avant-garde characteristics and decorative elements. Art Deco style was generally used in commercial ventures, as it lacked the theoretical background of the other architectural discourses (Jiménez 2004:114-116). These four architectural discourses were used in a variety of building programmes, and they developed a varied architectural landscape after the War or Revolution. In the following sections, we will examine the impact of the political administrations between 1920 and 1934 and their role in the production of architecture and the construction of the built environment.

3.3 Neo-Colonial Architecture

After the War of Revolution, the newly elected government of Álvaro Obregón (1920-1924) realised that the country lacked a unified national identity, so it embarked on the construction of a national project to consolidate the country and reinforce a sense of national identity and pride (Florescano 2002:397-398). Álvaro Obregón's presidency defined education as one of its top priorities, so in 1921, he founded the Secretaría de Educación Pública (SEP – Secretary of Public Education) and appointed José Vasconcelos as the Secretary of Public Education. Under Vasconcelos' leadership, the SEP became the main source of cultural, spiritual and intellectual development in the nation; it was the main sponsor of art and architecture, which embodied Vasconcelos' ideas for a renewed cultural doctrine.

Vasconcelos' 5 key principles defined the SEP's ethos: i. Latin America as a human synthesis, where education defines culture and not only the

professional sectors; the human synthesis would help emphasise each nation's uniqueness, yet unify them as one; ii. the concept of *Hispanidad* in contrast with the Anglo-Saxon races, which encouraged the search for Mexican-ness in the best parts of our Spanish past; iii. to shape men as self-sufficient beings capable of working for the well-being of others; iv. industry with a spiritual dimension; and v. look back at our Colonial past for inspiration and guidance (Alva Martínez 2004:63-67). The genesis of his ideology can be traced to his publications *La Raza Cósmica. Misión de la Raza Iberoamericana* (Cosmic Race. The mission of the Iberoamerican race – 1925) and *Indología* (Indology – 1926); subsequently, he tried to consolidate his Iberoamerican philosophy in the trilogy *Metafísica* (Metaphysics – 1929), *Estética* (Aesthetics – 1936) and *Ética* (Ethics – 1939).

The theoretical edifice of this period exalted nationalism as the most suitable discourse to crystallise the Revolution's ideals and express the country's historical nature. To achieve these goals, the SEP was allocated the second-largest budget of the administration in 1923, second only to the Secretary of War, and it embarked on developing an extensive construction plan. During Obregón's presidency, Vasconcelos' nationalist discourse was materialised by adopting neo-Colonialism as the official architectural paradigm. Vasconcelos requested architects working at the SEP to design schools and libraries using Colonial influences (de Anda Alanís 2001:42-43). Among those who worked at the SEP were José Villagrán and Carlos Obregón Santacilia, both key protagonists in the architectural scene of the first half of the twentieth century.

Furthermore, the government's position was supported by the nationalist architectural discourse and theories advocated by the architects Federico Mariscal (1881-1971) and Jesús T. Acevedo (1875-1918). At the start of the twentieth century, both architects championed the re-valorisation of Colonial architecture, as they considered it to be the foundation upon which Mexican architecture should be developed. Federico Mariscal was a professor of architecture at the Escuela Nacional de Bellas Artes in Mexico City and the founder of the magazine *El Arte y la Ciencia*. In his book *La Patria y la Arquitectura Nacional* (1913), he established the basis for the systematic re-valorisation of viceroyalty constructions and predicated that

Mexican architecture should move away from European eclecticism and instead search for architectural and artistic inspiration in its history (Mariscal 1913).

The book resulted from the conferences he delivered in 1913 and 1914 at the Universidad Popular Mexicana, where he postulated a close relationship between national identity and historical heritage. Mariscal's theoretical and practical work proposed Colonial architecture as the basis for representing in a material way the nation's new identity; hence, neo-Colonialism could materialise the emerging national identity and become the conduit through which to create a new image of the country (Mariscal 1913). He expressed his architectural ideas in constructions such as the building for the Government of Mexico City (1942-48) in the Zocalo, across from the capital's Metropolitan Cathedral. Mariscal used neo-Colonial features to design a building that fitted within the historical context, while being a functional edifice with a well-balanced and harmonious composition.

Jesús T. Acevedo shared Mariscal's appreciation for the architecture of the viceroyalty, and he was one of the founding members of the intellectual group the *Ateneo de la Juventud* in 1907. This group of young intellectuals and artists challenged the reigning positivist discourse and proposed a return to humanistic thinking. The group wanted to revalue the nation's historical heritage in order to distil a cultural project belonging to Mexico. The group's discourse defined the country's cultural life in the immediate years after the revolution (de Anda Alanís 2006:165). One of Acevedo's critiques was that previous generations of architects did not continue to evolve and adapt Colonial architecture to the new programmes of the time. In his view, architects ignored the past and severed the development of Colonial architecture, consequently interrupting the architectural tradition of the country. He questioned whether a stronger national art and architecture would have been possible if that continuity had been respected and encouraged (Acevedo 1967).

Acevedo died in 1918, but Nicolas Mariscal encapsulated his ideas by publishing three of his conferences under the title *Disertaciones de un Arquitecto* in 1920. These were *Apariencias arquitectónicas* (1907- Architectural appearances), *Ventajas e inconvenientes de la Carrera de arquitecto* (1914; Advantages and inconveniences of the profession of

architect) and *La arquitectura colonial de México* (1914; The Colonial architecture of Mexico). The book was reprinted in 1967 by Justino Fernández and Alfonso Reyes (Alva Martínez 2004:59-61). In *La Arquitectura Colonial de México*, Acevedo contends that we can find Mexico's roots in the Colonial period. It is there where we should find inspiration to develop a Mexican architectural style (1914:3). His architectural discourse accepted new ideas and construction materials, however, he proposed that these should be grounded in a deeper understanding of the history of art and a comprehensive critique and study of the conditions of the era. He also suggested that recognising local traditions and ways of living is essential in creating architecture (Acevedo 1967). Therefore, it can be argued that the architecture of nationalism espoused by Mariscal and Acevedo

[...] tried to rescue the value of the architecture constructed in Mexico during the years of the viceroyalty, which despite being the product of a society that assimilated the Spanish tradition, gave rise to an original culture that is consequent with the country's environment and the Colonial history, which later on became our country (de Anda Alanís 2006:164).

Considering Mariscal's and Acevedo's postulates, the architecture of nationalism attempted to concretise in built form the syncretism achieved in society in the previous two centuries. The imposition of Vasconcelos' ideals through the SEP, together with Mariscal's and Acevedo's architectural discourses, produced a fertile ground for the creation of neo-Colonial buildings during Obregón's presidency; the neo-Colonial style was used extensively in the construction of schools and libraries across the country.

One of the best examples of Mexican neo-Colonial architecture from the 1920s was the Centro Escolar Benito Juárez (1924), which embodied Vasconcelos' tenets about culture and education (Image 15 – overleaf). The project was designed and built by Carlos Obregón Santacilia, and the architectural typology of the traditional Mexican hacienda influenced it. The spatial organisation was altered to respond to the school's needs, so the central space, historically occupied by the church, was assigned to the library. The school was designed around a central axis that brought symmetry to the scheme, creating two wings (boys and girls) organised

around patios and sports facilities. The buildings' architectural expression used baroque elements as the basis to develop neo-Colonial architecture, yet with a severe application of proportions and scales. The school also integrated artistic contributions in the form of Roberto Montenegro's murals (de Anda Alanís 2005:39-40).

The change of political administration in 1924 produced a shift of priorities and architectural discourse. Whereas Álvaro Obregón's government prioritised education, the administrations of Plutarco Elias Calles (1924-28) and his three successors – Emilio Portes Gil (1928-30), Pascal Ortiz Rubio (1930-32) and Abelardo L. Rodríguez (1932-34), focused their attention in two areas: i. the provision of public health facilities (hospitals and clinics); and ii. the introduction of public services and infrastructure (pavements, roads, drainage, clean water, street lighting) to sustain the city's expansion (de Anda Alanís 2001:43-44). Portes Gil's, Ortiz Rubio's and Rodríguez's presidencies are known as the *Maximato*, and it refers to the influence and power that Plutarco Elias Calles exerted over the presidency until 1934 and after the assassination of Álvaro Obregón in 1928 (Matute 2010:245-46).

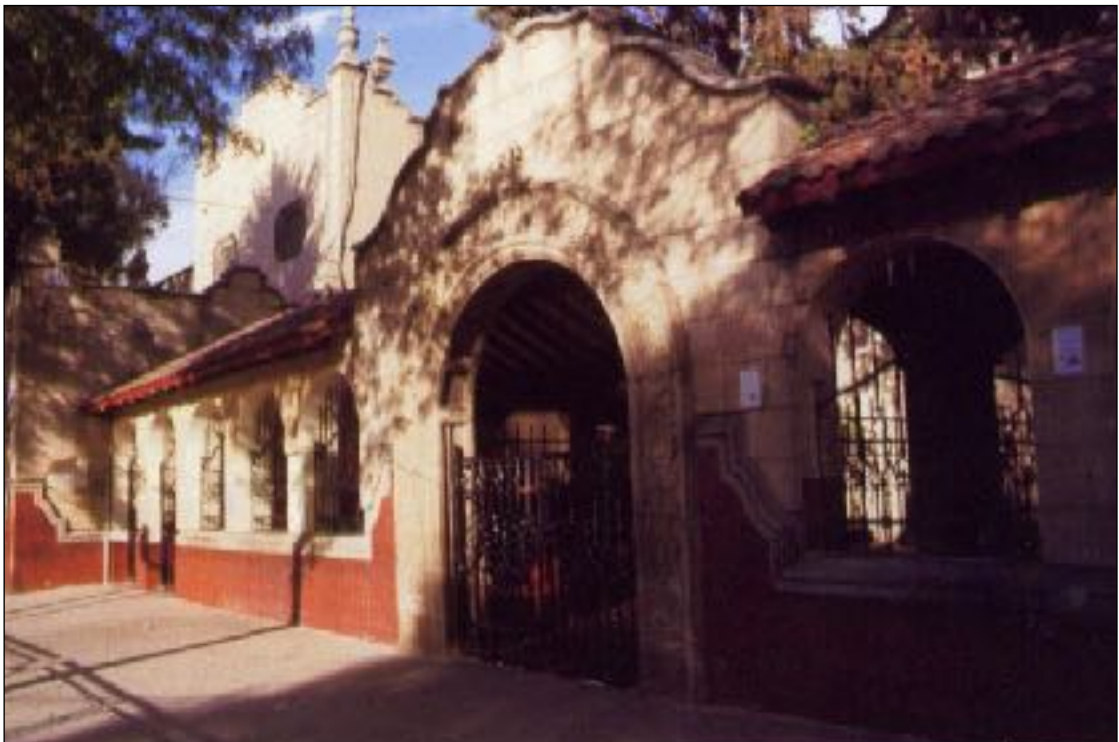


Image 15: Centro Escolar Benito Juárez, Mexico City, Carlos Obregón Santacilia, 1924.

After the War of Revolution, Mexico experienced a meaningful demographic growth as its population went from 14.3 million in 1920 to 16.6 million in 1930; the capital grew exponentially as the census of November 1921 showed that Mexico City had 615,367 inhabitants, which increased to 1,029,068 over 137.75 sq/km by the 1930 census (Espinosa 2007:146,161). In Mexico City, the population's increase was accompanied by urban growth, which required the design and construction of public buildings and new *colonias* or neighbourhoods. *Colonias* such as Lomas de Chapultepec, Reforma-Chapultepec, Hipodromo-Condesa and San José Insurgentes were designed to accommodate the growing middle class and provide homes for the well-established high class. As Enrique de Anda Alanís contended, these neighbourhoods were promoted as the solution to three key issues of the time: "the consolidation of the family's estate, to guarantee ownership of your home and to provide spaces and facilities to satisfy a new 'modern' lifestyle" (2001:44). The expansion of the city provided the opportunity for various architectural styles to be adopted in the pursuit of a modern metropolitan image.

During the *Maximato*, neo-Colonial architecture lost its strength and was consolidated as the preferred style for residential architecture, which populated the capital's newly founded *colonias*; neo-Colonialism was also used for public buildings, which strove to maintain a connection with the nationalist discourse. Despite Vasconcelos' intentions to unite the country under one national and architectural discourse that would crystallise the Revolution's ideas, neo-Colonial architecture did not have the strength or freshness to replace Porfiriato's academicism permanently. Therefore, from 1924 to 1934, the government's three key flagship programmes: health, education and housing, introduced a "functionalist architecture that, besides providing an image of modernity and vanguard, it entailed low costs, ease of reproduction, speed of construction and the development of the construction industry" (Alva Martínez 2004:69). As Fernanda Canales argued, the work developed between 1925 and 1939 was defined by three key conditions: i. the construction of the first functionalist projects, ii. the development and use of reinforced concrete, and iii. the consolidation of a modern architectural theory (2013:184). These three conditions defined a time of profound change in Mexico's architectural landscape as new ideas, materials, and a novel architectural style were adopted. However, before

we discuss Functionalism's role in Mexico, we must mention the other two styles that defined the 1920s and 1930s: neo-indigenous and Art Deco.

3.4 Neo-Indigenous and Art Deco

As mentioned before, Plutarco Elias Calles' administration made an effort to distance itself from the neo-Colonial discourse spoused by Alvaro Obregón's presidency, including Mariscal's and Acevedo's writings, and it adopted the ideals of neo-indigenism. During Obregón's presidency, the neo-indigenous discourse was an option adopted by intellectuals and architects who considered neo-Colonialism as a vestige of European control and a foreign intrusion (Méndez-Vigatá, 1997:72). Hence, in the early years of Plutarco Elias Calles' presidency, nationalism turned inwards, focusing its search for national identity in the country's pre-Hispanic past (Souto 2004:127-128). In contrast to Obregón's neo-Colonial nationalism, the neo-indigenous discourse proposed a different way of looking at the country's history, whereby the pre-Hispanic past was the source of authenticity. As Ana Souto contended, this approach pretended to produce an authentic and national architectural style on which the population could identify themselves (2004:130). Nevertheless, neo-indigenism did not gather as much momentum as neo-Colonialism despite producing projects that represented Mexico internationally. For example, Mexico participated in the 1929 Iberoamerican Exhibition in Seville, Spain, with Manuel Amábilis' neo-indigenous pavilion.

The pavilion attempted to convey the image of pre-Hispanic architecture through the use of architectural elements from the Puuc and Mayan periods, hence instilling the building with an indigenous aesthetic (Images 16 & 17 – overleaf); however, these attempts did not capture the essence of pre-Hispanic architecture and remained as superficial ornamentations designed to present a historicist image of the nation (Souto 2017). Amábilis elaborated his neo-indigenist discourse in the book *Pabellón de México en la Exposición Iberoamericana de Sevilla* (1929); despite the pavilion's aesthetic proposal, which was rooted in the country's past, it was heavily criticised in Mexico by the profession at large, as it was considered an anachronistic expression of the country. The government's search for a new architectural expression to embody the ideals of progress and

modernity towards the end of the 1920s meant that the pavilion was condemned by the neo-Colonial camp and by those architects looking for a non-historical, modern architectural expression (Rodríguez Viqueira 2009:102).

Simultaneously, the style known as Art Deco developed in Mexico from 1925 onwards. It became a hybrid architectural style that fused avant-garde characteristics with local ideals and implemented decorative elements to dress its spaces and surfaces. At the time, Art Deco architecture resorted to European and North American stylistic influences to produce a contemporary interpretation of the modernising conditions of the country. It became a new eclecticism that blended foreign influences with internal discourses; therefore, Art Deco supplied architects with the flexibility to design buildings with neo-Colonial and neo-indigenous influences, as well as projects using traits of the geometrically abstract language emerging in Europe (Jiménez 2004:115-116).

Despite the importance of Art Deco in Mexico during the 1930s, and the government's intentions to use it to capture the national identity, the style did not achieve its aim due to two interrelated situations. On the one hand, Art Deco architecture was a stylistic movement generated without a



Images 16 & 17: Mexican Pavilion in the Iberoamerican Exhibition in Seville, Spain, Manuel Amábilis, 1929.

theoretical framework; hence, it lacked an intellectual structure to support and question its own development (Jiménez 2004:114-116). The lack of a cultural and critical position was emphasised by the second condition, which was that Art Deco became the chosen style for private commercial ventures, and a minority of wealthy investors and developers favoured it. These two situations stifled its development and stopped its adoption in other cultural areas. There are exemplary projects built in Art Deco, most notably the work of Juan Segura, and in particular the Edificio Ermita (1930-1931); however, as Souto contended, it would be difficult to argue for Art Deco to be considered as a manifestation of Mexican identity in architecture as it did not respond to the broader conditions of the country (2004:135).

The three architectural styles, and their accompanying discourses, embodied the search for a cultural and architectural identity that could contribute to cementing the national identity proposed by the political power. In the neo-Colonial and neo-indigenous approaches, architects turned their gaze to the country's past in search of a valid historical anchor to stabilise the complicated emergent context of the early twentieth century. The remaining style – Art Deco, embodied international influences voided of a theoretical position and more as a decorative proposal. Architects in the 1920s seamlessly merged theory and practice in creating architecture; however, despite integrating the cultural discourse (theory) into practice, the three approaches did not root themselves in the emerging modern consciousness of the country. Therefore, a new paradigm came to dominate the nation – Functionalism.

3.5 The Birth of Functionalism in Mexico

In Mexico, Functionalism represented a new design paradigm that broke away from the eclecticism of the nineteenth century, the nostalgic gazing of neo-Colonial and neo-indigenous and the decorative nature of Art Deco that prevailed at the beginning of the twentieth century. The new architecture in Mexico after 1924 was characterised by the desire to be contemporary and firmly oriented towards resolving the nation's social, political and cultural needs. Functionalism produced projects that were useful and functional, while following a simple plastic expression

underpinned by European Modernism's ideals and firmly rooted in the social role of architecture; it was an architecture entrenched in its time, place and western culture (Villagrán 1962:VIII-IX). Alva Martínez described Functionalism in Mexico as "rationalism's modality applied to projects of social utility, [and] a tendency that manifested itself with extraordinary vigour in the post-revolutionary historical period" (2004:72). Functionalism, also referred to as 'rationalism' in Mexico, combined modernity's ideological tenets, technological advances and new materials, with local realities, in an attempt to resolve the country's pressing needs in education, health, social equality, culture and urban infrastructure. It rejected the use of styles from antiquity and advocated for simple geometric shapes, plain surfaces and a deeply committed social content (Olsen, 2008:22-25).

Functionalism became the symbol of the country's future, strengthening the profile of the revolutionary doctrine and portraying Mexico as a modern and progressive nation. Its emergence in Mexico differed from other nations, as Mexican architects hybridised mainstream European modernist paradigms with local concerns and ideas. Modernist ideals, such as the rejection of history and tradition, were adopted and transformed by Mexican architects who understood their importance in the production of architecture (Canales, 2013:131-137).

It is important to note that the European ideas that helped shape Functionalism in Mexico were embedded in José Villagrán's architectural theory teachings at the Escuela Nacional de Arquitectura (ENA- National School of Architecture) and the work he did during the *Maximato* (1928-34). However, in order to understand the impact of Villagrán's architectural theory and the favourable disposition of the country to adopt functionalist ideals, we must understand the changes that took place in architectural education in the 1920s.

3.6 Architectural Education in Mexico

The Real Academia de San Carlos (RASC) de la Nueva España was founded on the 25th of December 1783 by the royal decree of Carlos III; it was here that architecture, painting, sculpting and etching were taught in the

country. The RASC closed its doors during the War of Independence, and once it reopened, the royal designation was removed, and it was renamed the Academia de San Carlos (ASC). The ASC became part of the Escuela Nacional de Bellas Artes (ENBA- National School of Beaux Arts) in 1867, yet it remained an independent institution until 1910. In the same year, and by official decree, the ASC was integrated within the Universidad Nacional de México (UNM- founded in 1910). In its formative years, the UNM relied on governmental funding and academic guidance; however, it obtained administrative and academic autonomy in 1929 and became the Universidad Nacional Autónoma de México (UNAM).

Architecture and the visual arts were taught together in the ASC; however, architectural education was decoupled from the visual arts and consolidated under the ENA in 1929. The latter became UNAM's Faculty of Architecture in 1981 (UNAM online:13-15). At the start of the twentieth century, the ASC/ENBA was the main institution in the country that delivered architecture, and its syllabus was modelled after the *Académie des Beaux-Arts* in Paris. However, in the 1920s, architectural education changed as the ENBA's syllabus adopted modern ideas coming from Europe.

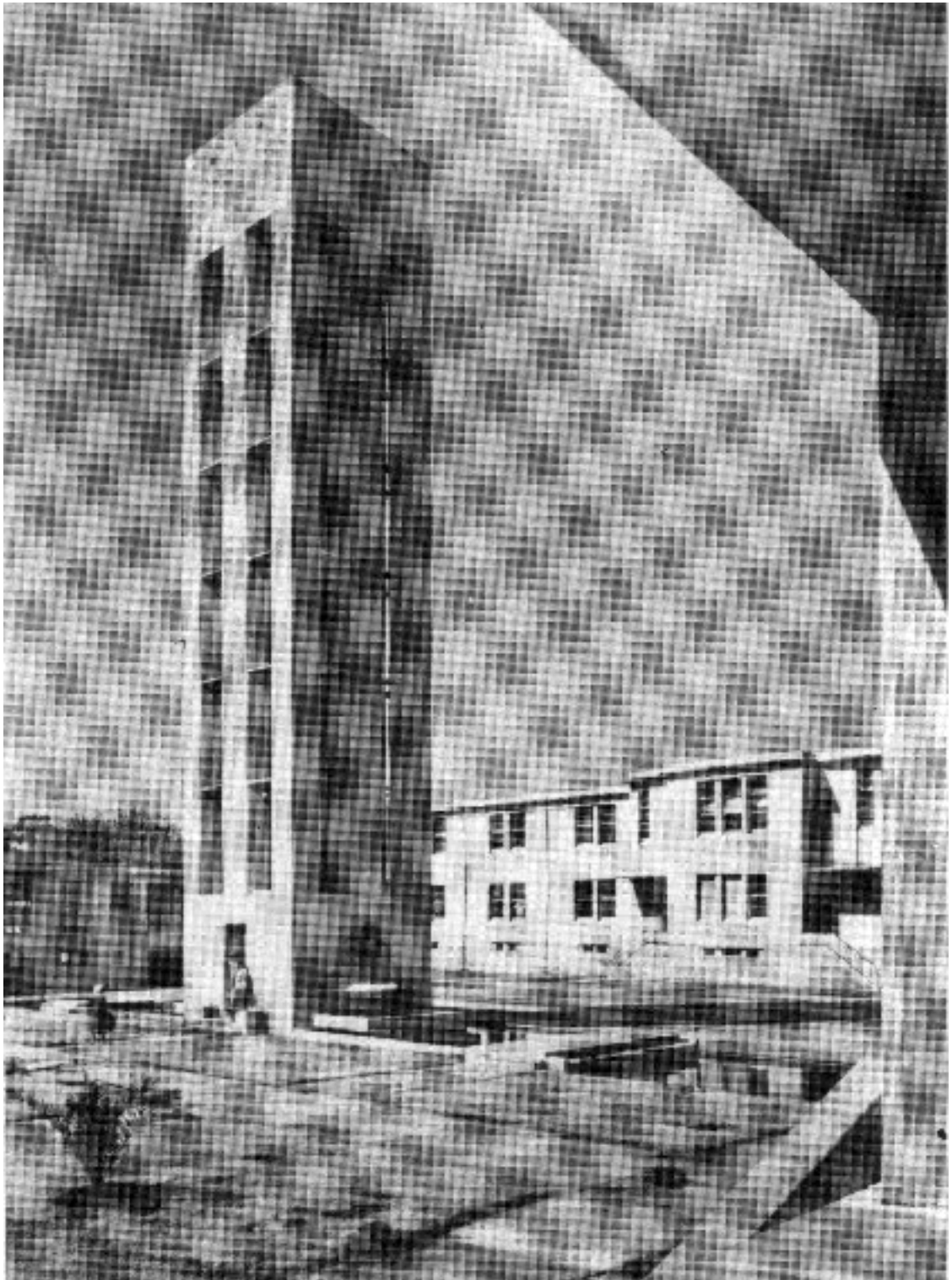
The country's most prominent architects of the first half of the twentieth century studied architecture in the ASC/ENA. Among them are José Villagrán García (graduated in 1923 – ASC), Juan O'Gorman (g.1925 – ASC), Enrique del Moral (g.1928 – ASC), Juan Legarreta (g.1931 – ENA), Enrique de la Mora (g.1933 – ENA), Augusto H. Álvarez (g.1939 – ENA), Juan Sordo Madaleno (g.1939 – ENA), Alberto T. Arai (g.1940 – ENA) and Pedro Ramírez Vázquez (g.1943 – ENA) (Canales 2013:323-26). The ASC/ENA was the epicentre of architectural debate and thinking in the country, shaping generations of architects. A key event in the transformation of architectural theory education at the ENA, and the development of Mexico's architectural theory in the middle of the twentieth century, was the appointment of José Villagrán as chair of the ENA's Architectural Theory course in 1926 (Canales 2013:190).

Villagrán's architectural discourse was disseminated through his pedagogic role as the chair of Teoría de la Arquitectura at ENA, which influenced architects from the 1930s onwards. His discourse became the central

doctrine in Mexican academia towards the 1950s, but it eventually lost its relevance in the 1970s (Alva Martínez 2004a:233). He postulated that for a work of art to be considered architecture, it had to contain an intrinsic value that he labelled 'architectural value' – this would define whether a building was architecture or not (Villagrán 1964:32). Villagrán's architectural discourse was the most dominant ideology in the middle of the twentieth century. José Villagrán and Carlos Obregón Santacilia were the two most dominant architects during the *Maximato*; they constructed some of the most paradigmatic examples of nationalist and functionalist architecture in those years. An example of Villagrán's work is the Instituto de Higiene y Granja Sanitaria in Popotla, which was built in 1925 and is considered the first post-Revolution functionalist building in Mexico. He also constructed in 1929 the Hospital para Tuberculosos in Huipilco (Images 18 – overleaf & 19 – p.124) (Canales 2013:190). Villagrán's influence cannot be underestimated as his principles of strict Functionalism and structural and tectonic honesty determined the thinking and practice of the architects of the first half of the twentieth century and gave direction to the radical ideas expressed in the *Pláticas sobre Arquitectura* by Juan O'Gorman, Juan Legarreta and Álvaro Aburto. Chapter 4 will explore Villagrán's architectural theory of values and its impact on the country's architecture.

The architectural discourse surrounding Functionalism increased in intensity and matured with the creation of the Escuela Superior de Construcción (ESC- National School of Construction) in 1932; the establishment of ESC was the direct result of the academic revision orchestrated by the Secretary of Public Education, Narciso Bassols, in 1931 to the curriculum of the Escuela Nacional de Maestros Constructores (f.1921, ENMC- National School of Master builders). The ESC followed the academic curriculum designed by functionalist architect Juan O'Gorman and the engineers José A. Cuevas, José Gómez Tagel, Carlos Vallejo Márquez and Luis Enrique Erro; the school's ethos had a social and technical direction, addressing the country's needs for technical and vocational careers. ESC's pedagogic discourse separated it from UNAM's ENA, which had a historical orientation with a humanistic identity. Therefore, Bassols inadvertently created a schism in architectural education: the ESC would address architecture from a technical and social point of view and was considered aligned with the government's social

agenda – the ESC was qualified as functionalist. On the other hand, the ENA would foster the humanist and historical aspects of the architectural object and was perceived to support architectural individualism and be contrary to the official direction – the ENA was described as academic (Rios Garza 2001:11-13).



Images 18: Hospital para Tuberculosos in Huipilco, José Villagrán García, 1929.

Functionalism was also championed by several architectural journals which were founded in the 1920s, such as: *Arquitectura* (f.1921-23, directed by Alfonso Gutiérrez), *El Arquitecto* (f.1923-27, by the *Sociedad de Arquitectos Mexicanos* [SAM] and directed by Alfonso Pallares from 1932-36), *Cemento* (f.1925-1930, directed by Federico Sánchez Fogarty and Raúl Arredondo) and *Tolteca* (f.1929-32, directed by Federico Sánchez Fogarty). The journals disseminated contemporary projects, debates, and ideas emerging across the nation, complementing them with information from North America and Europe. As Gallo maintained, *Cemento* and *Tolteca* exalted the cultural and ideological dimensions of cement, and especially the virtues of reinforced concrete. Their founder, Federico Sánchez Fogarty, aimed to enhance public awareness about cement and to promote its use in the country. Both journals were instrumental in counteracting the discipline's "indifference towards cement by creating and promoting an aesthetic of cement" (Gallo 2005:172), which led to its adoption and use throughout the country.

Reinforced concrete was understood as a break from the past, particularly from the *Porfiriato* and its eclectic style; the government adopted it as the preferred material for public projects, including schools, office buildings,



Images 19: Hospital para Tuberculosos in Huipilco, José Villagrán García, 1929.

hospitals and markets. Also, reinforced concrete addressed essential practical considerations linked to construction times and cost, while it fulfilled the post-revolutionary ideological discourse by creating a modern architectural proposal for the country (Gallo 2005:171-72). These publications contributed to the development and institutionalisation of Functionalism in Mexican architecture as they championed the use of new materials and techniques. The theoretical debates that defined the architecture of the 1920s and 1930s were represented in the conferences and presentations known as *Pláticas sobre Arquitectura*. The architects who participated in the lecture series expressed their views and ideas, creating a connection between their theory and practice.

3.7 Pláticas Sobre Arquitectura: México, 1933: traditionalists, moderate functionalists and radical functionalists.

The preceding sections have captured the political and social conditions that defined the architectural discourse in Mexico in the 1920s and 1930s. Architecture found itself firmly positioned in the intersections between the government's agendas, the country's emerging social needs and the new ideological paradigms adopted and developed in the country. Architecture became an essential cultural artefact expressing the debate around creating a national identity. The post-Revolutionary context and the desire to define a national identity determined the discussions of *Pláticas sobre Arquitectura*. The lectures, talks, and conferences embodied the ideas of 12 architects and 1 engineer, who approached architecture from different perspectives and tried to address the nation's needs in different ways.

In 1919, SAM took on the responsibility of representing the architectural profession, so during the 1920s, it addressed key concerns such as: the distinction between architects' and engineers' endeavours; the opportunity for architects to be appointed to public positions; the importance of commissioning major public projects through public competitions; and the encouragement of the debate relating to tradition and modernity (de Anda Alanís 2001:43). It is the latter debate that would shape the first half of the twentieth century and would inform the discussion about Functionalism that was emerging in academia and the profession at large. In this context, the architect Alfonso Pallares (SAM's president) organised in 1933 several

talks and conferences that would eventually be known as *Pláticas sobre Arquitectura* (Image 20), to which we turn our attention now.

The architectural debate emerging in Mexico between 1928 and 1934 revolved around the opposition between the ideas of nationalism – linked to neo-Colonial and neo-indigenous styles, and Functionalism – as the post-revolutionary style. The discussions were centred around the best way to integrate tradition and progress into a narrative that could adapt modern thinking to local conditions; these debates eventually led to substituting nationalist discourses with Functionalism (Biondi 2007:129-30). Functionalism represented a break away from the nineteenth century's eclecticism, as well as a reaction against the styles embodying nationalist ideas; it was understood as a modality of rationalism, in some cases radical rationalism, that was applied to projects



Image 20: *Pláticas sobre Arquitectura: México, 1933*; Alfonso Pallares (ed).

of social scope embodying the national identity in post-revolutionary architecture (Alva Martínez 2004:72). Functionalism was a commitment to a new vision for society, not only comprising material and economic efficiency but developing a social programme through architecture that allowed people to live better (Arias Montes 2001a:25).

The organised debates revolved around the relationship between tradition and modernity and the long-lasting impact of the latter. However, the events had other intentions, as they promoted the confrontation between architects from the functionalist and academic positions, and the talks attempted to dissect the efficiency of the newly founded ESC. Narciso Bassols' unintended division of architectural education into technical and humanistic positions produced other meaningful dichotomies: social orientation vs individualism; technique vs creativity; and architecture as a social act vs architecture as an object (Rios Garza 2001:13-15). These events embodied the intersection and clash of two ethos, of the new and old intellectual paradigms and their architectural representation in Mexico.

The director of SAM, architect Alfonso Pallares, convened the presentations between October and December 1933. In his words, the events should "unify the architects' ideology to achieve a construction movement in accordance to the scientific, economic and artistic postulates of the time" (Pallares 1934:37). In order to do so, 12 architects (Álvaro Aburto (1905-1976), Manuel Amábilis (1886-1966), Mauricio M. Campos (1905-1949), Juan Galindo, Juan Legarreta (1902-1934), Federico Mariscal (1881-1971), Antonio Muñoz (1896-1965), Juan O'Gorman (1905-1982), Manuel Ortiz Monasterio (1887-1967), Silvano B. Palafox, Salvador Roncal (1902-1959) and José Villagrán (1901-1982)) and 1 engineer (Raul Castro Padilla) were invited to present their responses to six fundamental questions posed by Pallares (Pallares 1934:37-38):

- i. What is architecture?
- ii. What is Functionalism?
- iii. Can we consider Functionalism as a definitive architectural stage or as the embryonic start of an architectural zeitgeist?

- iv. Should we consider the architect a simple construction technician or a cultural driver of society?
- v. Does architectural beauty derive from the functional solution, or does it demand the conscious input of the creative will of the architect?
- vi. What should the current architectural orientation be in Mexico?

Alfonso Pallares produced a summary of each event, and subsequently, all the speakers were invited to participate in a free debate to discuss the merits of the various theoretical positions and the emerging thesis. The edited book contained most of the presentations, as José Villagrán's paper was not included, and Juan Legorreta only submitted a synoptic abstract of his presentation. The events promoted the architectural theory debate *vis-à-vis* Functionalism and its importance for the country. Despite the various stances, the emerging discourse acknowledged the changing conditions brought by modernity; *Pláticas sobre Arquitectura* crystallised the participants' concerns and ideas about spaces for dwelling and social wellbeing, the subordination of aesthetic values to the architectural programme and re-directed the architectural discussion from the notion of buildings as aesthetically endowed objects to technological and material expressions of the time.

The book was reprinted in 2001, which indicates its importance in mapping the debates informing the profession in the early decades of the twentieth century. In the introductory text to this volume, Carlos Ríos Garza contended that paradoxically both groups could be defined as functionalist: one designated as technical, social or material Functionalism that was governed by economics, and the second labelled aesthetic, idealist or humanist Functionalism that was ruled by architecture's spiritual needs (2001:19). Once again the issue of the permeability between boundaries is a point of contention, as the ideologies articulated by the participating architects would fall between these two categories. Despite Ríos Garza's characterisation of two main groups, this project follows Stefania Biondi's grouping of the speakers into three factions: i. traditionalists, ii. moderate functionalist, and iii. radical functionalist (2007:243). In each category, different hues and perspectives exist based on the authors' experience and

theoretical inclinations; nevertheless, all of them searched for an architecture that improved the lives of its users (Table 03 – overleaf).

The traditionalist group rejected the dominant role of Functionalism in architecture and searched for answers in the local cultures and traditions while arguing for the appropriate functionality of buildings. Manuel Amábilis, the architect of the 1929 neo-indigenous pavilion for the Iberoamerican Exhibition, represented the traditional approach. The moderate functionalists accepted Functionalism's principles as foundational elements for architecture; however, they envisioned them as complementary to architecture's aesthetic character, which was defined by the discipline's aesthetic needs and values of the time. Manuel Ortiz Monasterio, Salvador Roncal, Federico Mariscal, Mauricio M. Campos, José Villagrán, Silvano B. Palafox and Raul Castro Padilla constituted the moderated functionalist group.

Finally, the radical functionalist group rejected entirely traditional aesthetic considerations and focused their attention on the technical, useful, functional and rational aspects of architecture (Carranza and Lara 2014:75). For this group, the aesthetic value of a building emerged from the programme and the material expression of the building itself. Radical Functionalism was advocated by Juan Legarreta, Juan O'Gorman and Álvaro Aburto. *Pláticas sobre Arquitectura* captured the theoretical discussion of the time, and it demonstrated that the majority of the participants expressed, to one degree or another, an adherence to the ideology of Functionalism. Functionalism was considered the most suitable ideological and material pathway to produce a modern Mexico. It generated an essential shift in the way architecture was envisioned because architecture's spiritual values were replaced by reason; beauty was subordinated to the architectural programme, and it elevated technique above the individuality and creativity of the architect (Biondi 2007:130). Despite these transcendental changes, Mexican architects attempted to synthesise the new paradigms with local culture and geographical conditions. In the following pages, we will analyse and discuss each group's ideas in response to Pallares' six questions.

Platicas Sobre Arquitectura 1933		
	What is Architecture?	What is Functionalism?
Traditionalist: They rejected the dominant role of Functionalism in architecture and searched for answers on the local cultures and traditions, yet arguing for the appropriate functionality of buildings.		
Manuel Amábilis (1886-1966)	It is "one of the beaux arts, the art par excellence"	Function is one of architecture's key principles leading to aesthetic considerations.
Moderate Functionalist: They accepted Functionalism's principles as foundational element of architecture, yet they envisioned them as complementary to architecture's aesthetic character and cultural values.		
Manuel Ortiz Monasterio (1887-1967)	It is "the art of constructing human dwelling taking into consideration the material and spiritual circumstance of the time, place, customs and people"	The path to achieve beauty was defined by the useful, as without functionality a piece of architecture could not hope to attain ultimate beauty.
Salvador Roncal (1902-1959)	For him architecture could not be defined separately from functionality.	There are two types of functions: i. responding to material usefulness & ii. responding to moral usefulness. Functionalist architecture is that "which fulfilled not only material needs, but spiritual necessities, either of aesthetic, philosophical or of a moral kind"
Federico Mariscal (1881-1971)	It is the "art of constructing the dwellings for men" in order to "satisfy human needs, which implies fulfilling spiritual and immaterial aspirations"	Function' referred to 'movement', 'vital action' and the raison d'etre of an organism, so function in architecture could not be linked exclusively to functionality, truth or aesthetic qualities, but it must be connected with the idea of 'activity'.
Antonio Muñiz (1896-1965)	It is "precisely the art of building beautifully"	Functionalist architecture is the most efficient resolution of the programme using the least possible effort, while having an integral architectural approach and understanding of the needs of the client.
Mauricio M. Campos (1905-1949)	It is "one of the fine arts, which resolve human needs (spiritual and material), through constructing buildings"	Buildings should be useful, rational, and achieved economically, however architects must not forget to produce beautiful and expressive projects using form and colour to satisfy the aesthetic and spiritual needs of men.
Silvano B. Palafox	It is a fine art geared to satisfy the physical and spiritual needs of men through the formal-functional realisation of buildings.	A functional work of architecture satisfied as a whole, and in every of its individual parts and details, the programme for which it was created.
Raúl Castro Padilla	Architecture is "the art of building the men's dwellings in an ordered, solid and expressive manner"	Functionalism is an inseparable and logical consequence of human needs. The human functionalism accounts for the material and subjective aspects that form human nature.
Jose Villagrán (1901-1982)	His contribution was not included in the publication	
Radical Functionalists: They rejected entirely traditional aesthetic considerations and focused their attention in the technical, useful, functional and rational aspects of architecture.		
Juan Legarreta (1902-1934)	Architecture should aim to address social change and producing the dwellings for the working classes. He had a strong disdain for architectural aesthetes and rhetoric.	
Juan O'Gorman (1905-1982)	Architects must be careful about the importance conferred to spiritual needs and values as they are subjective principles shaped by the architect's past experiences, education, desires and inclinations, rather than by fundamental and universal needs – Technical Architecture.	It is "maximum efficiency at minimum cost". The ultimate goal of technical architecture, is to be useful to mankind; therefore, it must address the fundamental material and tangible needs of people, as this is the only way architecture will represent our time.
Alvaro Aburto (1905-1976)		Functionalist architecture is that in which all the parts or elements of a building perform a function and they are made with appropriate materials and precise dimensions.
Juan Galindo	His contribution was not included in the publication	

Table 03: Pláticas sobre Arquitectura, 1933. Participants responses to questions 1 and 2

i. Traditionalists:

In his contribution to *Pláticas sobre Arquitectura*, Manuel Amábilis championed the search for inspiration in the local cultures, traditions and

formal expressions of the past. However, he clarified that he did not aim to reproduce the perishable forms of the past but to capture the aesthetically transcendental elements and their immortal spirit. Amábilis thought the ancient pre-Hispanic arts were the most akin aesthetic modalities for the Mexican people. He defined architecture as “one of the beaux-arts, the art *par excellence*” (Amábilis in Arias Montes 2001:43) and stressed that it must be functional; he attempted to conciliate the difference between traditionalism and Functionalism. For Amábilis, architecture must address the main issues of its time through technical and aesthetic resolutions, thus creating buildings rooted in their context and of aesthetic value. Functionalism’s drivers (logic, economy, utility and function) that emerged from architectural modernity should join beauty as key elements of architecture; beauty should not be replaced by function (Amábilis in Arias Montes 2001:46-47).

Amábilis called himself a ‘traditionalist’ in the sense that he considered the present as the result of the cultures, ideas and memories of the past; hence, progress should be understood as the outcome of the accumulation of humanity’s efforts in every cultural field. His understanding of Functionalism as a stage is not stated clearly, yet his discourse accounts for function as one of architecture’s key principles leading to aesthetic considerations. Architects should use their cultural, philosophical and artistic formation to find the spiritual paradigm of the time and bestowed architecture and the arts with it; architects should not imitate the work developed by engineers, who have applied materials and forms in strict alignment to the function of the building and in accordance to the law of economy of materials (Amábilis in Arias Montes 2001:43-44). This latter statement was a critique of the radical functionalists who espoused the ideas of Le Corbusier and his ‘machine for living’ principle.

Amábilis stated that “to renovate and boost architecture’s progress, the functionalist and none functionalist architect, must appeal to [...] nature” (Amábilis in Arias Montes 2001:46). He pointed out that due to the geopolitical and social instability brought by the Mexican revolution and European war, a unifying spiritual ideal has been lost, hence the architectural orientation in Mexico should translate the restless and confused spirit of our time (Amábilis in Arias Montes 2001:41-51). Despite

Amábilis' work in the pre-Hispanic style, his 1933 presentation indicated a willingness to accept foreign influences but filtered through the local conditions and transcendental ideas of the past; his understanding of architecture as the beaux art *par excellence* positioned him as a traditional architect in opposition to the dominant notions of the radical functionalist, however in line with some of the ideas of the moderate functionalists. Amábilis' work was discussed in section 3.4, where we described how his architectural discourse relied on recovering indigenous cultures to connect the nation with its past and define a new future. We will turn our attention to the moderate functionalist group now.

ii. Moderate Functionalists:

The group of architects in the moderate faction strived for a balance between adopting traditional ideas and using progressive notions and materials. They tried to bridge the gap between the eclectic and historicist views of the Traditionalists and the paradigms espoused by the Radical Functionalists.

On his contribution to *Pláticas sobre Arquitectura* on the 12th October 1933, Manuel Ortiz Monasterio defined architecture as "the art of constructing human dwelling taking into consideration the material and spiritual circumstance of the time, place, customs and people" (Ortiz Monasterio in Arias Montes 2001:69). In his view, architecture should harmoniously satisfy practical needs and aesthetic ideals, as buildings have functional and spiritual goals in line with people's material and spiritual dimensions. In Ortiz Monasterio's opinion, architecture is the living commentary of human existence and the expression of people's history and lives; therefore, he acknowledged that architects were living in a time of transition and change, where Functionalism was defined as a reaction against traditionalists' rhetoric and principles.

Ortiz Monasterio argued that the era demanded a new architecture aligned with new social ideals, innovative inventions and novel materials and construction processes, which would create new forms and constructive solutions (Ortiz Monasterio in Arias Montes 2001:71). For him, architectural history has always contained two opposing tendencies: a 'rational' and a 'traditional'; the abuses of the latter by imitating old

historical styles produced a 'functional' style looking at the process, materials and ideas of its time. Nevertheless, he is critical of both tendencies when it comes to its extremes: on the one hand, Functionalism can abuse the notion of 'function' and use it as its sole guiding element; on the other extreme, Traditionalism can forget about function for the sake of attaining a 'traditional' formal expression (Ortiz Monasterio in Arias Montes 2001:71-73). He considered these two extremes to be detrimental to the advancement of architecture.

In the 1930s, the architect's role was to design and adequately resolve human dwellings, which considered the material and spiritual needs of its inhabitants, while being responsive and aligned with its time and creating a 'home' rather than a 'machine for living'. Ortiz Monasterio contended that the path to achieve beauty was defined by the useful, as without functionality a piece of architecture could not hope to attain ultimate beauty, or what he called the *splendour of order* (Ortiz Monasterio in Arias Montes 2001:73). Ortiz Monasterio's presentation was a syncretism of the new ideas developing in Mexico, but with an emphasis of the spiritual aspects of architecture; he considered architecture as a three-dimensional art that dealt with volumes and shapes, brought together through compositional principles such as proportion, symmetry, balance, colour, etc.

A built example of his theoretical discourse was the Edificio de Seguros la Nacional (1930-32; Image 21 – overleaf), which was the first high-rise building in Mexico and showed Art Deco influence on its detailing. The building reminded us of the early skyscrapers erected in New York, and it contributed to an eclectic context defined by buildings from various architectural styles, such as the Palacio de Bellas Artes (neoclassical French), the Edificio de Correos (neo-Gothic), and the Guardiola Building (Art Deco). One of the most important aspects of its construction was the use of a steel structure and concrete; hence, the form of the building was connected with its structural solution. As a moderated functionalist, Ortiz Monasterio adopted modern construction techniques and created a building that expressed the emerging debates surrounding the architectural identity of the country.

On the 9th of October, Salvador Roncal presented his paper to SAM. In his presentation, he made a strong statement about how architecture has always been functional (Roncal in Arias Montes 2001:75); for him, architecture could not be defined separately from functionality. He described two types of functions: i. responding to material usefulness, and ii. responding to moral usefulness. Roncal understood functionalist



Image 21: Edificio La Nacional, Manuel Ortiz Monasterio, Bernardo Calderon y Luis Avila, 1932.

architecture as that “which fulfilled not only material needs but spiritual necessities, either of aesthetic, philosophical or of a moral kind” (Roncal in Arias Montes 2001:76). His presentation elaborated his position about architecture and function, as he considered functionality to be architecture’s essence as long as it fulfilled both types of usefulness: material and moral. In his view, function is manifested through the notion of architectural character, which in turn should be legible in the plan and elevation of a project.

Roncal contended that architecture’s beauty increased as it embodied and gathered the functional characteristics for which it was destined, as well as those contained within the building’s typological archetype. In his words, “the most beautiful architecture is the most functional” (Roncal in Arias Montes 2001:76). For Roncal, the architect's mission was to study the life of the modern man in order to meet his material and spiritual needs. He argued that the architecture of the time should be characterised by rational plans and rational construction methods and solutions, which were based on technical advances emerging from the progress of applied science and knowledge. Roncal’s position attempted to conciliate the new ideas and techniques of the time with the architectural symbolism emerging from a time of chaos and transition.

Federico Mariscal envisioned an architecture that simultaneously represented the national identity and the modern ideals of the time. At the beginning of the twentieth century, he had presented his discourse in the book *La Patria y la Arquitectura Nacional* (1913), where he exalted the virtues of the neo-Colonial style. However, by October 1933, he had transitioned through a phase of Art Deco and had positioned himself in the middle ground of the Functionalism debate. Mariscal can be considered to be at the centre of the Moderate Functionalist group and in line with Ortiz Monasterio, as he defined architecture as the “art of constructing the dwellings for men” to “satisfy human needs, which implies fulfilling spiritual and immaterial aspirations” (Mariscal in Arias Montes 2001:81). In Mariscal’s views, ‘function’ referred to ‘movement’, ‘vital action’ and the *raison d’etre* of an organism, so function in architecture could not be linked exclusively to functionality, truth or aesthetic qualities, but it must be connected with the idea of ‘activity’. Activity implies the “combination of a

project's parts performing according to the usefulness of the whole" (Mariscal in Arias Montes 2001:81).

He was sceptical of the notion of Functionalism as an era because he acknowledged that functionality has always been an intrinsic part of architecture. The era's social, economic and political challenges forced architects to become more involved in understanding the character and spirit of the man of the time; this contributed to the creation of an architecture of its time and in line with other architecture around the world. For Mariscal, beauty would be achieved by addressing Functionalism in a complete manner, whereby each part of the scheme has been designed and produced according to its use and fulfilling the aim of the whole (Mariscal in Arias Montes 2001:81-83).

Mariscal's presentation was balanced and showed an evolution from his early neo-Colonial ideals to recognise and resolve the country's pressing needs in the 1930s. He believed in an architecture that had a *raison d'être* and was true to the activities it was created to address. An architecture that fulfilled men's need for a space to dwell and that reflects the modern conditions of its time. Mariscal's neo-colonial approach of the 1920s was examined in section 3.3; however, by the 1930s, he had adopted Art Deco principles in an attempt to respond to the modern influences from abroad. An example of this phase was the internal spaces of the Palacio de Bellas Artes, which he completed in 1934. After the building was halted due to the War of Revolution, President Pascual Ortiz Rubio appointed Mariscal to complete Adamo Boari's unfinished Art Nouveau building. Mariscal was not able to modify the exterior of the building, so he adopted Art Deco's symmetry and clean geometrical forms to produce spaces that blended nationalist symbolic motifs with an avant-garde aesthetic. He used national materials to embody a sense of national pride and adapted Boari's architectural programme from 1902 to fit with the country's national discourse – he transformed Díaz's sumptuous Grand National Theatre into a palace accessible to everyone: the Palacio de Bellas Artes (Olsen 2008:105).

Another moderate functionalist was the architect Antonio Muñoz, who presented his responses to Pallares' questions on the 7th of December 1933 in front of an audience in SAM. In his speech, he defined architecture

as “precisely the art of building beautifully” (Muñoz in Arias Montes 2001:85); he proceeded to expand this by stating that if architecture stops being beautiful, then it is not architecture. Architects must produce beauty, as this is the only quality that positions them in the realm of architecture. His architectural discourse was influenced by an aversion to the Communist socio-political agenda spoused by some of the political administrations at the time; he firmly believed that Functionalism should be about the proficient resolution of the architectural programme and not the alignment to a particular socio-political agenda. Muñoz defined functionalist architecture as the most efficient resolution of the programme using the least possible effort, while having an integral architectural approach and understanding of the client's needs. He considered Functionalism a founding characteristic of the discipline, as long as it is not confused with the ‘Communist Functionalism’ (Muñoz in Arias Montes 2001:85-91).

Muñoz defined the architecture of the time through four explanations or *raisons-d’être*: i. creating smooth and hygienic forms; ii. the lowest construction cost; iii. the shortest execution time; iv. and the best investment (Muñoz in Arias Montes 2001:87-88). For him, architecture had been moving increasingly towards the simplification of volumes and the creation of forms devoid of decorations and ornaments; nevertheless, it was essential to remember that these forms must have good lines and proportions to be considered beautiful. A built example of Muñoz's thinking was the Centro Escolar Revolución, constructed in 1933 and embodying his four functionalist ideals. The educational complex embodied the use of clean volumes working together to form a simple composition of unadorned buildings (Image 22 – overleaf). The complex's masterplan was symmetrical and was defined by a central axis that cut the site diagonally and divided the school into two wings; the buildings were connected at 90° to the central axis, which became the central area for activities and sports (Image 23 – overleaf). The spaces between the various educational buildings are designated as playgrounds and sports spaces, providing more intimate areas for children’s activities. The school was an example of the integration of artists and architects in the 1930s, as murals and stained glass windows were added in 1937. Muñoz rejected Functionalism's links with communist ideas and proposed a novel architecture using the modern



Image 22: Centro Escolar Revolución under construction, Antonio Muñoz G, 1933



Image 23: Aerial view of Centro Escolar Revolución, Antonio Muñoz G, 1933

advantages of the time to address pressing needs in education and housing. These concerns and preoccupations linked him to the other moderate functionalist architects.

Mauricio M. Campos' presentation was less articulated than the previous speakers and lacked the clarity of Manuel Ortiz Monasterio's or Federico Mariscal's discourse; however, he provided well-considered responses to the questions posed by Pallares. Campos' discourse rejected the notion of styles as he considered them a fashion and declared himself opposed to all the -isms of the time: Futurism, Modernism, Realism and Functionalism (Campos in Arias Montes 2001:105). In his view, styles were prejudicial to the creation of architecture as they came with predetermined ideas and notions. He characterised function as one of the essential qualities that shape architecture, and he defined architecture as "one of the fine arts, which resolves human needs (spiritual and material), through constructing buildings" (Campos in Arias Montes 2001:105). He supported his discourse by looking back at architectural treatises from Vitruvius to Le Corbusier, and traced the meaning of the essential values that have shaped architecture through history.

Campos' studies on architectural treaties led him to consider function as one of the key qualities of architecture, as it made buildings useful and served to fulfil their architectural programme, hence providing buildings with character. Despite his reluctance to acknowledge any particular style, he recognised the changes of the time; he advocated for architects to be prepared to understand the conditions (climate, customs, materials, social tendencies, etc.) that intervene and influence architecture. His views on beauty are in opposition to some of the architects of the time, as Campos disagreed with the notion that the beauty of a building should emerge from the "functional resolution of the architectural programme" (Campos in Arias Montes 2001:104); he considered that buildings should be useful, rational, and achieved economically. However, architects must not forget to produce beautiful and expressive projects using form and colour to satisfy the aesthetic and spiritual needs of humanity. His architectural thinking was expressed in the Hospital General de Mazatlan in Sinaloa (1942).

The last moderate functionalist architect whose work was included in the edited book was Silvano B. Palafox. He considered architecture a fine art

geared to satisfy men's physical and spiritual needs through the formal-functional realisation of buildings (Palafox in Arias Montes 2001:107). Palafox was critical about the debate surrounding Functionalism, indicating that despite the use of a novel term, architecture has always been functional. Therefore, Functionalism cannot be conceived as a new movement, and architecture can be considered 'perfect' only if the building satisfies all the functions for which it was created. In his view, there are two groups of functionalist architects: the 'unilaterals' and the 'universals'. The first type defined architecture as neither beautiful nor ugly, but only as functional and useful. The second type affirmed that architecture was either beautiful or ugly precisely because it must be functional; he identified himself with the second group and contended that the 'unilaterals' spoused a 'half-truth' about the essence of architecture, i.e. architecture = function.

For Palafox, architecture can only be beautiful if it resolves formally and functionally the material and spiritual needs of men; a functional work of architecture satisfies as a whole, and in every one of its individual parts and details, the programme for which it was created. In order to achieve this goal, architects must prepare themselves by grasping the challenges presented by the social, political, economic, cultural and geographic conditions of the time at global and national levels; this entails moving away from imitating foreign ideas, regardless of who proposed them (Palafox in Arias Montes 2001:107-114).

José Villagrán's contribution was not included in the edited book; however, at the time of publication, he had been developing his architectural theory since 1926, when he was appointed chair of the ENA's Teoría de la Arquitectura course. His theoretical discourse will be examined in more detail in the next chapter.

The responses of the six moderate architects showed several common threads in the development of a theoretical position and its architectural expression, which welcomed the progress and changes of the time, yet with a commitment to the spiritual and aesthetic aspects of architecture. The answers to Pallares' questions show key intersections and commonalities among these architects, and these are grouped in several areas:

1. Architecture was considered an art that must satisfy humanity's physical, spiritual, and functional needs. A building must address aesthetic and functional principles and harmoniously resolve these values, leading to beauty in architecture. Beauty and function were not separate but had a symbiotic relationship—one could not be achieved without the other.
2. Function was considered essential to the architecture of the time; however, it was not the only defining principle of the discipline. The moderate functionalists argued that a beautiful piece of architecture must fulfil all the functional requirements of the programme.
3. Functionalism was considered a reaction to eclecticism's excesses in the late nineteenth and early twentieth centuries; however, it was not envisioned as a new zeitgeist because function was understood as a value that existed at the heart of architecture for centuries.
4. The architect must have a holistic understanding of the context and circumstances that define the creation of architecture in order to respond to the needs and aspirations of their client. This will lead to the production of functional and beautiful architecture.
5. Architecture in Mexico must use the advances of the time to pursue an architecture that reflects its era – functional and beautiful, without falling back into the excess of the eclectic discourse.

Moderate functionalists aimed to create architecture that addressed humankind's physical and spiritual needs by producing buildings where function and beauty had key roles in creating architecture. The buildings fused the period's technological and material advances with a timeless understanding of the aesthetic values of architecture. In their view, architecture was a fine art that embodied the complex circumstances of the time in the creation of functional and beautiful buildings. The architect's position was summed up by Antonio Muñoz's statement: "the architect must produce beauty, as this is the only capacity that positions him in the true field of architecture" (Muñoz in Arias Montes 2001:91).

iii. Radical Functionalists:

The Radical Functionalists discarded traditional aesthetic notions and principles of beauty, arguing for the importance of Functionalism's tenets in constructing an architecture that reflected its time. Functionalism was considered an architecture of transformation, which symbolised the values and progress of a new era and was adopted by the government. The presentations by Juan Legarreta, Juan O'Gorman and Álvaro Aburto (founding academics of the ESC) confirmed the institutionalisation of Functionalism, which was embodied in Legarreta's project for a prototype of a minimal workers' dwelling in 1932 and the adoption of the style by the unions and the ESC.

Juan Legarreta's contribution to the edited book *Pláticas sobre Arquitectura* was a summary he provided when asked to revise the transcript of his presentation. Despite the brevity of his note (3 bullet points), it was evident Legarreta's commitment to architecture aimed to address social change and produce dwellings for the working classes, as well as a strong disdain for architectural aesthetes and rhetoric. He wrote back to Pallares and simply stated:

People who live in shacks and round rooms cannot speak about architecture; we will make the people's dwellings; aesthetes and rhetoricians will later make their discussions (Legarreta in Arias Montes 2001:39).

His passion for Functionalism was displayed in his winning scheme for the prototype for a low-cost minimal workers' dwelling competition (Image 24 – overleaf). Carlos Obregón Santacilia organised the competition and invited architects to design and build a 'model' worker dwelling in Mexico City. Legarreta's proposal provided maximum functionality in minimum areas while providing spatial flexibility and frugality in the tectonic nature of the surfaces. In line with Functionalism's ideals, the dwelling emphasised clean lines and simple forms in the resolution of its spaces, hence producing a proposal with a strong functionalist character and at a low production cost. Legarreta's project addressed the needs and integrity of a typical working-class family rather than the economic conditions defining a building of this kind. His scheme was based on his graduate



Image 24 Casa Obrera Minima, Mexico City, Juan Legarreta, c.1934.

professional thesis from 1930 of a minimal house for workers; Legarreta designed the project and built a prototype house in Calzada Vallejo to demonstrate their feasibility (Olsen 2008:91). Despite a promising start to his architectural career, his theoretical and practical work only developed between 1930 and 1934, as he died on a car accident at the age of 32 in 1934.

Juan O’Gorman was one of the most prominent advocates of radical Functionalism, which was rooted in his belief in the efficient use of materials, time and money in creating architecture. He was influenced by Le Corbusier’s book *Vers une Architecture* (1923), and he developed functionalist ideas to the extreme. Le Corbusier proposed in his book a revolutionary discourse based on a closer relationship with new technologies, and a set of aesthetic principles for the architecture of the twentieth century (Cohen 2008:85-89). His ideas fitted well with the nascent functionalist movement in Mexico and the government’s desire to address the country’s social needs to produce a modern nation (Canales 2013:196). O’Gorman was familiar with Le Corbusier’s discourse as he had read *Vers une Architecture* by 1924 and had adopted the master’s rationalist ideas to produce several houses, among which we can identify

some of the first modern houses in the country: the Casa Cecil O’Gorman (1929) and the Diego Rivera and Frida Kahlo Casa-Estudios (1931-32).

The Casa Cecil O’Gorman was built in 1929 as a studio for his father, and it was the first project to use radical rationalist language (Images 25 & 26 – overleaf). The project aimed to achieve maximum economy of space through a thorough study of the architectural programme, and its formal expression was the result of its functions. The house is devoid of any decoration, and its simple rectangular volumes are constructed using reinforced concrete and glass. O’Gorman thoroughly studied the activities its clients required and formed the architectural programme to satisfy their needs. At ground level, the house’s footprint is divided into two zones: i. an outdoor open plan space serving to transition between the outside and the inside of the house, and defined on its long edge by concrete columns and roofed by the first floor; and ii. an indoor space enclosed by walls.

The main volume of the house is elevated from the ground by columns, featuring a studio space with a window spanning the entire length of the elevation and a concrete helicoidal stair that connects the ground floor with the first level. The project’s simplicity is a true reflection of O’Gorman’s functionalist ideas and shows Le Corbusier’s and José Villagrán’s influence on his thinking. O’Gorman was one of the first disciples of Villagrán, from whom he learnt key ideas that contributed to his functionalist discourse, such as the importance of the architectural programme, the honest expression of the tectonic nature of materials and the importance of architecture’s social content.

The ideas explored in the Casa Cecil O’Gorman were the basis for the 1931-32 Diego Rivera and Frida Kahlo Casa-Estudios. These two house studios represented the built expression of O’Gorman’s manifesto that rejected a conservative, historicist and provincial society (Adria 2013). The two buildings embodied the intersection of theory and praxis, and they contained the ideas that O’Gorman would passionately support in his *Pláticas sobre Arquitectura* lecture in 1933. In particular, Diego Rivera’s house/studio (Image 27 – p.146) used a rationalist vocabulary that took inspiration from Le Corbusier’s principles embodied in the Ozenfant house/studio (1922) and the Maison Citrohan (1920). In Rivera’s dwelling, the studio was the building’s central space, and all the other spaces



Images 25 & 26: Casa Cecil O'Gorman, Mexico City, Juan O'Gorman, 1929.

(accommodation and service) were organised around it. The house's main volume was lifted in *pilotis*, creating an open plan at ground level and producing a double-height studio space with a north-facing floor-to-ceiling operable industrial window. The building was crowned with a sawtooth skylight that provided a top light for the studio area. The spatial

organisation in the plan, use of volumes and sawtooth roof demonstrate the influence of Le Corbusier's discourse in O'Gorman's architectural language. (Carranza and Lara 2014:72).

These two projects by O'Gorman became the embodiment of functionalist ideas and were at the centre of the debate about Functionalism's validity in Mexico. The radical functionalist architectural language championed by Juan O'Gorman in the Casa Cecil O'Gorman and Diego Rivera's house studio would be attacked in the *Pláticas sobre Arquitectura*. O'Gorman's presentation for the event elaborated in-depth on the flaws and problems with traditionalists and, in particular, focused on the notion of 'spiritual' needs and values, which several participants have referred to throughout the events. His critique stated that architects must be careful about the importance conferred to spiritual needs and values as they are subjective principles shaped by the architect's past experiences, education, desires, and inclinations rather than by fundamental and universal needs. The latter is precise and must be resolved with exactitude rather than sentimentalism (O'Gorman in Arias Montes 2001:53-54). He elaborated the point further by arguing that spiritual needs can be used to deceit and hide the true



Image 27: Casa Estudio Diego Rivera y Frida Khalo, Mexico City, Juan O'Gorman, 1931-32.

nature of architecture by turning its back to the honest expression of construction methods and materials, as well as lending themselves to the fulfilment of whims and vanities of the client, or the architect, by copying ideas of the past (O'Gorman in Arias Montes 2001:53-59). The attack on 'spiritual' needs not only addressed the Traditionalist but also separated the radical functionalist architects from the discourse of the moderate camp, who accounted for aesthetics in its narrative.

O'Gorman does not turn his back on aesthetics, but rather than considering it as a means and finality, he regards it as a consequence of the act of building. For O'Gorman, architecture was invented to find shelter and defend man from nature and its elements; in his speech, he defined the true architecture of the time as 'technical' and in response to the axiom: "maximum efficiency at minimum cost" (O'Gorman in Arias Montes 2001:53-62). The ultimate goal of technical architecture is to be useful to humankind in a direct and precise manner; therefore, technical architecture must address the fundamental material and tangible needs of people, as this is the only way architecture will represent our time (O'Gorman in Arias Montes 2001:60). To achieve the best results, architects should be helpful to the majority of the population which have material needs, and to who the spiritual needs have not cascaded down to, rather than to a minority who profits from the usufruct of the land and industry.

O'Gorman brought to the *Pláticas* the debate about the opposing pedagogic strategies, ethos and curricula between the ENA and the ESC. In his view, the teaching taking place in the ENA was academic and geared towards catering for a privileged minority, whereas the new programme that he devised in the ESC aimed to produce technical and useful architecture for the majority of the population. In the subsequent decades, O'Gorman's architectural discourse transformed as he grew disillusioned with the development of Functionalism in the late 1930s and 1940s; this caused him to abandon architectural practice from 1935 to 1948, and to dedicate himself to the visual arts, particularly mural art. He returned to architecture in 1948 with the murals of UNAM's Central Library, and his architectural discourse shifted from a Le Corbusian functionalism to the adoption of key ideas of Frank Lloyd Wright's organic architecture. The

latter helped O’Gorman to reconcile the ideas of function and local traditions (Burian 1997:140-47)

The last presentation was from Alvaro Aburto. He declared that functionalist architecture is one in which all the parts or elements of a building perform a function and are made with appropriate materials and precise dimensions. He does not see Functionalism as an era but as an essential quality of architecture throughout time. His historical awareness led him to state that architects should study how people live in their communities and use this knowledge to provide better dwellings. Architects are not only technicians but also in charge of understanding how people live, creating the architectural program, designing the project, and executing its construction (Aburto in Arias Montes 2001:132).

He disregarded the debate about beauty and instead linked good architecture with one that is efficient and remains economic; these notions mirrored O’Gorman’s maxim about efficiency and cost. For Aburto, architecture should reflect its time; hence, the architecture for the Mexican people should be pure, simple, economical and efficient, which contrasted with the architecture built by private citizens that he considered bourgeois and lacking in functionality (Aburto in Arias Montes 2001:129-133). Juan Legarreta, Juan O’Gorman and Álvaro Aburto championed a radical Functionalism using Le Corbusier as a referent for the development of an architectural language representative of the new era, and adopting the teachings of José Villagrán as a guiding light to a new architectural expression.

The three groups acknowledged the need for a new architecture that reflected the changing circumstances of the era. Despite rejecting or fully accepting these modern conditions, they envisioned architecture as the art of building spaces for human habitation and aimed to fulfil human needs. All of them searched for an architectural theory that would support the construction of a national identity, which would be reinforced by architecture itself.

The understanding of what constituted human needs proved to be different in the speech of each architect, as some considered spiritual and material needs on equal terms, whereas others thought about material and

functional needs as the main elements. All the participants considered functionality as an essential element of architecture, but its relationship with aesthetics and beauty was called into question; the most radical architects considered the concept of beauty as ambiguous, subjective and subservient to addressing the functional and useful nature of the architectural programme, whereas traditionalists thought of beauty as a guiding element from which architects should take inspiration from. The moderate position attempted to bridge these extremes and recognised that both – function and beauty, form an intrinsic part of architecture as an art and a representation of society and the culture of the time.

One of the key reasons for the organisation of *Pláticas sobre Arquitectura* was the conflict between architects and engineers at the time, which forced SAM to call the conference and to clarify the discipline's position *vis-à-vis* functionalist architecture. The conflict was based on the appointment of prominent functionalists to key governmental positions, which influenced and defined the type of architecture produced in the country. The Secretary of Education, Narciso Bassalo, had set the foundations for the institutionalisation of Functionalism by establishing the ESC, proposing the construction of schools using Functionalism and adopting O'Gorman's maxim of "maximum efficiency at minimum cost". The contentious nature of the situation was captured in the responses about beauty and the architect's role (Rios Garza 2001:13-14).

The importance of *Pláticas sobre Arquitectura* lies in how it crystallised the state of affairs on architectural thinking and practice in Mexico at the time. The key concepts and ideas coming from the European modern context (Le Corbusier and the Bauhaus) merged with the prevailing national concerns and conditions, and developed and consolidated the process of integration of Modernism in the country. The events organised by Alfonso Pallares, and its accompanying publication, demonstrated the syncretism of the new discourse with the emerging socio-political and cultural circumstances of the 1920s and 1930s. Despite the controversial nature of Functionalism, its architectural discourse was integrated into the national context by using its tenets in the government's flagship construction programmes – housing, education and health. Functionalism became the primary architectural paradigm for the reconstruction of the nation after the Revolution, and it

was used to construct a national identity in the 1930s and 1940s. Architects synthesised Functionalism's paradigms and applied their theory to architectural practice to build early twentieth-century Mexican architecture. The importance of *Pláticas sobre Arquitectura* is based not only on the debate it generated but also on collecting the thoughts of architects through the written word. The architects of the time became authors who articulated their ideas and theories in books, articles and presentations. Architects expressed their discourses in a built form and captured them in a written format.

The relevance of *Pláticas sobre Arquitectura* as a historical marker in the development of Mexican architecture is evident, as 88 years after its publication, the volume is a reference to understand the origins of architectural thinking and education in Mexico in the twentieth century. A 2nd edition was printed in 2001, with extended pieces by Carlos Ríos Garza, J. Víctor Arias and Gerardo G. Sánchez Ruiz, in which they set up the context surrounding the talks, and positioned the book as the cornerstone in the production of architectural theory and practice in the country after the War of Revolution. The book embodied the struggles of architects adopting technical and functionalist concepts as the medium to represent local traditions and national identity. This would be a serious dilemma for the architects of the 1930s and 1940s – how to be part of an European avant-garde movement yet represent Mexican themes, local cultures and traditions? Mexican culture struggled with the desire to be universal and modern, yet to dwell and develop its Mexican-ness (Burian 1997:132-33).

The architects that participated in *Pláticas sobre Arquitectura* were actively engaged in the construction of the country's built environment; despite their theoretical differences and practical experience, they contributed to the nation's transition into modernity by virtue of being the first generation of modern architects (Canales 2013:323). Furthermore, the public lectures highlighted not only the ideological divide between the leading architects of the time, but the generational schism within the discipline: on the one hand, the young generation of architects supported a socio-political view of architecture that gravitated towards a rationalist perspective with concerns about the efficiency of materials and making reality the dreams of the

revolution; on the other hand, the older generation, who had been educated in the previous regime, deployed a deeper interest for the aesthetic and spiritual content of architecture, yet they had to transition to the new way of thinking and practising architecture (Arias Montes 2001a:28).

Following Villagrán's ideas, Functionalism in Mexico would stress the importance of the architectural programme and the vital role architecture plays in fulfilling social needs. Functionalism discourse would entail a socio-political and cultural change based on human requirements, which would affect the architects' teaching, thinking and practice. The *Pláticas sobre Arquitectura* highlighted the close collaboration between thinking and practice at the time, and how the profession embraced key European tenets but adapted them to the national situation. The inauguration of General Lázaro Cárdenas' presidency (1934-1940) opened an era defined by strong nationalist politics with anti-imperialistic inclinations; it was during his administration that the country experienced an extensive programme of social reforms designed to favour the development of the accumulation of capital as well as addressing the needs of the working classes (Alva Martínez 2004:71). This change in the political agenda, and the development of Villagrán's architectural discourse will be explored in the following chapter.

3.8 Conclusions

The objective of chapter 3 was to analyse the architectural discourse in Mexico in the two decades that followed the War of Revolution. Specifically, it focused on the leading architects involved in the development of the theoretical discourse and adoption of Functionalism in the country. The majority of these architects took part in the seminal event *Pláticas sobre Arquitectura: México, 1933*, which embodied the different architectural thinking strands at the time. The key objective of this chapter was to highlight the intersection between architectural theory and practice after the War of Revolution and to substantiate its role in the development of architecture that represented a new national identity. The narrative constructed in chapter 3 analysed how, at the end of the War of Revolution, the Mexican political class developed a national identity project

that covered all areas of society. The connections between the socio-political, cultural and architectural expressions in the 1920s and 1930s validated the symbiotic relationship between these areas of human endeavours, while reinforcing the argument that the intersections between the political agendas and the architectural discourses were essential for developing the country's identity. The government's social, political and cultural agendas found in architecture the perfect complement to materialise a nationalist discourse; architecture became the ideal expression to formalise the nation's sense of progress while fostering the material recovery after the destruction generated by the War of Revolution.

Chapter 3 explored the discourses that influenced architecture in the immediate post-Revolutionary decades and how they were tied to a sense of nationalism and the desire for progress. Architecture adopted a defining cultural role, and architects generated theoretical discourses about the style most suited to represent a new identity for the country. In the 1920s, Federico Mariscal, Jesús T Acevedo and Manuel Amábilis looked back into the country's history and formulated two main approaches: neo-Colonialism and neo-indigenous. The Neo-Colonial architecture aimed to reinterpret the work of the viceroyalty, and its theoretical position postulated that the colonial period should provide the basis and elements to develop a comprehensive Mexican identity; the writings of Mariscal and Acevedo expressed these ideas and lamented the fact that the advent of the War of Independence disrupted the evolution of the Colonial style. On the other hand, neo-indigenous architecture proposed looking further back into the country's history and taking inspiration from the architecture of the indigenous civilisations that inhabited the land before the Spanish arrived. Manuel Amábilis worked on this style and produced several texts explaining his neo-indigenist approach; also, he criticised neo-Colonial as a vestige of European control and foreign intrusion. Even though both styles were used by celebrated architects, who produced several exemplary buildings, neither aesthetic proposal managed to reflect the emerging zeitgeist or to create a critical mass that carried them beyond the early years of the 1930s. The chapter argues that both approaches were anachronistic in their desire to search for inspiration in past styles, some of European descent, whilst the other was rooted in a distant, forgotten past.

Chapter 3 demonstrated that the changes in the regimes' socio-political and cultural agendas significantly impacted the development of architecture. As a result of different initiatives and emphases at the end of the 1920s and early 1930s, the country shifted towards a progressive interpretation of national identity; this was fuelled by the need to resolve the country's social and cultural challenges, hence, it generated the adoption of modernity's paradigms by the government. In architecture, the desire for progress was embodied in a discourse based on the importance of the architectural programme, the resolution of the building's functions and its constructive efficiency – this was labelled as Functionalism. In Mexico, Functionalism interpreted and adapted European Modernist principles and was vested with local conditions and restrictions, which generated a unique architectural approach. Functionalism became a modernist aesthetic, taking into consideration local characteristics and materials. Eventually, Functionalism superseded the two competing nationalist approaches and became the government's official architectural style. As chapter 3 argued, Functionalism would define the architecture of the country until the 1960s.

Despite the adoption of Functionalism as the official style in public architecture, the architectural discourse had a powerful internal contradiction that conflicted architects and caused struggles for Mexican society at large. How could a European approach with aspirations for universality be adopted while remaining linked to the country's traditions in the pursuit of a unique national identity? The debates between tradition and modernity, the local and global, and identity and history would define Mexico's cultural and architectural landscape of the twentieth century.

As the chapter highlighted, the debate between the three architectural discourses: neo-Colonial, neo-indigenous and Functionalism, informed the conferences and texts edited as *Pláticas sobre Arquitectura: México, 1933* by Alfonso Pallares. The book embodied the collision of these discourses and synthesised them into three overlapping positions: Traditionalists, Moderate Functionalists and Radical Functionalists. The chapter demonstrated how these three stances attempted to propose new pathways for Mexican architecture; these three pathways were captured in the lectures and debates that embodied the intersections between

architectural theory and practice of the time. In the context of an evolving national identity, architects demonstrated the ability to connect their intellectual endeavours, which were disseminated in books and articles, with the practical aspects of constructing the built environment. *Pláticas sobre Arquitectura: México, 1933* not only corroborated the intersections of theory and praxis at the start of the twentieth century, but also reflected the pedagogical division between the two leading institutions that taught architecture at the time. The ENA was classified as 'academic' as it taught architecture from a humanist, historic and creative perspective; in contrast, the ESC was viewed as technical and socially aware, and it was labelled functionalist and in alignment with the government's ideals.

This chapter has narrated, evaluated and analysed the connections between architectural theory and practice in Mexico after the War of Revolution, and how these various positions were represented and embodied in *Pláticas sobre Arquitectura: México, 1933*. The chapter's emphasis was to construct the argument about the relevance of the intersections between theory and practice in the production of architecture at the start of the twentieth century in Mexico. The chapter argued that the connections between theory and practice in the 1920s and 1930s were strongly intertwined, and it was from within this context that the architects who dominated the middle of the twentieth century emerged. In particular, the teachings and works of José Villagrán were of paramount importance for the architecture that developed until the 1960s in the country; this will be one of the main components that chapter 4 will elaborate on.

4. Architectural Diversification: Thinking and Practice (1934 - 1964)

4.1 Introduction

As chapter 3 demonstrated, the *Pláticas sobre Arquitectura* set the basis for the development of the discourse linked to Functionalism in Mexico; however, the architectural discourse and practice between the 1940s and the 1970s were also defined by several approaches that departed from Functionalism's well-established ideals. Chapter 4 will study the development of architecture between the 1930s and 1960s – its objectives will be to examine the heterogeneous architectural production in the middle of the twentieth century and to reflect on the impact of José Villagrán's architectural theory on Mexican architecture in that period.

Chapter 4 will argue that José Villagrán's architectural theory of values was one of the most dominant theoretical discourses in Mexico as it defined architectural thinking, practice and education from the 1940s to the 1970s. Functionalism was consolidated as an architectural proposal in the 1930s; subsequently, it became institutionalised during the 1940s due to becoming the official style for government-sponsored public architecture. The assimilation of Functionalism was completed in the 1950s. However, the architectural movement abandoned its social principles and transformed, by a process of aesthetic assimilation, into a variant of the international style. This formal assimilation instigated the crisis of Functionalism in Mexico. Chapter 4 will argue that it was in the 1940s and 1950s that José Villagrán's doctrine gained strength and recognition and was accepted by the profession at large (Biondi 2007:133).

Villagrán disseminated his architectural discourse through his teaching at the ENA, producing a school of thought embodied in the projects of multiple generations of architects, such as the work of Juan O'Gorman and Enrique del Moral in the 1930s; Pedro Ramírez Vázquez and Carlos Obregón Santacilia in the 1940s; Vladimir Kaspé, Pedro Moctezuma and Juan Sordo Madaleno in the 1950s; and collaborations with Enrique Yañez,

Mario Pani and Antonio Attolini Lack in the 1960s (Canales & Hernández 2017). These connections are a testament to the far-reaching influence of his thinking, practice and teachings. His architectural theory of values was based on the understanding of the architectural programme as the project's main design generator and the importance of social consciousness in determining the discipline's endeavours. Villagrán's built projects embodied his theoretical thinking and represented the four core architectural values: useful, logic, aesthetic and social. His ideas permeated and defined the work of architects interested in creating architecture with a modern character, yet based on an understanding and adoption of local conditions and principles.

In 1952, Villagrán published the article *Panorama de 50 años de Arquitectura Mexicana Contemporánea*, where he lamented a "divorce between doctrine and practice in several young practitioners who returned, maybe by cultural inconsistency, to a decorative and a-tectonic formalism" (Villagrán 1953:III). He contended that true contemporary Mexican architecture emerged from a historical process initiated in 1924, and as the product of the ideas and doctrine formulated in the classrooms of the ENA; this architecture was not strictly functionalist, as it neither neglected historical knowledge and aesthetic ideals nor adopted a set of stylistic principles, but it was truly modern in its desire to actively capture local conditions (climate, traditions, economy, etc.) and produced an architecture of its time and responsive to its context (Villagrán 1953:X). In the 1950s, the debate surrounding the crisis of Functionalism resulted in several alternative positions and debates that informed architectural theory and practice. It was in the 1950s and 1960s that the reaction to the type of Functionalism aligned with the international style became embodied in the regional architecture produced outside of the capital by Luis Barragán; also, it can be found in the emergence of the brutalist aesthetic proposed by Teodoro González de León and Abraham Zabludovsky.

This chapter will map the trajectory of key architects between 1940 and the 1970s, highlighting their role and influence in the development of Mexican architecture. The chapter will construct the wider socio-political and economic contexts that informed the work of Carlos Obregón Santacilia, Félix Candela (concrete shells), Mathias Goertiz (Emotional

architecture), Vladimir Kaspé (architecture as a whole), Mario Pani and Luis Barragán (regionalism); all contemporaries of José Villagrán, and were influenced in various degrees by his teachings, buildings or collaborations. The chapter will argue that Villagrán García's architectural thinking was the leading discourse in the middle of the century, and he should be positioned among the most important architects of the time. The chapter will examine Villagrán's theory and reflect on its impact on the country's architecture, hence demonstrating the importance of theoretical endeavours for practising architects in Mexico. The leading argument of this chapter asserts that the connectivity between theory and practice that defined the start of the century gradually decreased in the middle of the twentieth century, despite the work of a range of national and international architects.

4.2 The Social(ist) Emergence of Architecture [1934-1940]

Lázaro Cárdenas's ascension to the presidency (1934-40) brought a shift in the government's concerns and the architectural programmes it supported. Whereas previous administrations equipped and expanded the city's urban infrastructure and invested in constructing three main social programmes (health, education and housing), Cárdena's administration turned its attention to one of the core tenets of the War of Revolution: the agrarian reform. Cárdenas' presidency aimed to address the social inequalities found in the countryside, and his administration was the first to benefit from a 1927 constitutional amendment that extended the presidential period from four to six years. His presidency was defined and affected by two critical circumstances: i. the administration's socialist vocation that influenced all its decisions and became the dominant socio-political ideological discourse, and ii. the global geo-political conditions brought by the pre-war context in Europe (Matute 2010:246-50). The internal political disposition and the external global conditions defined the work of architects in the country by setting a strong social agenda that tried to resolve the social inequalities the country experienced; to this effect, Functionalism was adopted as the government's official style for public architecture (Rodríguez Viqueira 2009:115-16).

Functionalism's paradigms and values embodied the government's social aspiration and helped strengthen the discipline's social character during Cárdenas' regime. In those years, the collaboration between architects and politicians achieved a symbolic pinnacle: the architecture of 'grand' social transformations. The country's social transformation embodied the needs of the working class. It reflected the ideals of society's most progressive and revolutionary sectors as it identified with Functionalism's paradigms and its desire for progress (Rodríguez Viqueira 2009:113-116).

The two key architectural typologies developed during Cárdenas' administration were: i. single-family dwellings and ii. mixed-use buildings for syndicates (de Anda Alanís 2001:46). The public and private sectors championed the two typologies; however, their architectural aesthetic manifestations were at opposing ends of the architectural spectrum. Whereas single-family dwellings used the neo-Colonial/Californian style to showcase a sense of historical belonging and national identity, the syndicate buildings used the simple architectural vocabulary of Functionalism to mark the triumph of the working class and the Unions in Mexico. Syndicate buildings were constructed in the main urban centres, and they embodied the socialist inclination of the administration. This typology demonstrated Functionalism's use in civic buildings as a vehicle to represent the hopes of the working class. Two syndicate buildings represented the architecture from this period: the building for the *Sindicato de Cinematografistas* by Juan O'Gorman (1934; Image 28 – overleaf) and the building for the *Sindicato Mexicano de Electricistas* by Enrique Yáñez (1938). In the latter, Yáñez did a rigorous analysis of the spatial needs to inform the architectural programme; the building was designed with a strong Le Corbusian influence, and Yáñez applied strict functionalist principles: the use of pilots to provide structural stability and flexibility, an open plan at ground level to provide spatial freedom, continuous horizontal windows to provide suitable lighting conditions, the implementation of a roof terrace and the building's skin was built independently from the structure (Rodríguez Viqueira 2009:116-117). Yáñez's architecture reflected his belief that architecture should satisfy the needs of the majority and that the architect should be an agent of social change. Juan O'Gorman and Enrique Yáñez studied at the ENA and were

influenced by the ideas and principles taught by José Villagrán in his architectural theory class.

The two aforementioned typologies were dominant during Cárdenas' presidency; however, other exemplary architecture was built in those years, for example, Carlos Obregón Santacilia's Monumento a la Revolución (1933-38). Obregón Santacilia was a prolific architect and thinker who never settled in one particular style; due to the evolution of his architectural and intellectual positions, it is difficult to categorise him, as



Image 28: Sindicato de Cinematografistas, Juan O'Gorman, 1934.

he maintained "certain traditional values as well as the dictates of the vanguard" (Mijares Brancho 1997:151). He published key books such as *El maquinismo, la vida y la arquitectura* (1939), in which he reflected on the cultural and social changes brought by modernity and argued that architecture was charged with expressing the material transformations brought in by new means of production. In his view, the "greater transformer of architecture is [sic] the Economy" (Obregón Santacilia 1939). In his book, he postulates that the social aspects of architecture were disregarded, as Functionalism's economic paradigms became the guiding principle to create utilitarian and standardised spaces flooded with light and comfort. Another essential text by Obregón Santacilia was *Panorama de 50 años de arquitectura Mexicana* (1952), where he mapped his vision of the architectural landscape of the first half of the twentieth century.

In the Monumento a la Revolución, Obregón Santacilia repurposed the 64-meters high steel structure of Émile Bénard's Legislative Palace (Image 29 – overleaf) and designed and constructed a monument to the Revolution. Obregón Santacilia reflected on the challenges and significance of the monument in his book *El Monumento a la Revolución: simbolismo e historia* (1960), where he defined the building as a symbol of the Revolution and one that was susceptible to change and appropriation (1960:62). For Obregón Santacilia, the monument represented the moment in time when the search for a suitable architectural language to symbolise the revolution ended, and it opened a period on which architecture reflect the "material conditions of its production" (Carranza 2010:179). In *El Maquinismo, la vida y la arquitectura*, Santacilia affirmed that architecture should respond to the country's economic conditions and is affected by the laws of production, distribution and consumption (Carranza 2010:179-180)

The Monumento a la Revolución (1938; Image 30 – p.162) represented the transformation of one of Porfirio Díaz's historical remnants into a celebration of the momentum of the post-Revolutionary movement. The monument became a memorial for the heroes and martyrs of the War of Revolution and a symbol of the historical progress of the nation's evolution towards political and social progress and emancipation. It embodied the three key stages of the country's liberation: the War of Independence

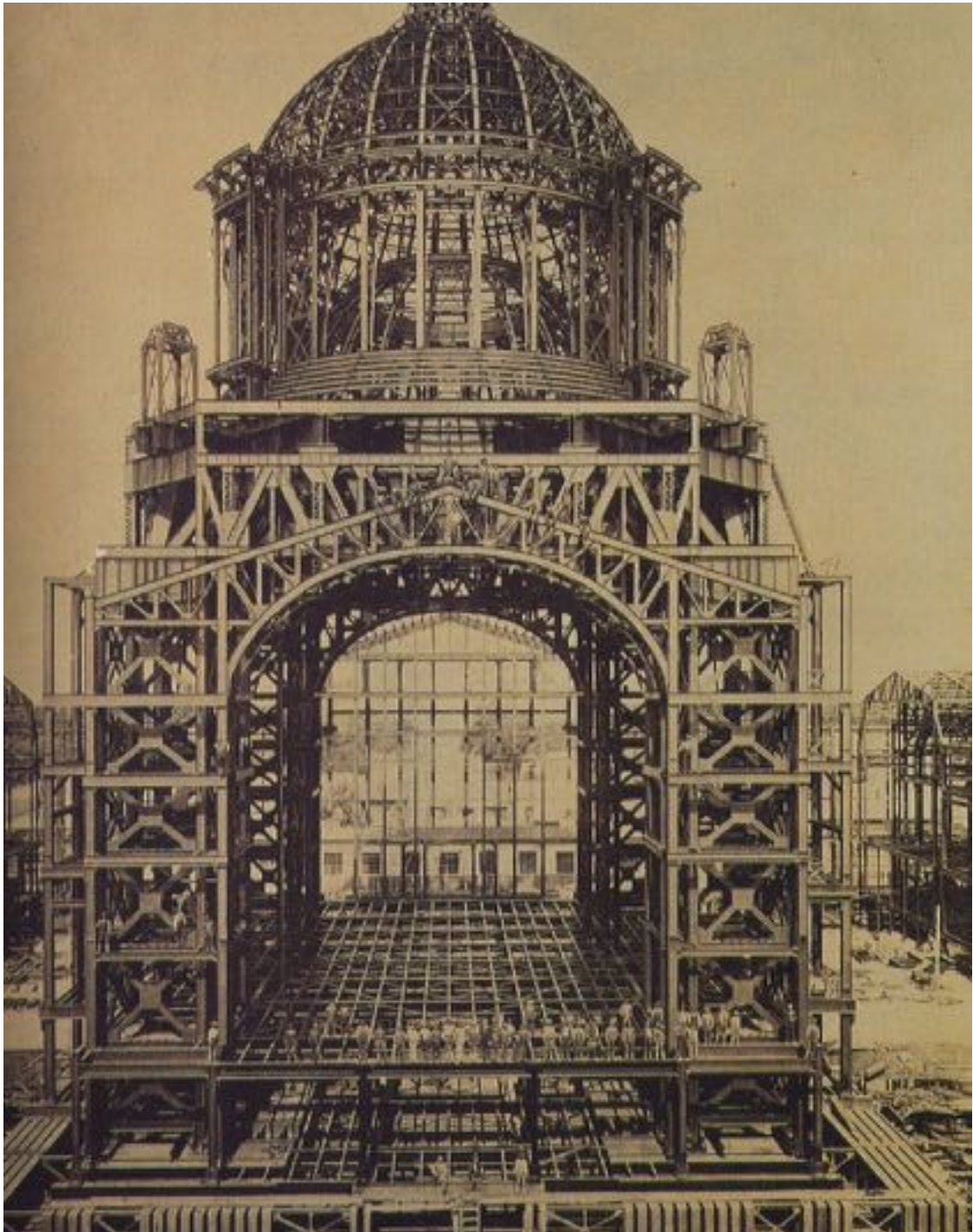


Image 29: Structure of the Legislative Palace, Mexico City, Emile Bernard, 1912.

(political emancipation), the War of Reforma (spiritual emancipation) and the economic emancipation provided by the War of Revolution (Carranza 2010:176-77).

In this decade, Villagrán designed and built the Hospital de Cardiología (1937; Image 31 – p.163), which exemplified the government's political

and social drives to develop a public health infrastructure. Villagrán studied the hospital's complex set of requirements in detail and formulated an architectural programme in accordance with the needs of a new era. All the functions were expressed using a simple language of austere geometries



Image 30: Monumento a la Revolución, Mexico City, Carlos Obregón, 1933-38.

without concessions to a pre-determined aesthetic proposal. The formal aspect of the building emerged from a careful interpretation of the architectural programme, its spatial needs and the building's main functions. Nevertheless, Villagrán took into consideration architectural principles of proportion and formal contrast to design a project with a rich geometrical composition that fulfilled the needs of its users.

His influence in the 1930s was magnified by his appointment as the director of the Department of Construction in the Secretary of Public Health in 1935; this position not only increased the volume of his built work but also allowed him to define the architectural direction of hospitals and clinics in the country. His official role was complemented by his endeavours as Head of the Escuela Nacional de Arquitectura (ENA) from 1933 to 1935, which permitted him to define the school's curriculum. At the time, the ENA was the main architectural education institution in the country.

Cárdenas' socialist tendencies engendered a fraternal militancy from the left and produced several cultural groups and societies that provided a voice to the emerging unions. For example, the prevailing socialist atmosphere encouraged the foundation of the *Unión de Arquitectos*

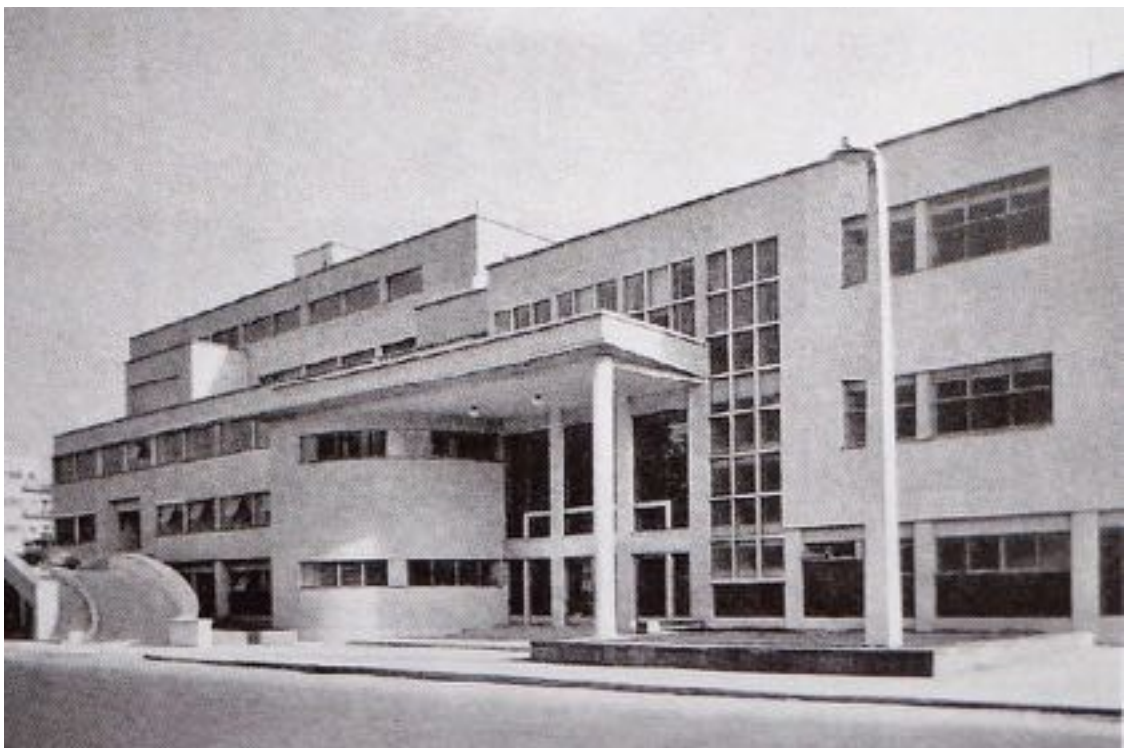


Image 31: Hospital de Cardiología, Mexico City, José Villagrán García, 1937.

Socialistas (UAS- Union of Socialist Architects) in 1938, which counted among its founding members the architects Alberto T. Arai, Enrique Yáñez, Raul Cacho, Ricardo Rivas and Carlos Leduc. Additionally, the pre-war conditions brought a tense relationship with certain European sectors while softening the stance towards the North American culture and increasing the USA influence in the country (de Anda Alanís 2001:46). However, the most significant impact of the prevailing global conditions of the 1930s and 1940s, was the arrival to the country of several refugees escaping the Spanish Civil War (1936-39) and the devastation of World War II (1939-45). The imprint foreign architects and artists left in the country's architectural thinking and practice was profound, as it defined alternative avenues for practising architecture. For example, in the middle of the twentieth century, Vladimir Kaspé postulated his concept of 'total' architecture (Kaspé 1992), Mathias Goertiz wrote his '*Manifiesto de Arquitectura Emotiva*' (1953), and Félix Candela pioneered the use of concrete shells (1961).

In this period of change and ideological (r)evolution, SAM's efforts to restore the status of architects in public life increased, and the growth of their political influence paid dividends. As elaborated in chapter 3, the *Pláticas sobre Arquitectura* aimed to unify the profession around the debate surrounding tradition and Functionalism, while proposing a position *vis-à-vis* the novel paradigms that defined the government's endeavours. In parallel, in the 1930s, there were several meaningful appointments to influential public positions. Amongst them was the selection of Juan O'Gorman as the director of the Department of Construction in the Secretary of Public Education (1932-35), and Juan Legarreta was in charge of the division of design projects in the Department of Buildings of the Secretary of Communications and Public Works (1932). These appointments, together with Villagrán's official role as the Secretary of Public Health, played an essential part in the adoption of Functionalism as the official paradigm during Cárdenas' regime (Canales 2013:217) and contributed to defining the direction of architectural debates and practice in the 1930s and the 1940s.

In these two decades, architecture practices such as those of José Villagrán and Mario Pani were prolific as they found fertile ground in the conjuncture

of the era's key national and international circumstances. After the War of Revolution, the number of practising architects was limited; nevertheless, the government's desire to build a national discourse supported by architecture helped these emerging architects. In the 2017 interview with Professor Alejandro Aguilera, he commented that "by examining the careers of José Villagrán and Mario Pani, and looking at their oeuvre in those decades, it is remarkable the volume and types of buildings generated and constructed by them – stadiums, schools & hospitals. [...] This was possible due to the reduced number of architects at the time and the high volume of architectural commissions" (2017). Professor Enrique de Anda agreed with Aguilera in the 2017 interview, where he pointed out that "early in his career, Villagrán had the opportunity to designed and built a complex typology: hospitals. This building type had a very complicated programme [...] and it helped Villagrán to demonstrate to his students the coherence of his discourse" (2017). Hospital architecture was suited for Villagrán's architectural discourse and programmatic approach. The historical conjuncture meant that architects benefited from the prevailing conditions and used functionalist ideas to develop their practices. Functionalism offered a pragmatic approach that fit the country's needs and was instrumental in efficiently developing its built environment.

4.3 Foreign Architectural Intersections and Influences [1940s-1950s]

The prevailing pre-war conditions and the war raging in Europe had a meaningful and lasting impact on Mexico and its architectural landscape, as they generated the arrival of exiled artists and architects from Europe. The European migration commenced with the Spanish Civil War in 1936 and lasted until the 1950s with the stabilisation of Europe (Carranza and Lara 2014:100). In 1939, the Spanish engineer/architect Félix Candela, the Swiss architect Hannes Meyer and the German architect Max Cetto were the first ones to arrive to the country. After them, the Russian architect Vladimir Kaspé settled in the country in 1942 and seven years later, the German artist Mathias Goeritz landed in Mexico. Other well-known artists who spent time in Mexico were the designer Clara Porset and the French surrealist poet André Breton (Canales 2013:217). As Carranza and Lara contended, one of the unique characteristics of émigrés or exiles is their

detachment towards the new place they inhabit, so they “can operate without the weight of local traditions, debates, or formal expectations” (2014:102). Migrants such as Félix Candela, Max Cetto and Mathias Goeritz produced architecture and art that fused their prior memories, knowledge and experiences in a new context, novel socio-cultural conditions and material restrictions; they generated new ways of looking at and teaching architecture, pushing the boundaries of the debate.

The wave of foreign architects and artists produced creative and insightful discourses that moved the debate away from the simmering crisis of Functionalism and the international style. The arrival of foreign architects and artists, compounded by Functionalism's crisis, opened the door for alternative ways of thinking and practising architecture. The avenues for debating, reflecting and producing architecture were enriched by the construction ideas of Félix Candela and his concrete shells, Mathias Goeritz's Emotional Architecture Manifesto and Vladimir Kaspé's ideas about architecture as a totality. The national debate was also energised by the internal discourses of *Integración Plástica* (Plastic Integration), Luis Barragán's work and the development of a Regional school of architecture. These international and national avenues of theorising and practising architecture would evolve in the 1950s, maturing during the 1960s and producing exemplary buildings in the 1960s and 1970s. These various architectural avenues ran parallel and constituted the context in which Villagrán's ideas developed. In the following pages, we will discuss the influence of these three foreign architects on Mexico.

i. Félix Candela: Concrete shells architecture

Félix Candela was born in Madrid in 1910 and did his architectural studies at the *Escuela Superior de Arquitectura*, where he graduated in 1935. Candela's architectural contribution in Mexico was the experimentation, design and construction of thin concrete structures and shells, which produced audacious and evocative forms while reducing the construction cost of buildings. His projects were based on a structural theory that pushed concrete's capabilities and possibilities to the extreme, and based its structural stability on geometrical principles rather than traditional building techniques based on the massing of the structure (Mendoza and Chilton 2008; de Anda 2006:199-200). His structures were characterised

by spanning large spaces through the geometric manipulation of paraboloids and hyperboloid forms to produce undulating surfaces that challenged the conventional structural concepts of the time. Examples of his work in the 1950s are the Pabellón de Rayos Cósmicos at UNAM (1951; in collaboration with Jorge González Reyna), the Iglesia de la Virgen de la Medalla Milagrosa (1953) and the Capilla de Nuestra Señora de la Soledad (1955; in collaboration with Enrique de la Mora; Images 32 & 33 – overleaf).

Candela's projects were predominantly of an industrial nature. However, he also designed markets and churches; he produced spaces without columns or vertical supports, and created flexible spaces that were resolved in accordance with the architectural programme. The internal spaces were fluid and in close relationship with the roof's formal configuration, hence creating a unity of space, form and construction technique. In technological terms, the concrete shells were thinner than 10 cms, and they represented a construction challenge for builders, who, without any formal preparation, helped build these gracious, unique and novel projects (Mendoza and Chilton 2008; Mendoza 2015)

In his work "*Hacia una nueva filosofía de las estructuras*", he proposed that experience and experimentation should be the basis for the development of science and the work in the field of structures (Candela 1961 in Noelle 2007c:313-315). In the 1950s, Candela pointed out that the most pressing issue in architectural practice at the time was the crisis of the international style. He criticised the limits of such style, emphasising the challenges and misuses of Functionalism in the country. His critique stated that, on the one hand, Functionalism had become the government's instrument to embody an unfinished modernity project and an unaccomplished revolutionary doctrine; yet, on the other hand, it was the style used by private developers to maximise profits and showcase a built image of progress. Hence, Candela questioned whether the type of Functionalism aligned with the international style of the middle of the century could fulfil the nation's desire for a permanent architectural style (Candela 1957). This debate was captured in several articles published in the magazine *Arquitectura/México*, and they developed an underlying understanding of the crisis of the international style in Mexico.

Candela's stature in Mexico never reached the status he held internationally, as Antonio Toca Fernández stated, "by 1963, [Candela] was the most recognised Mexican architect. [...] However, in Mexico, he was viewed as an engineer or a modest collaborator in works that were clearly of his making" (2016:34); nevertheless, the concrete shells he designed and built in Mexico held a strong sense of contemporaneity and global appeal and made a statement in relations to the possibilities of technological advances and formal innovation. Candela demonstrated with his work that conventional spatial solutions based on rational structural proposals, which were constituted by horizontal planes and vertical supports, should be challenged for the development of the discipline. In the 1950s and 1960s, Félix Candela was one of the most influential architects in Mexico, collaborating with some of the most prominent



Image 32 & 33: Capilla de Nuestra Señora de la Soledad, Mexico City, Félix Candela, 1955.

Mexican architects of the time, such as Enrique de la Mora and Pedro Ramírez Vázquez, and giving Mexican architecture international exposure and reputation. Candela migrated to the USA in 1971 due to the lack of professional opportunities in Mexico and died in North Carolina in 1997 (Mendoza 2015).

ii. Mathias Goeritz: Emotional Architecture Manifesto

Functionalism's aforementioned crisis, and its absorption by the international style, resulted in strong reactions by architects who disagreed with the increasingly hygienic aesthetic of the crystal boxes. Projects following the ideas of the international style were built across the nation to accommodate the urban growth of the country hence office buildings, industrial projects and urban infrastructure were constructed in the main cities of the country; examples of these projects were the Aeropuerto de la Ciudad de México (1952) and la Torre Latinoamericana (1948-56; Image 34 – overleaf) both by Augusto H. Álvarez and the Estación Central de Ferrocarriles Nacionales (1958; Image 35 – overleaf) by Jorge Medellín (Rodríguez Viqueira 2009:123-36). The German exiled Mathias Goertiz joined the critique of the international style in the 1950s and influenced architecture from his position in academia and through his collaborations with architects and his artistic practice.

Mathias Goertiz was born in Danzig in 1915 and studied philosophy and history of art at Berlin's Friedrich-Wilhelm-Universität, where he obtained a doctorate in 1940. Goeritz initially fled the Nazi regime in 1941 and settled in Morocco; however, by 1945, he had moved to Granada, Spain. He arrived in Mexico in 1949 following the invitation of Ignacio Díaz Morales to teach art history and visual arts at the Universidad de Guadalajara. In Guadalajara, he met architect Luis Barragán, with whom he cultivated a prolific and intense professional collaboration that produced the Capilla de las Capuchinas (1955; Image 36 – p.171) and the Torres de Satellite (1957; Image 37 – p.172) among other works (Noelle 2007a:321-22).

Goertiz inaugurated one of his most significant architectural projects in 1953: el Museo Experimental El Eco (Images 38 - 40 – p.173); his project was a radical statement opposing the objective pragmatism of the international style and embodied his architectural discourse. Goertiz aimed



Image 34: La Torre Latinoamericana, Mexico City, Augusto H. Alvarez , 1948-56.



Image 35: The Estación Central de Ferrocarriles Nacionales, Mexico City, Jorge Medellin, 1958.

to design and construct a building that exalted artistic values and visual unity irrespective of the architectural programme or functional requirements; therefore, the museum can be read as a piece of art, as well as architecture. In the opening of the building, Goertiz introduced his '*Manifiesto de Arquitectura Emotional*' (1953; Emotional Architecture Manifesto), where he stated that the building was the embodiment of his discourse. He contended that "the new Museo Experimental El Eco started

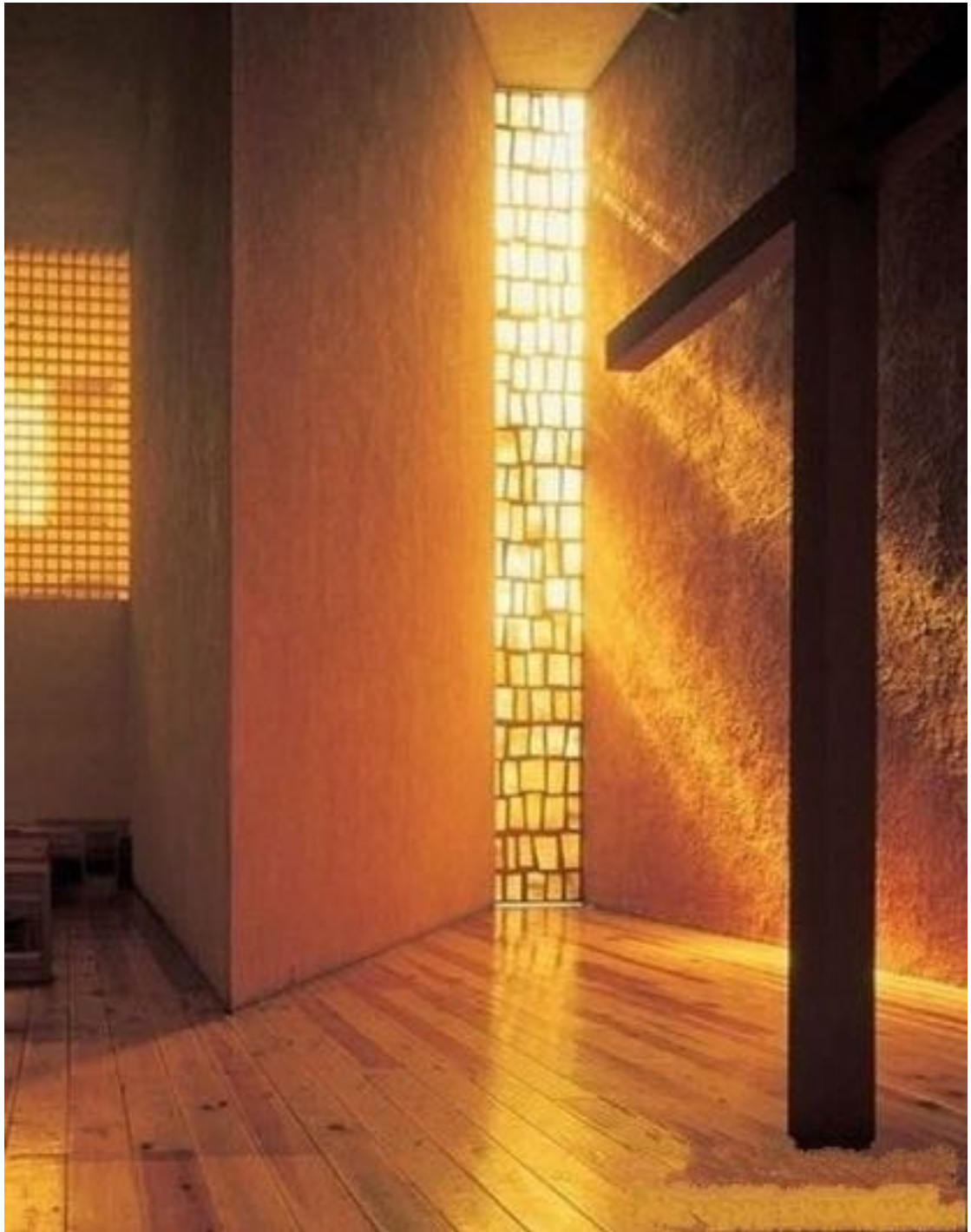


Image 36: The Capilla de las Capuchinas, Mexico City, Mathias Goertiz and Luis Barragán, 1955.

its activities, and experiments, with the museum's architecture itself." (Goertiz 1953).

His manifesto included concerns about the dominant paradigms championed by modern architecture, which the international style had driven to the extreme. He declared that art and architecture are a reflection of humanity's spiritual conditions; furthermore, he argued that the mid-century man had been crushed and overwhelmed by the weight of the useful and logical paradigms. These notions have overshadowed architecture's connection with the community. For Goertiz, the functionalist intellectual position of modern architects had overstated architecture's rational aspects, which had been achieved at the expense of architecture's connection with people and place (Goertiz in Noelle 2007a:323-24).

The manifesto is a *tour de force* proclaiming emotion as the main element in architecture. It is the combination of space, form, volumes, light, textures, materials and colours that contribute to enhancing the emotional experience of architecture. Goertiz contended in his manifesto that man aspires to more than having a beautiful, pleasant and adequate home; architecture's main objective should be the production of true emotions



Image 37: The Torres de Satélite, Mexico City, Mathias Goertiz and Luis Barragán, 1957.



Images 38, 39 & 40: Museo El Eco, Mexico City, Mathias Goertiz, 1953.

that can lead to a spiritual uplift, such as the one we experienced when witnessing the architecture of the Egyptian pyramid, the Greek temples or the Gothic cathedrals. It is only through receiving true emotions from architecture that we can start considering it an art again (Goertiz in Noelle 2007a:324). The museum El Eco integrated the arts seamlessly, where architectural space is regarded as a sculptural element, as much as

sculptures became architectural elements without losing their artistic value. The museum aimed to create deep emotions, but without using empty decorative movements, which in some instances were applied to the building; the museum attempted to rescue the relationship between man-space-form, yet without denying the importance of function. In Goertiz's manifesto, Functionalism's values must be brought under the control of a modern emotional and spiritual framework (Goertiz 1953).

Despite the provocative nature of his manifesto, Goertiz's emotional architecture never consolidated as an architectural discourse or style. However, it influenced the thinking of architect Luis Barragán, who adopted the term 'emotional architecture' to define his work. Goertiz used emotion to mediate Functionalism's tired paradigms in producing local architecture that addressed regional concerns (Noelle 2007a:322).

iii. Vladimir Kaspé: architecture as a whole

Vladimir Kaspé was born in Harbin, Manchuria, in 1910 and did his architectural studies at the École des Beaux-Arts in Paris, where he graduated in 1935. In 1942, the Russian architect arrived in Mexico by invitation of Mario Pani to become a correspondent for the journal *Arquitectura/México*; Pani and Kaspé had met in 1928 at the École des Beaux-Arts in Paris while studying architecture. On arrival in Mexico, Kaspé became an active contributor to the development of Mexican architectural thinking and practice through his writings at *Arquitectura/México*. Kaspé made available the European discourse of the time by translating the work of his professors; as Aguilera argues, "he brought into Mexico first-hand experience of Le Corbusier's buildings and ideas, as well as the modern buildings that were constructed in Europe at the time" (2017). Kaspé was an influential architect in the country who distributed modern ideas through his writings and buildings.

Kaspé's influence grew as he was invited by Villagrán in 1943 to teach architectural theory, architectural composition and design studio at the ENA. From this moment onwards, his academic endeavours expanded, and he taught in various national universities over the next four decades: La UAM, La Universidad Iberoamericana, La Universidad Anahuac and La Universidad La Salle. Kaspé work was "characterised by its austere

elegance, his good sense in dealing with the projects' materiality and tectonic nature and for valuing essential principles without formal displays and always with clarity and moderation" (Aguilera and Ayllón 2011:1). He viewed architecture as an 'indivisible totality' on which multiple layers of knowledge, relationships, ideas and techniques came together. In his view, it was a 'totality' for the client, who inhabited the building; for the critic, who tried to grasp the ideas and intention of the architect and their materialisation in the building; and for the architect, who brought together ideas, techniques and intentions into a single cultural object (Kaspé 1992:6-20).

His book "*Arquitectura como un todo. Aspectos teórico-prácticos*" (1986), is a synthesis of his design philosophy. In the book, he acknowledged the importance of the architectural programme and the need to fulfil the functional requirements of any project. However, he urged architects not to forget to express the essential aspects of an architectural project. Kaspé's design philosophy was based on the principles of architectural character, order and hierarchical values (Aguilera 2016:17), and his work showed an insightful ability to integrate his cultural background with the country's architectural language, construction techniques and available materials. His projects had a rationalist aesthetic and were anchored in the past, yet with a view towards the future. He was a prolific architect, and his architectural approach was exhibited in buildings such as the Super Servicio Lomas (1948-1952; Images 41 & 42 – overleaf), the Liceo Franco Mexicano (1950-1958) and the Centro Deportivo Israelita (1955-1958) (Aguilera and Ayllón 2011:iii-iv). He collaborated with José Villagrán in the Hospital de Tuberculosos in Tampico (1946) and influenced the work of Mario Pani in the 1940s through his work as an editor of *Arquitectura/ México*.

As stated in chapter 3, the construction of Mexican architectural identity in the 1930s was defined by the government's desire to embody the political will to effect change in society. The influence of foreign architects complemented the work of Mexican architects; nevertheless, it was the American Esther Born's book – '*The New Architecture in Mexico*' (1937) that showed a consolidated body of work from a young generation of Mexican modernist architects, such as Enrique del Moral, Juan O'Gorman, Enrique de la Mora, Luis Barragán and Enrique Yáñez. Born's book was the

first international publication that presented functionalist Mexican architecture to an international audience, and it crystallised the emerging style by grouping like-minded architects, urbanists and theorists. The book highlighted the social vocation and nature of the architecture produced in Mexico in the 1930s; furthermore, it provided the first images of modern Mexican architecture abroad and became the basis for constructing a Mexican architectural identity overseas. The image of Mexican architecture abroad helped to reinforce the discipline's national reality and added a



Image 41 & 42: The Super Servicio Lomas, Mexico City, Vladimir Kaspé, 1948-1952.

sense of validation to the theoretical debates and positions elaborated in the *Pláticas sobre Arquitectura* (Canales 2013:486).

A year after the publication of Born's book, Mario Pani established the journal '*Arquitectura/México*' (f.1938). Mario Pani was born in Mexico City on the 29th of March 1911, but early in his childhood, he relocated to Europe with his father, Arturo Pani, a Mexican diplomat. His academic education took place in the Academy of Beaux-Arts in Paris until he returned to the country in 1934, just in time to benefit from the nation's surging industrialisation and economic growth. *Arquitectura/México* defined the architectural debate in the four decades after 1938, and Pani edited the journal for over forty years until it stopped being published in 1980. The journal was a meaningful source of architectural critique and debate in the country by providing fundamental analyses and reviews of exemplary architecture (Toca Fernández 2004:472). The journal provided the stage for Mexican architects to exhibit their ideas and projects to a national and international audience, and it was an essential platform for the formative discussions about the role of the profession in the 1940s (Noelle 1997:188). In the 1940s, parallel to Functionalism, a new way of thinking about architecture emerged from the universities and practices in the provinces; these approaches revolved around the interpretation of regional traditions and ideologies, gaining momentum and becoming a strong movement in the 1940s. The transition to the 1950s signified a change in political administration and its socialist orientation, and the consolidation of Functionalism in the country.

4.4 The Institutionalisation and Crisis of Functionalism [1940-1952]

From 1940 to 1952, the political context was defined by the ideological discourse of Manuel Ávila Camacho (1940-46) and Miguel Alemán Valdés (1946-52); the two administrations moved away from the socialist views advocated during Cárdenas' presidency and attempted to foster a sense of national integration. In 1941, Ávila Camacho championed the concept of 'national unity' and used it as an ideological framework to validate and consolidate the modern Mexican state; the discourse was supported by the start of sustained economic growth in the country. As Daniel Cosío Villegas explained, Mexico's economic recovery after the War of Revolution was

slow, and its economic growth could be divided into two eras: "the first one, which is called 'without sustained economic growth' goes from 1910 to 1935, and the second one, going from 1936 to 1970, is known as of 'defined economic growth'" (Cosío 2003:162). Three transcendental external factors punctuated these two economic periods: i. the great American Depression (1929-33) that wrecked the world's markets and affected Mexico's exports to the USA; ii. the pre-war conditions and emergence of fascism in Europe; and iii. the devastating effects of World War II (Cosío 2003:162; Meyer 2010:251).

After the financial difficulties experienced in the 1920s and early 1930s, the nation's economic growth stabilised and showed signs of recovery by 1936. The economic growth achieved by 1940 was 6%, higher than the average growth of other Latin American countries such as Brazil, Argentina and Venezuela (Cosío 2003:163). Despite the material devastation and inhumane nature of World War II, Mexico's development was aided by the global nature of the conflict in a three-folded manner: i. the nation's internal political struggles were set aside, producing political agreement between the revolutionary factions and strengthening the project of 'national unity' spearheaded by Ávila Camacho; ii. it created an era of cooperation and understanding between Mexico and the USA, as Mexico became its main supplier of goods and products and evolved into an essential workforce source to supplement the USA's industries; and iii. the lack of trade with Europe forced the country to develop its manufacturing industry, hence constructing appropriate infrastructure and factories to provide Mexicans with the required goods (Meyer 2010:251). President Miguel Alemán Valdés used the country's stable position after World War II to modernise the country by addressing three key areas: i. encourage foreign investment in the country; ii. modernise agriculture through the use of new technologies; and iii. stimulate travelling and communications with the modernisation of roads and airports. Therefore, at the end of his administration, and due to the international conditions and national initiatives, the country's built environment changed significantly in form and substance, resulting in its industrialisation and the efficient production and export of products and goods (Meyer 2010:251-52).

In the 1940s, the economic and social inequalities that had defined the country since the revolution came into focus, and despite the 'defined economic growth' experienced since 1936, the distribution of the national wealth was imbalanced. In this decade, nearly 50% of the national income was concentrated in a small privileged minority that accounted for 10% of the population; in contrast, 40% of the population lived in poverty and accounted for 14% of the national income. The uneven distribution of wealth exacerbated several serious demographic challenges and problems: i. an uncontrolled population growth of 3.4% per year; ii. the unbalanced demographic composition of the working-age population; and iii. the migration from the countryside to urban centres (Cosío 2003:163-65). These challenges were evident as the country's population grew from 19.6 million in 1940 to 26.7 million by 1950, a 31.22% increment (INEGI 1955), hence cities had to expand to accommodate the influx of people from rural areas.

In the capital, urban development took place in all directions: to the south of the historical quarter, the city expanded with the construction of Ciudad Universitaria (1946-52, CU) and the erection of the first houses in Luis Barragán's real estate venture of Jardines del Pedregal (1949). In the north of the city, the Lindavista and Vallejo neighbourhoods were created to accommodate the construction of further industrial sites and suitable accommodation for their workers (de Anda Alanís 2001:47-48). On the west edge of the city, the neighbourhoods of Reforma Polanco and Lomas de Chapultepec were developed in 1943. The urban and demographic growth of the capital city highlighted its essential role in the country's social, political and cultural life. These demographic and migratory problems would remain a constant for the rest of the century, stretching into the twenty-first century and producing complications in the construction of infrastructure and challenges in the provision of essential services in the cities and towns of the country.

In order to respond to these challenges, presidents Manuel Ávila Camacho and Miguel Alemán Valdés established numerous national plans to design and construct essential infrastructure in the emerging metropolises and the countryside; as mentioned earlier in the chapter, the Aeropuerto de la Ciudad de México (1952) and the Estación Central de Ferrocarriles

Nacionales (1958) are two examples in the capital. A key concept championed by both administrations as a tool to improve the nation's living standards was 'planning'. This notion implied a thorough knowledge of the past and present to propose a better future for Mexico. Hence, the administrations implemented national plans to build schools and hospitals aiming to improve and balance the quality of life in the city and the countryside (de Anda Alanís 2001:47). These national plans re-activated the construction industry during the second half of the decade, leading to the modernisation and industrialisation of the country, and transforming towns into cities.

Architecturally, the administrations of Manuel Ávila Camacho and Miguel Alemán Valdés used public buildings to strengthen the national identity and to reflect a modern nation. As Fernanda Canales stated, "public architecture was defined by a cosmopolitan imagery that cohabited with the nationalist pride of the time" (2013:226) and the ideals of the post-revolutionary functionalists were manifested in José Villagrán's Hospital Infantil (1942) and Mario Pani's *Escuela Normal de Maestros* (1945). The government used large-scale projects such as the *Centro Medico Nacional* (1945) and Mario Pani's *Conservatorio Nacional de Música* (1946) as urban triggers to activate the growth between the old historic quarter and the new urban developments located in the perimeter of the city.

Despite the consolidation of Functionalism as the dominant paradigm and its adoption by the profession in the 1950s, it was in the 1940s and 1950s that the functionalist architecture championed during Cárdenas' regime fragmented into several expressive avenues in response to the movement's transformation. Functionalist architecture underwent a process of stylistic assimilation that disconnected it from its previous social agenda, while adopting key architectural precepts from European and American programmes; in particular, the use of ideas from the emerging international style attempted to represent an image of contemporaneity. The transformation of Functionalism into an architectural fashion based on economic profits and the assimilation of its tenets by the international style, resulted in an architectural crisis that climaxed in the 1960s (Biondi 2007:134). Glassed office buildings became the defining typology of this style in Mexico and they were built across the country to accommodate

private companies and foreign investors as per the government's initiatives; two examples of glassed prismatic towers are the Torre de Banobras in the housing state in Tlatelolco (1964; Image 43 – overleaf) by Mario Pani and Luis Ramos and the Torre de Inmobiliaria Jay Sour (1964; Image 44 – p.183) by Augusto H. Álvarez (Rodríguez Viqueira 2009:136).

In 1952, Villagrán wrote the text *Panorama de 50 años de Arquitectura Mexicana Contemporánea [1900-1950]* (Outlook of 50 years of Contemporary Mexican Architecture) in *Cuadernos de Arquitectura* no.10. In the article he organised the architecture of the first half of the twentieth century into four stages with well-defined ideological and formal characteristics. The first stage was the historicism of the late nineteenth century that stretched into the first 16 years of the twentieth century; he called it *anacrónico exótico* (exotic anachronism), and it was characterised by architectural forms from the past and ideas from other countries. This stage was followed by the architecture of the second and third decades of the twentieth century, and it was defined by the use of pre-Hispanic and Colonial traits in support of the political project of nationalism. He denominated it as *anacrónico nacional* (national anachronism) as the projects lacked honesty in handling materials and the constructions' useful-economic values (Villagrán 1952:IV-VI).

In Villagrán's text, the third stage emerged in 1923 and overlapped with the second one; it was a short-lived period that interpreted modern ideas from the USA and Europe through the national lens but with a strong sense of individual expression. Villagrán labelled this period as a time of *individualistic current nationalism*, and it included the work of Juan Segura. In Villagrán's view, the ideas that shaped the fourth stage were generated and incubated in academia since 1924 and were oriented towards a national yet contemporary architectural expression. He defined this stage as *authentic modernity*, and it encompassed projects that attempted to resolve the challenges faced by the country by considering particularities of place and culture, and designing architecture using the values of useful, logic, aesthetic and social (Villagrán 1952:VI-X; 1962:IV-VII). These values formed the backbone of Villagrán's architectural theory and will be expanded later in this chapter.

Villagrán further discussed the crisis of Functionalism in his article '*Meditaciones ante una crisis formal de la Arquitectura*', where he postulated that Functionalism's crisis was the result of the translation of key Functionalism ideas into the formal vocabulary of the international style. He affirmed that Functionalism's theory remained the primary



Image 43: Torre de Banobras, Mexico City, Mario Pani, 1964



Image 44: the Torre Inmobiliaria Jay Sour, Mexico City, Augusto H. Alvarez, 1964.

vehicle for producing architecture that could resolve the country's needs. However, the 1950s crisis was linked with its formal expression, which was devoid of connections with local characteristics (Villagrán 1962a:11).

The crisis of functionalism meant the departure of key figures of the movement, such as Juan O’Gorman, who stopped practising architecture from 1935 to 1948, as he deplored the distortion of Functionalism into an international tendency. The interpretation of functionalist architecture that emerged from the merger of paradigms was, as Enrique de Anda described it, “conceived for internal spatial freedom, free expression of the structure, desertion of regionalist aesthetics and condemnation of external ornamentation” (2006:190-91). However, the architecture built outside Mexico City was less rigid and fused with regional characteristics that responded to climatic conditions, formal traditions, and local materials and construction techniques. This architecture developed into a regionalist position that would stretch into the middle of the 1950s.

4.5 Regionalism and the Architecture of Luis Barragán [1950s-1960s]

In the 1950s, a regionalist position re-emerged from the crisis of functionalism and opposed the supremacy of the international style in architecture. Canizaro defined regionalism as

a concept, strategy, tool, technique, attitude, ideology, or habit of thought. Despite its many manifestations, collectively it is a theory that supports resistance to various forms of hegemonic, universal, or otherwise standardizing structures that would diminish local differentiation. [...] In architecture regionalism commonly refers to the establishment of connections between new works and pre-existing local and regional characteristics. (2007:20-21)

Regional architecture in Mexico reinterpreted the character of vernacular spaces and materials; it created an expressive architectural aesthetic that merged local principles with modernist tenets. The work designated under this category adapted modern architecture tenets to extreme climates by producing vernacular yet contemporary architectural proposals; architects used local materials, techniques and cultural values to create projects that

manipulated spatially the relationship between the inside and the outside. Regionalism “resists the values of the centres of standarization and taste, actively promoting the local” (Canizaro 2007:21), and this is the main difference with vernacular and provincial architecture. The projects that emerged from the syncretism of ideas were sometimes referred to as ‘tropical’ architecture. Examples of regionalism in Mexico are the Hotel La Marina in Acapulco, by Carlos Lazo (1939); the University campus for the Instituto Tecnológico de Estudios Superiores de Monterrey (ITESM) and the Templo de la Purísima Concepción, both in Monterrey and designed by Enrique de la Mora (1946; Images 45 – overleaf & 46 – p.187); Max Cetto’s house in the lake of Tequesquitengo (1948); and the restaurant Los Manantiales in Xochimilco (1958; Image 47 – p.188) by Félix Candela and Joaquín Álvarez Ordoñez (Canales 2013:234-240).

An important text that captured the theoretical position behind regional architecture in Mexico was Enrique del Moral’s ‘*Lo General y lo Local*’, published in October 1948 in the magazine *Espacios*. Enrique del Moral’s work attempted to resolve the dichotomy between the impact of the foreign avant-garde movement and the national search for identity. A disciple of José Villagrán, his work oscillated between these two tendencies, and his projects attempted to combine tectonic and experiential qualities into an architectural expression fusing traditional and modern forms, such as the Casa del Moral from 1949.

In his text, he stressed the power of architects as vehicles for expressing the zeitgeist of the time and the will of the people. He elaborated and acknowledged how it was inevitable that dominant countries, which can communicate, convince and/or impose particular cultural and material ideas, would come to define the general tone of the era. In his view, the general tone of an era would undergo local alterations motivated by the diversity of the people inhabiting said era. Enrique del Moral stated that “there is a local ‘interpretation’ of the epoch, and such ‘locality’ depends less on the political and geographical frontiers, and more on the affinity of character, ideas and idiosyncratic ways of living” (del Moral 1948 in Noelle 2007:307). The core argument of his text proposed that despite material and/or economic dominance, strong cultures can resist the totalitarian impact of universal and general canons by relying on the influence and

impact of local and regional aspects of a place (del Moral 1948 in Noelle 2007:306-309).

Three years after del Moral's text, Alberto T. Arai (1915-1959) published the article *Caminos para una arquitectura mexicana* (1952) in the February issue of *Espacios*. In his piece, he expressed a preoccupation with reconciling the contradictions embodied by the debate surrounding the modernist and traditional paradigms. He proposed the fusion and harmonisation of modernity and tradition, as well as of reason and emotions, in order to produce original and authentic Mexican architecture. In his view, this approach would need to fit within a larger context embodied by an all-encompassing American doctrine. For Arai, the reconnection of these extremes would entail reconciling Functionalism with the formal traditions of the past. Arai postulated that the practical rationality found in USA architecture, in conjunction with the emotional and artistic aspects of Latin American work, could lead to the evolution of authentic Mexican architecture that would be different from European manifestations (Arai in Noelle 2007a:290-93).



Image 45- Templo de la Purísima Concepción, Enrique de la Mora, Monterrey, Mexico, 1946.



Image 46: Templo de la Purísima Concepción, Enrique de la Mora, Monterrey, Mexico, 1946.

Arai's theoretical discourse was framed by the premise that Mexico's historical past lay dormant in the modern soul as it was assimilated by the European canons after the Spanish conquest. Despite considering tradition as a 'closed' and 'finished' condition laying dormant in the past or the nation's soul, he envisioned it as a condition that could be rescued and reinterpreted to serve the present. Arai relied on the cultural continuity of forms through history, which can be used to provide a connection with the locality and the region. His theoretical principles informed his projects in the 1960s (and 1970s), which were based on the re-interpretation of pre-Hispanic forms and ideas; he produced a body of work using concepts taken from the Mayan culture and, in particular, from the city of Bonampak. Arai integrated the pre-Hispanic ideas with expressive contemporary architectural geometry and created expressive projects using monolithic volumes and solid geometries; an iconic example of his work was the Frontones of Ciudad Universitaria (1952; Image 48 – overleaf).

In the Fronton courts, Arai used the local volcanic stone to infuse the truncated pyramid with a strong tectonic presence inspired by the arid



Image 47: Restaurant Los Manantiales in Xochimilco, Félix Candela and Joaquín Álvarez Ordoñez, 1958.

nature of the site. The formal inspiration for the Fronton courts was the pre-Hispanic pyramids and the volcanoes surrounding the valley in which Mexico City was founded; the buildings were carefully positioned among a well-designed architectural landscape that utilised the site's natural features to significant dramatic effect. His work influenced architects such as Luis Barragán, and as the Mexican architectural historian Louise Noelle argued, Barragán and Arai were pioneers in developing regionalism in Mexico (Noelle 2007b:288-289).

Regionalism was a well-studied topic internationally in the 1980s as leading theorists Liane Lefevre and Alexander Tzonis coined the term *critical regionalism* early in the decade; three years later, Kenneth Frampton published on the same theme. Since then, these authors have



Image 48: Frontones of Ciudad Universitaria, Mexico City, Alberto T. Arai, 1952.

published extensively on critical regionalism. In the 1980s, critical regionalism "described a type of [...] architecture that engaged its particular geographical and cultural circumstances in deliberate, subtle, and vaguely politicised ways" (Eggener 2002:395). Frampton stated that "critical regionalism is not so much a style as it is a critical category oriented towards certain common features" (1980:327), which helps to resist and mediate the impact of a universal and totalising approach. These features, or attitudes, included adopting and applying territorial qualities, elements and characteristics to the building and emphasising its tectonic essences. Critical regionalism acknowledged that architecture could be experienced through all the senses, such as touch, smell, sound and temperature, and not just via sight alone; it is an architecture that encourages human inhabitation and experience (Frampton 1980:327). Paradoxically, despite critical regionalism being an act of resistance towards modernism's totalising paradigms, it embraced its social ethos and used new technologies and methods. Additionally, it embraced postmodernism's notions of plurality and diverse subjectivities while rejecting historical banality and scenographic approaches (Eggener 2002:398). Critical regionalism's relation with both movements was complex and uneasy, as it did not fit cleanly in either movement. Frampton cited several architects that fitted this pattern: Jorn Utzon (Denmark), Mario Botta (Switzerland), J.A. Coderch (Catalonia), Alvaro Siza (Portugal), Sverre Fehn (Norway), Carlo Scarpa (Italy), Tadao Ando (Japan), Oscar Niemeyer (Brazil) and Luis Barragán (Mexico) (1980:314-27).

In contrast to Alberto T. Arai and Enrique del Moral, Luis Barragán did not leave behind an extensive body of theoretical work where he elaborated his architectural doctrine; however, his built work influenced the architecture of the country from the 1940s onwards and led him to become internationally recognised in the second half of the twentieth century (Biondi 2007:136), and eventually win the Architectural Pritzker Prize in 1980. Barragán's architectural approach was based on a strong interpretation of modernist ideas filtered, adapted and enriched through local architectures and vernacular cultures, hence his inclusion in Frampton's list and the analysis of his work in historical books such as Curtis (1996) and Benevolo (1999).

The roots of Barragán's intellectual position can be traced back to the architecture he produced in his native Guadalajara from the late 1920s to the mid-1930s. In his formative years, he was influenced by a trip to Europe in 1925 and 1926, where he experienced Mediterranean and Spanish/Moorish architecture, as well as visited the landscape work of Ferdinand Bac; on his return to Mexico, he used these European influences in the design of nine homes in Mexico. In these dwellings, he explored the ideas of open courtyards, the balance between solids and voids in elevations, the introspective nature of intimate dwelling spaces and an architectural composition based on cubist volumes. Additionally, his projects were infused with regional characteristics emerging from his experience of provincial haciendas and the colourful architecture of regional towns (de Canales and Hernández 2017:48).

He made a second trip to Europe in 1931 and attended a number of Le Corbusier conferences. In 1936, Barragán relocated from Guadalajara to Mexico City, where he came into contact with Functionalism and started to apply the ideas of Le Corbusier in his professional practice. The work he developed between 1936 and 1945 was characterised by the rational use of cubist volumes and geometries and the intimate connections between the inside and outside, although mediated by glazed areas. During these years, Barragán adopted a rationalist approach to architecture, forgetting some of the vernacular ideas that had shaped his early work in Guadalajara; nevertheless, rationalism never became the dominant force in his work, but one more strand that influenced his practice and that would emerge in the projects he completed in the 1940s (de Anda Alanís 2005:78-79).

The architectural language he developed in the 1940s was one of massive volumes, using rough textures to define the volumes and applying vivid, saturated colours to enhance the architectural forms. The manipulation of form and light became essential in creating emotive spaces that carefully interacted with skilfully designed external areas; this relationship produced a holistic inside/outside architectural experience reminiscent of Colonial haciendas and convents. Barragán designed internal spaces that embody a sense of intimacy and mystery while taking advantage of the environmental conditions of the locality. His architectural work developed a

symbiosis with the landscape surrounding his buildings, using water as one of the key elements of his landscape designs. The finishing materials he used looked back to the vernacular traditions of the country; hence, he applied cement renderings on the walls, clay tiles on floors and exposed timber beams in interior spaces (Figueroa Castrejon 2016:73-80).

His compositional principles, attention to spatial organisation and creation of an emotional haptic experience are embodied and articulated in his casa/estudio, which he built in Tacubaya, Mexico City, in 1947. The building epitomised the connection between modernity and tradition, and it produced an architecture steeped in emotion and mystery yet holding a modernist formal language (Image 49 – overleaf). Barragán's two-story house was designed as a retreat from the city, blocking visual and auditory stimuli emerging from the sprawling metropolis and producing a space for reflection and contemplation. In the words of Enrique de Anda, in Barragán's house, "modernity is matched with regional traditionalism through abstractions that managed the relationships of vertical and horizontal planes" (2005:80-81). His home was vernacular, as it reinterpreted key elements from the provincial haciendas and convents of the sixteenth century, and it was modern in its use of a strong modernist cubist geometry and functional approach influenced by Le Corbusier (Adria 2016:56).

Barragán's home/studio is oriented on an east-west axis, with the entrance to the house located on the east facade; the context defined the main elevation, as it was designed to contain a minimal number of openings to control the impact of the street's noise in the internal life of the house. The living spaces of the home, and the working areas of the studio, were isolated from the city by positioning them away from the street entrance and towards the middle of the plot. This ensured silence in the most private areas of the home. These west-facing rooms are enlarged by the visual connectivity with the garden, which extends the inside of the house and provides natural light to the spaces (Image 50 – p.194). The garden is isolated by high, thick walls, providing privacy and a sense of seclusion and timeless abandonment while encouraging the house's inhabitants to explore the patches of vegetation at leisure and on their own time. The architectural studio is located on the north side of the plot, and it connects



Image 49: Barragán's Home/Studio Roof terrace, Mexico City, Luis Barragán, 1947.

with the house internally through a discreet door and externally through the patio.

The house's main protagonist is light and how it interacts with the simple volumes of the house while cascading down the coloured walls and ceilings. This is complemented by framing multiple views, revealing the spatial complexity and richness of the house. These primordial elements



Image 50: Casa/Estudio Barragán, Mexico City, Luis Barragán, 1947. From Left to right: Ground Floor, 1st Floor, 2nd Floor/Roof terrace.

played an essential role in creating a range of atmospheres and experiences, which are enhanced by the generosity of the rooms and their spaces (Images 51 & 52 – overleaf & 53 – p.196). The house carefully manipulated single and double-height spaces that create a sense of compression and release throughout the building; this spatial playfulness constantly modifies the human experience and its relationship with the building.

It is paradoxical that an architecture that attempted to resist the totalising effects of modernity and the intentional style, eventually “came for many in Mexico to represent [the] country’s architecture at its best and most distinctive” (Eggner 2002:400) and provided an enduring influence nationally and intentionally of the perception of what Mexican architecture should be. In Latin America, the regionalism of ‘resistance’ postulated by Frampton, Lefaivre and Tzonis should be understood as a regionalism of ‘divergence’. A regionalism that responded to local conditions developed parallel to mainstream architecture in the West (Waisman 1994).

4.6 The Fragmentation of Architectural Thinking and Practice [1950-1964]

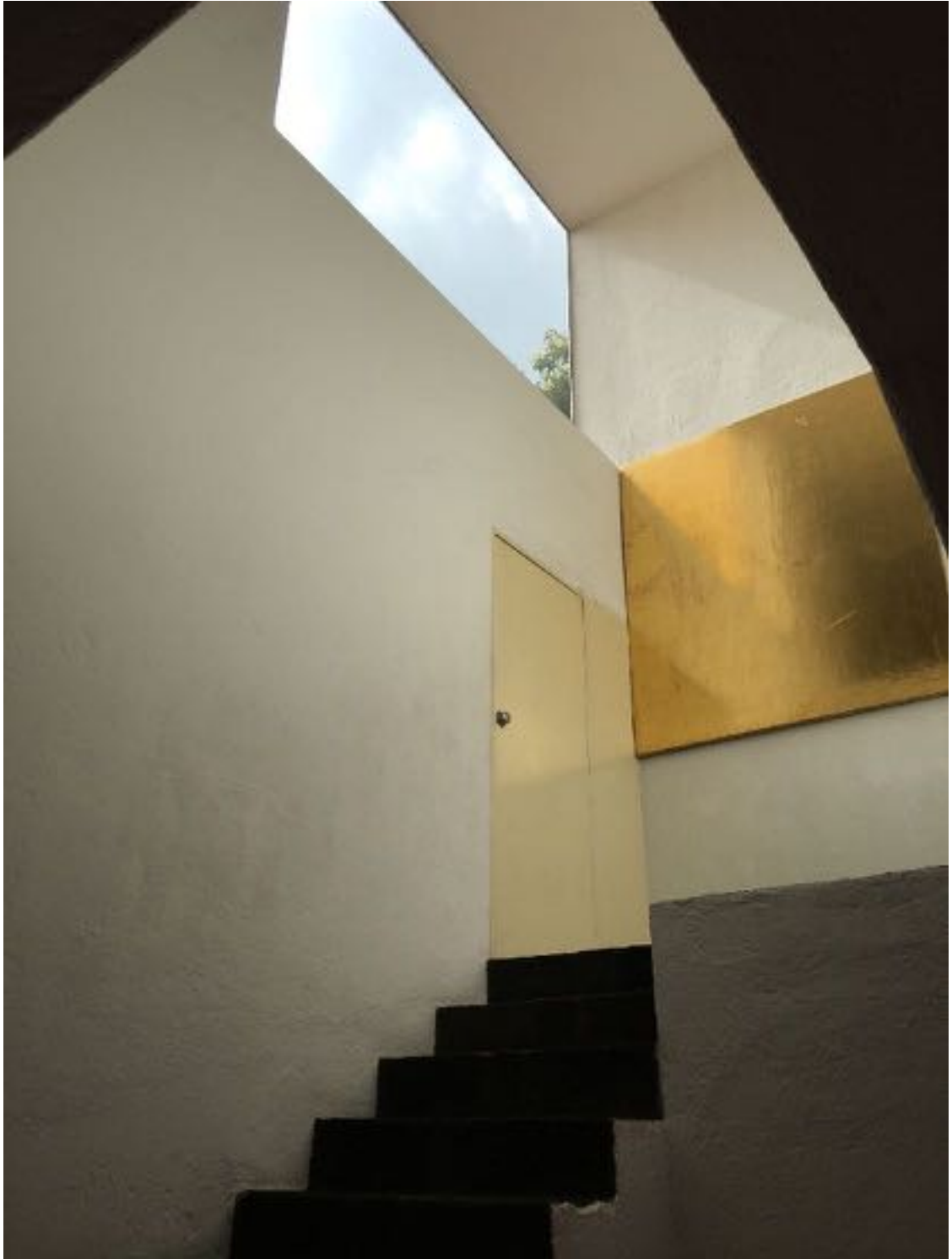
The 1950s and 1960s were defined by the policies developed by the administrations of Adolfo Ruíz Cortines (1952-1958) and Adolfo López Mateos (1958-1964), who attempted to control the growth of the nation and provided the country with a renewed cultural image through the



Images 51 & 52: Casa/Estudio Barragán's, Mexico City, Luis Barragán, 1947. Internal spaces.

construction of monumental projects. In the 1950s and up to 1964, the country's population continued to grow incrementally, creating significant pressure on urban infrastructure and housing. Mexico City and other cities across the country expanded to accommodate the effects of industrialisation in the urban fabric; therefore, the urban area of the capital went from 143.5 sq/km and 1.76 million inhabitants in 1940 to 223.8 sq/km and 4.9 million inhabitants in 1960 (Espinosa 2007:194-239). In the capital, Luis Barragán acted as urban planner, real estate developer and architect. He created the Pedregal de San Angel neighbourhood, which became the location for the up-and-coming wealthy families of the city. The Pedregal de San Angel was planned in the mid-1940s, but it was not until the 1950s that signature buildings started to appear in response to the newly found wealth of some sectors of Mexican society. The neighbourhood was defined by a landscape of volcanic rocks, and the urban design included carefully positioned and orchestrated open spaces for gathering and building a sense of community (Monteys 2016:108-10). The new neighbourhood was connected with Ciudad Universitaria's campus, creating a focus of urban development in the south of the city.

Architecturally, the transition between the 1940s and the 1950s was defined by the design competition of Ciudad Universitaria in 1946 and its construction between 1950 and 1952. The project was the result of a competition organised by the ENA in 1946 and won by the students Enrique Molinar, Armando Franco and Teodoro González de León; however,



Images 53: Casa/Estudio Barragán's, Mexico City, Luis Barragán, 1947. Atmosphere and top lighting.

the architects Mario Pani and Enrique del Moral authored the final scheme, in which they included certain aspects of the students' winning proposal (Carranza and Lara 2014:163). Architects and historians consider Ciudad Universitaria (CU) as the most representative project of twentieth-century Mexican modern architecture, as it captured the main ideas of the time, which came together and materialised in one place – CU (Arredondo Zambrano 1997:91).

The campus was designed using key concepts of modern architecture combined with urban ideas of pre-Hispanic inheritance in order to organise the buildings around open spaces, slopes and stepped-up platforms. The buildings are defined by simple volumes, which frequently express their structural logic; they are functionally expressive, with rigorous internal logic and honesty in the use of modern, local materials. In most cases, the buildings have a free ground floor, using a structural system of columns or *pilotis*; the elevations are composed of horizontal windows, which support the sense of transparency and connection between the inside and the outside (de Anda Alanís 2006:195-96). These design drivers ensured a degree of architectural coherence and unity as more than 60 architects participated in the design and realisation of CU's campus.

The architects came from a wide range of stylistic inclinations and belonged to various generations; all of them worked together with engineers and landscape architects in the construction of the project. Additionally, CU demonstrated the government's capacity to organise and deliver a complex project within a tight time frame while engendering an image of modernity to satisfy the expectations and demands of the public in the middle of the century. One of the inherent contradictions of the project was the use of modern tenets, which are conventionally linked with the notions of progress, universality and objectivity, to build a national identity based on local traditions and materials and with connections to the country's history. In the words of Ester Arredondo Zambrano, CU's "architecture represented the Mexican contradiction of attempting to be modern while representing a national identity" (1997:92). The intersection of modernist ideals and local conditions meant that architects creatively applied modern tenets, crafting a syncretism between universal and

objective principles and local idiosyncratic and formal proposals (Images 54 & 55 – overleaf).

CU contains one of the country's most creative and iconic examples of *Integración Plástica*: the Biblioteca Central (Central Library). The project and its stone-mosaic murals were designed and executed by Juan O'Gorman, who returned to architecture in 1948 after a 13-year hiatus. The building's simple rectangular form responded to the architectural programme and the main functions of the building – organising the racks of books. The central volume is a ten-story height tower that sits on top of a double height rectangular volume, which provides reading spaces and administrative office for staff at ground floor; the facade of the ground floor used rectangular onyx and glass panels to create a sense of horizontality that complements the solid, un-fenestrated body of the tower (Image 56 – p.200). The building's stone-mosaic murals captured Mexico's history, providing an exemplary case for the integration of the arts and architecture (Carranza and Lara 2014:163-65).

Integración Plástica (Plastic integration) was a 1950s architectural approach that championed the fusion of the visual arts and architecture. Its architectural discourse was based on key ideas recovered from the nationalist discourse of the beginning of the twentieth century and the muralist movement of the 1920s. The core principles were the use of art in the service of the collectivity and a strong interdisciplinary ethos by which all the arts participated in the design and realisation of the architectural project. This interdisciplinary methodology meant that painters, sculptors, designers and architects worked together from the inception to the completion of a project; the aim was to create an architectural proposal embodying a sense of visual unity in which the arts were an intrinsic element of the building. By holistically approaching architecture, the members of the movement aimed to avoid the use of the arts as an ornament that was applied afterwards to a building. The integration of the arts did not compromise the constructional or programmatic needs of the building but enhanced its aesthetic presence (de Anda Alanís 2006:197-98).

Since his return to Mexico in 1934, Mario Pani developed a personal architectural style influenced by Beaux-Arts concepts obtained in Paris, yet



Images 54 & 55: Rectoria de la Ciudad Universitaria, Mexico City, Enrique del Moral, Mario Pain and Salvador Ortega Flores, 1952.

producing projects with a novel formal expression and using modern materials. His buildings were defined by axial symmetrical compositions, with a tendency for monumentality and the pursuit of the integration of the visual arts, for example, in the Hotel Reforma (1936) and the Hotel Plaza (1946) (Noelle 2004a:166-67). Pani was concerned with the external manifestation of the buildings rather than with the internal sequencing of spaces, and according to Enrique de Anda, "his point of departure was an aesthetic proposal based on the configuration of form through three key principles: contrast, texture and colour" (2006:193). Mario Pani was one of the most important architects in the middle of the twentieth century and an important contemporary of José Villagrán, with whom he collaborated on the project for the Centro Medico Nacional. His intellectual position was defined by his constant search for enduring ideas and creative solutions to the key problems of the time.



Image 56: Ciudad Universitaria covered corridors and Biblioteca Central, Mexico City, Gustavo Saavedra, Junta Martinez and Juan O’Gorman, 1956.

In 1949, Pani planned, designed and built the first Multifamily Housing complex – Centro Urbano Miguel Alemán. The project was the first high-density housing scheme in Mexico City, and it provided 1000 apartments distributed in nine thirteen-story buildings and six three-story buildings. The adoption of a high-rise buildings strategy meant that the project occupied only 20% of the site surface. His proposal released space at ground level for the provision of amenities (offices, school, commercial spaces, sports and childcare facilities) and the design of gardens and relaxation areas while maintaining a separation between pedestrians and automobiles. The scheme was influenced by Le Corbusier's ideas for the Unité d'Habitation Marseilles; however, his project adjusted Le Corbusier's ideas to his principles for denser urbanism and the *modus vivendi* of Mexicans (Noelle 1997:180-82), hence producing a project suited to the cultural needs of the country and the specific requirement of the city (Images 57 & 58 – overleaf and 59 & 60 – p.203).

The government's obligation to address affordable housing for the population found an outlet in Pani's work. He started in 1949 with the planning, design and construction of the Centro Urbano Miguel Alemán, then continued in the 1950s and into the 1960s with the construction of the Unidad Independencia in 1960. Unidad Independencia attempted to respond to the rising socio-political pressures to provide housing and amenities to the population, as well as to develop key urban areas of the city in an orderly way. Mario Pani was one of the leading architects in the 1940s and became "one of the most prolific and original architects of twentieth-century Mexico" (Noelle 1997:177). He was instrumental in responding to the urban demands of the expanding city in a two-fold manner: either by designing in-city housing schemes that took advantage of the existing infrastructure and context or by designing satellite cities linking with neighbouring states, such as Ciudad Satellite (1957) in the north of Mexico City.

As Villagrán, Pani influenced and defined generations of architects by promoting modern architecture in the country through his journal *Arquitectura/México* and his course on architectural composition in the ENA, which he taught from 1940 to 1948. It can be argued that the work of three masters defined the middle of the century: Carlos Obregón



Images 57 & 58: Housing complex Centro Urbano Miguel Alemán, Mexico City, Mario Pani, 1949.



Images 59 & 60: Housing complex Centro Urbano Miguel Alemán, Mexico City, Mario Pani, 1949.

Santacilia, Mario Pani and José Villagrán; all three attempted to capture the prevailing principles of the time in their projects (de Anda Alanís 2006:191). The three architects were accompanied by several practitioners who formed and influenced the discipline at the time, such as Carlos Lazo Barreiro, Enrique Yáñez, Enrique del Moral and Pedro Ramírez Vázquez. Ramírez Vázquez would become the most influential figure between the 1950s and the 1970s.

In the 1950s and 1960s, the government invested its efforts in constructing civic architecture within the city's boundaries and central locations; museums, markets and housing schemes became emblematic of public investment and the desire to materialise political power in the capital. Three projects reflect this political will: Mario Pani's Centro Urbano Presidente Alemán (1949), the design and construction of Ciudad Universitaria's Campus (1950) and the Museo Nacional de Antropología e Historia by Pedro Ramírez Vázquez (1964). We have discussed the first two examples earlier in this chapter, so we turned our attention to the latter.

The Museo Nacional de Antropología e Historia opened in 1964 and was designed and constructed by Pedro Ramírez Vázquez. He was born in Mexico City on the 16th of April 1919 and studied architecture at the ENA. The museum was the most significant cultural project of the presidency of Adolfo López Mateos, and it represented a new type of modern construction in Mexico based on the use of concrete and a monumental architectural scale (Image 61 – overleaf). The museum has a rectangular central courtyard that becomes the main organisational move feeding the exhibition rooms, which are carefully distributed around its periphery. The central courtyard is defined by a concrete umbrella that shelters half of the courtyard, while the other half is defined by a rectangular water feature and open space for visitors to dwell in the museum's outdoor space. Both of these elements invite visitors to explore the spaces of the museum. The exhibition rooms are isolated from the outside, and the galleries are connected internally; however, most of them also provide access to the central courtyard, creating a play of scale between the monumentality of the outside spaces and the intimate inside rooms (Images 62 - 64 – p.206). The building's materiality, attention to detail and play of scale conferred the Museum a transcendental position in the country and



Images 61: Museo Nacional de Antropología e Historia, Mexico City, Pedro Ramírez Vázquez, 1964.

converted it into one of the exemplary buildings of the 1960s (Carranza and Lara 2014:237-28).

In the middle of the twentieth century, private investment sought opportunities to support the city's expansion in the underdeveloped peripheral areas of the capital. Private investors developed urban areas in the city, responding to speculative interests and aiming for financial gain. Consequently, in the 1960s, the office tower block became representative of private interests, evolving from the 1940s' simple volume into complex sets of buildings relating to the international style (de Anda Alanís 2001:49-50).

4.7 José Villagrán García: architectural discourse

As chapter 3's discussion on *Pláticas sobre Arquitectura* demonstrated, the connections between theory and praxis after the War of Revolution were robust, and they produced a dynamic debate of the key conditions influencing architecture. However, as the century unfolded, the connections between theory and praxis were eroded, and their productive relationship diminished to the point where architects returned to copy styles from other



Images 62, 63 & 64: Museo Nacional de Antropología e Historia, Mexico City, Pedro Ramírez Vázquez, 1964.

places (Villagrán 1953:III). The erosion of connectivity between the two areas of knowledge contributed to the fragmentation of architecture in the second half of the century; however, in those years, José Villagrán's projects stood as the embodiment of the positive impact that the intersection of theory and practice had on architecture.

José Villagrán was born in Mexico City on the 11th of September 1901. He started his architecture degree at the RASC in 1918 and graduated in 1923 from the ENA. After graduating, he began his professional practice by working on significant projects in the capital, such as the Estadio Nacional (1924; Image 65 – overleaf) and the Instituto de Higiene y Granja Sanitaria in Popotla (1925). In 1924, he started teaching design

composition at the ENA, where he emphasised the architectural programme as the generator of the design composition. Two years later, due to the absence of Professor Eduardo Macedo y Abreu, he was invited to teach the course of Teoría de la Arquitectura by a group of architects and students, among them were Juan O'Gorman, Enrique del Moral and Mauricio Campos. Students were tired of the classical academicism taught at the school and considered Villagrán's approach a new way to conceive architecture (Canales 2013:190). Villagrán's academic endeavours at the ENA were instrumental in disseminating his architectural theory, as he taught for fifty years at the ENA until 1976. His early academic years overlapped with Carlos Obregón Santacilia and Pablo Flores, who taught at ENA at the time (González Franco 2007a:229).

Concurrently, Villagrán held several public positions that allowed him to determine the development of Functionalism in the country. He worked at the Secretary of Public Health from 1924 to 1935 and constructed the Hospital de Tuberculosos in 1929, which set the basis for the construction of subsequent hospitals across the country. Villagrán built numerous hospitals across fifty years of practice, the last one being the Nuevo Instituto Nacional de Cardiología in 1978. He designed and constructed over seventy buildings in his lifetime and covered the most significant areas of civic life: health, education and culture (Lasky 1992:xi). In



Image 65: Estadio Nacional, Mexico City, José Villagrán García, 1924.

education, he built primary and secondary schools, for example, the Escuela Primaria 'República de Costa Rica' (1945) and the Centro Universitario México (1944-45), but his most meaningful contribution in this area was the design and construction of the School of Architecture for the ENA at CU (1951-52). His work also covered commercial typologies, such as office blocks, hotels and markets (González Franco 2007a:230)

Villagrán's theoretical discourse was influenced by the teachings of Guillermo Zárraga (1892-1978), the writings and architecture of Le Corbusier and Walter Gropius and the treatises of European architectural theorists, such as Jean-Nicholas-Louis Durand (1760-1834), Leonce Reynaud (1805-80) and Julien Gaudet (1834-1908) (González Pozo 2004:154). Guillermo Zárraga was Villagrán's professor at ENA, and he introduced Gaudet's ideas in his lectures; in particular, Zárraga elaborated on three architectural ideals: the correspondence of the external forms and internal spaces; the coherence of the building's appearance and its structural integrity; and the honesty of materials and the functions they will perform (Vargas Salguero 1964:17). As a result, Gaudet's principles were embedded in Villagrán's core beliefs of: i. architectural and material honesty; ii. unity between the parts and the whole; iii. and the correspondence between architecture and its era (González Franco 2007a:230-31).

After studying Gaudet's 1910 architectural treatise *Elements et théorie de l'architecture*, Villagrán proposed a more straightforward and more precise approach that aligned architecture with the constructive methods and technologies of the time, and allowed the aesthetic values to emerge from within the building rather than through the copy of historical styles. In Villagrán's theory, the composition, design and execution of projects were guided by the programmatic resolution of the scheme and the application of tectonic ideas; in his view, architecture's formal expression should not be modelled by purely aesthetic or stylistic matters but should be driven by correspondence with its time, culture and place. Architecture's social responsibilities overrode aesthetic and historicist concerns, yet Villagrán did not discard or forget them entirely (Villagrán 1964). The theoretical discourse developed by José Villagrán established him as the father of Mexican architectural theory, and his ideas were adopted by the majority of

Mexican architects who used them to inform and explain their creative endeavours between the 1930s and the 1970s (González Pozo 2004:154-55).

Villagrán did not publish widely, but most of his discourse was presented in articles and conferences and delivered through his lectures at UNAM's ENA. Villagrán was renowned for his academic discipline and rigour as a written script always accompanied his lectures and conferences; these original texts have carried his voice throughout decades into our days (Lasky 1992:vi-vii). The book *Teoría de la Arquitectura* was edited in 1964, and it contained articles he published under the title 'Apuntes para un Estudio' between July 1939 and April 1943 in the journal *Arquitectura/México* (vol. 3, 4, 5, 8 and 12) and a compilation of his lecture notes used by the professors supporting his course (Villagrán 1964:30). The book was edited by Ramon Vargas Salguero (a 2nd edition published in 1980) and followed Villagrán's article *Meditaciones ante una crisis formal de la arquitectura*, (Meditations facing architecture's formal crisis) published in *Cuadernos de Arquitectura* no.4 in 1962 (Villagrán 1962a).

Villagrán's school of thought initially was predicated around two key ideas: i. a rational analysis of the architectural programme and ii. honesty in the tectonic expression of the building. His projects and their aesthetic manifestation were in line with his theoretical principles; for example, the aforementioned Instituto de Higiene y Granja Sanitaria in Popotla (1925) embodied a rationalist approach to the architectural programme, which was based on the economy of means and the use of new technologies and construction methods. The building moved away from historical norms, focusing on an effective resolution of the architectural programme and an aesthetic proposal derived from the project's functional and contextual requirements. The hospital was one of the most transcendental buildings at the time, and it changed the way hospitals were envisioned, designed and constructed (Canales 2013:190; Pinoncelly 2004:13-18; de Anda 2006:173). These two principles defined his architectural production and formed a design methodology for the creation of architectural spaces suited to address human needs; as mentioned before, Villagrán did not discard the importance of aesthetic principles, but he believed that the form of a building should emerge from the solution of the architectural

programme, and not from the selection of a historical style. In his early work, one can appreciate the influence of Tony Garnier; however, in subsequent years, his work was defined by the interpretation of the ideas of Le Corbusier and Walter Gropius, which he adapted to suit the Mexican context (González Pozo 2004:154).

At the end of the 1930s, inspired by the philosopher Max Scheler and his value hierarchy, Villagrán formalised his architectural theory of values. Scheler elaborated his structure in the book *Formalism in Ethics and Non-Formal Ethics of Values* (1913), where he argued: "for the objectivity of values [...], which are encountered as the intentional objects of feelings" (Moran & Mooney 2002:200-01). In his work, he stressed the importance of lived experience and defined it as the experience of the *whole* person engaging with the world and the things that constitute it. Scheler proposed an objective ranking of values that was structured from 'lower' to 'higher' levels and was determined by several characteristics, such as longevity, intensity of satisfaction and autonomy. The five levels, from a superficial to a deeper level, were pleasure, utility, vitality, culture, and holiness (Zachary and Steinbock 2021:online). In Scheler's work, values are independent of the things to which they belong and are autonomous from our perception or any other act of consciousness (Moran & Mooney 2002:201).

Inspired by Scheler's hierarchical structure, Villagrán's architectural theory of values was structured in four primary values constituting the essential parts of an overarching 'Architectural value'. The four primary values were i. 'Useful', ii. 'Logic', iii. 'Aesthetic' and iv. 'Social', and they were autonomous and objective, but if any of them were missing, it would disintegrate the Architectural value. Villagrán stressed that the Architectural value "qualified a human work of art as architecture or not, and it was compound by a series of primary values included some from Scheler's classification" (Villagrán 1964:32). His considerations on these four primary principles are captured in *Teoría de la Arquitectura*; however, the book also dwelled in other important aspects of architecture, such as architectural character, style and proportion. The writings in the 1964 [1980] edited book linked the resolution of an architectural project to an exhaustive analysis of the architectural programme, which entailed an

understanding of the physical, biological, psychological and spiritual needs of the human being (González Franco 2007a:231).

A vital aspect of Villagrán's academic, intellectual and professional endeavours was the coherence between his theoretical discourse and his architectural practice; the historical time he inhabited encouraged the development of his theoretical thinking and its application as the backbone of his professional work. The intersection between philosophy, architectural theory and practice was tangible in his projects and reflected a time of change and progress. Villagrán's influence cannot be underestimated as his architectural theory of values bridged the two post-revolutionary prevailing positions of nationalism and Functionalism; he provided young architects with an alternative that matched the post-revolutionary reality of Mexico and contributed a strong methodology in the design process (González 2007:231-32).

4.8 Teoría de la Arquitectura (1964 [1980])

On the 22nd of November 1950, the recently founded Instituto Nacional de Bellas Artes (f.1946- INBA) organised the first exhibition of contemporary Mexican architecture in the capital. In the event, José Villagrán was recognised as the most influential practitioner, theorist and professor in the Mexican architectural scene (de Anda Alanís 2006:192). At the exhibition's opening, he delivered the keynote *Panorama de 50 Años de Arquitectura Mexicana Contemporánea (1900-1950)*, which formed the basis for the 1952 publication of the same name. A decade later, he followed it with *Panorama de la Arquitectura Mexicana Contemporánea (1950-1962)*, where he addressed the architectural trends and projects until 1962.

In the 1952 article, he constructed a historical narrative whereby Mexican architecture was categorised into four groups: *exotic anachronism*, *national anachronism*, *individualistic current nationalism*, and *authentic modernity* (Villagrán 1952:IV-X). In his historical account, he defined 'authentic modernity' as true Mexican contemporary architecture, and he argued that its roots were found in the teachings at the ENA from 1924 onwards. His argument postulated that the new architectural orientation that defined Mexican architecture in the 1950s had been generated in the

field of theory, where a new doctrine was formulated and subsequently applied (1952:VIII). Incidentally, the inception point he proposed matched his appointment to teach design and, later on, theory at the ENA. Villagrán's proposition attempted to legitimise his discourse by connecting and validating the idea of true Mexican architecture with fulfilling the Architectural value elaborated in his architectural theory classes (Villagrán 1952:X).

In the second article, Villagrán re-stated his theoretical position and the four periods he designated in his 1950 keynote; however, he addressed the architecture produced between 1950 and 1962 by establishing four directions (Villagrán 1962:VIII-XII): i. an international tendency characterised by steel structure, reinforced concrete and curtain glass, which disregards the cultural and geographical contexts; ii. the concrete shells developed by Félix Candela and others, which he considered an international strand; iii. ornamental and decorative historicism, which tries to use historical forms to find a grounding in our traditions and history; and lastly, iv. a tendency that he did not label but described as the one "direction to resolve our grave problems" (Villagrán 1962:XII), which used technology and was based on universal taste, yet rooted in knowledge of our problems, needs and realities. This last direction reaffirms architecture's commitment to resolving society's challenges.

His analysis of the époque described a plurality of approaches that would define the country's architectural scene in the 1970s and 1980s, so without articulating it explicitly, he foresaw the arrival of Postmodernism's ideas to the country with its plurality and use of historical elements. Villagrán's texts suggested that Mexican architecture could gain a modern character by rooting itself in its locality and using its unique conditions, challenges and resources to define the projects. His theoretical discourse was based on a careful methodological analysis of the architectural programme and a thorough understanding of the local conditions to design and create projects with a sense of social engagement and representing their time.

Teoría de la Arquitectura (1964) embodied the core concepts that shaped Villagrán's architectural theory. A decade later, he delivered a comprehensive set of lectures between April and June 1974 in the Escuela Nacional de Conservación y Museografía Manuel del Castillo Negrete, where

he reflected and expanded on his discourse. The lectures were compiled and edited by Julieta Lasky in 1992 and were published under the title *Integración del Valor Arquitectónico* (Integration of the Architectural Value). The text evidenced how Villagrán's discourse evolved and was constructed upon carefully reflecting on the differences between what he called the 'instrumental sciences of mathematics' and the 'sciences of the spirit or culture'. The former are interested in pursuing and gaining objective true knowledge, whereas the latter is focused on the art of making, which is understood as the constant human endeavour of constructing – we construct thought, phrases, objects, buildings, etc. (Villagrán 1974:2-4).

Villagrán defined making as the transformation of a chosen raw material through a process of manipulation into a new form; the form's final purpose was to serve and fulfil the objective set by its maker. He defines form as "an object's aspect when presented to our consciousness" (Villagrán 1962a:91). In his theory, 'inhabited space' is the raw material that architects manipulate and transform in the creation of architecture (Lasky 1992:ii). In his writing, Villagrán described two types of space: i. 'bounding spaces' such as landscaping elements, the sky and horizon or vegetation; ii. 'built spaces' which are intrinsic to architecture as they enclose the inhabited space and are elements that are constructed (1974:29). Architecture defined by Villagrán is the art of making, whereby space is transformed through a construction process and in response to an architectural programme. The programme guides the architect in creating inhabited spaces that fulfil its users' physical, biological, instinctive, rational and spiritual needs (Villagrán 1974:4-5). His architectural axiological theory of values proposed a clear hierarchical structure of interrelated values that were autonomous and independent from each other; the order of values, from the lowest to the highest, was the 'useful' [*útil*], 'logic' [*lógico*], 'aesthetic' [*estético*] and 'social' [*social*] (Image 66 – overleaf). It is the positive contribution of each of these values in a project that forms the Architectural value (Villagrán 1974:19-25). The chapter will examine the four principles that form his architectural theory.

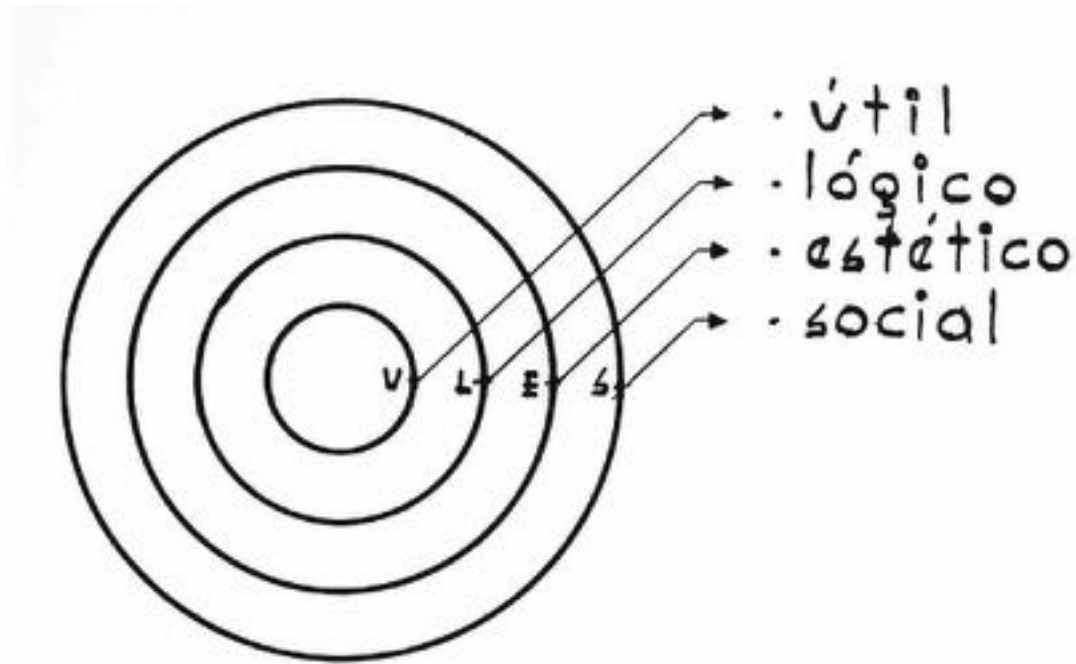


Image 66: Architectural Theory of Values Diagram, José Villagrán García.

i. Useful

From the time of the Roman engineer Vitruvius, the purpose and usefulness of a construction were instrumental; his triad *firmitas, utilitas* and *venustas* (strength, utility and beauty) reflected the importance of structural stability and appropriate spatial accommodation, coupled with the usefulness of a construction and its aesthetic presence. This classical triad influenced architecture for centuries (Gelernter 1995:61-66). For Villagrán, the concept of usefulness was related to the satisfaction of human needs, and in particular, the physical and biological demands that emerge from our corporeal existence in the world (1974:27). In his architectural theory, a building could respond to the programme and fulfil the physical needs of the users, however neglecting the other primary values would introduce negative connotations into a building, for example not aesthetically pleasing or logical on its use of materials (1964:34). Villagrán defined the primary value of 'useful' in architecture in two ways: i. the appropriate use of inhabited space, which he called 'useful-economic' and included circulation, ventilation, lighting, and dwelling; and ii. the fitness of built space in relation to mechanical and constructive aspects, which he labelled 'useful-mechanical/constructive' and encompassed load bearing and structural resistance to outside forces. Architecture will always

respond to both of these aspects, yet their emphasis may depend on the architectural programme that the architect is designing for. Therefore, both types of usefulness must influence and help define the design of a building; otherwise, it could not be considered a work of architecture (Villagrán 1964:34-35).

Villagrán elaborated his argument by discussing the useful principle of a factory and a commemorative monument. A factory will need to address the building's useful-mechanical/constructive aspect efficiently and provide spaces that satisfy the useful-economic experience of the inhabited spaces. In a factory, both useful aspects play a key role in the design, functionality and inhabitation of its spaces. On the other hand, in a commemorative monument, the useful-mechanical/constructive is essential as it will define the architectural elements that embody the symbolic nature of such construction, yet the useful-economic of its inhabited spaces might not carry the same importance as the monument holds a symbolic meaning rather than having a strict functionalist use. This comparison led Villagrán to state that "the useful-mechanical/constructive will always be present in any piece of architecture, but the useful-economic is conditioned by the typology and architectural programme" (Villagrán 1964:36). Usefulness is essential for architecture as it ensures that the basic needs of its users are met.

ii. Logic

Villagrán's discourse surrounding the second value is connected with a profound reflection on the essence of truth, and in particular, the question: What is truth in architecture? Villagrán relied on Gastón Sortais' philosophy to define his ideas of architectural truth. In his philosophical work *Critical Logic* (1907), Sortais defined truth as the "agreement between thought and its objects: *conformitias intellectus et rei*" (Villagrán 1964:42). Sortais' definition revealed three interlinked elements: the *object* upon which something is affirmed, the *intellect* that makes an affirmation and a *relationship of agreement* between the affirmation and the object. For Sortais, it is the relationship between intellect and object that defines three types of truths: i. logical; ii. metaphysical; and iii. moral. Villagrán distilled from Sortais' classification three truths: i. *ontic*, metaphysical or objective; ii. *ontological*, logical or subjective; and iii. ethical or moral. The first one

is the direct accordance between the object and the essence of its nature in a classical way. The second truth is the agreement between thought and object. Finally, the ethical truth is the accordance between thought and expression – truth as a human expressive act. (Villagrán 1974:34-35). For him, architectural production can only have an *ontic* truth, as the building's essence should be at least in accordance with the architect's creative intention; the ontological truth is reserved to the building's user, who will interact with the construction and will develop an agreement between the architectural elements and their properties, and the intellectual perception of them. It is important to emphasise that truth and sincerity are worthwhile virtues that the architects of the time are still pursuing and using in their professional endeavours (Villagrán 1964:43-44).

Villagrán found five forms of truth in architecture in treaties, essays, and critiques of the nineteenth century, all related to an honest relationship between the elements contributing to the creation of architecture and their meaning and perception. He contended that historically, architecture was truthful when there was an agreement between: i. the constructive materials and the optic-haptic appearance of the building; ii. the form and the mechanical-constructive function; iii. the form and the economic usefulness; iv. the external forms, in particular the elevations, and the internal spaces and structures; and v. the built form, including all its tangible and intangible qualities, and its historical time (Villagrán 1964:44-47). Villagrán's analysis of architectural histories and philosophical discourses leads him to define truth in architecture as "the agreement of the built form with its final purpose, with its raw material and with the transformation technique or process. The final purpose in architecture [...] is understood as the architectural programme" (Villagrán 1974:42). It is the agreement between the form, material, construction technique and programme that constitutes architectural logic, which is an essential aspect of the Architectural value.

iii. Aesthetic

Villagrán distilled the primary aesthetic value from a comprehensive understanding of aesthetics and its relationship with architecture. In his view, there were two pathways to explore the values of aesthetics: one based on the study of the philosophical area of Aesthetics, which aims to

explain the aesthetic values of natural and manufactured objects, particularly those found in a work of art. The second path was based on a practical and experimental approach emerging from a close observation of the objects we considered beautiful (Villagrán 1964:53). The first pathway entailed a deeper philosophical reflection on aesthetic taste, artistic creation and the structures that defined the arts and architecture; whereas the second approach was practical and it explored the creative means by which artists and architects achieved beauty. The two pathways brought something unique to the aesthetics debate, and each area contained authors and artists that were in opposition to each other, as one avenue dealt with the objective and intellectual role of aesthetics and the other with the practical application of means to achieve beauty (Villagrán 1964:54). In Villagrán's writings, there was no evidence suggesting that the creative friction produced by these two approaches to aesthetics were problematic; he considered them as complementary aspects to achieve a complete understanding of the architecture.

Villagrán's ideas and writings on aesthetics, and the construction of his theoretical edifice, were influenced by two nineteenth-century French theorists: Leonce Reynaud and his *Traité d'Architecture* (1875) and Julien Gaudet and his *Elements & Theorie de l'Architecture* (1909). The use of these theorists highlighted Villagrán's knowledge and interest in developing a philosophical understanding of architectural aesthetics. Raynaud argued in his treatise that architectural beauty was connected to architectural usefulness and the idea of convenience; on the other hand, Guadet's book proposed linking architectural beauty with truth and honesty. Both philosophical treaties emerged from the Platonic tradition and influenced Villagrán's axiological theory of values (Villagrán 1974:63-65); nevertheless, he generated a critique of both stands as he had important critiques of both authors' positions.

Villagrán levelled a series of critiques of Raynaud and Gaudet's positions about architectural beauty. The most significant issue for Villagrán was the way both architects/thinkers conditioned architectural beauty to either the usefulness or the truth; in Villagrán's architectural theory, all the values were interrelated, yet autonomous and independent; therefore, architectural beauty could not be found only in the honesty of materials or

in the final purpose of a building but in the totality of the architectural creation (1964: 54-56). Villagrán stated that "architectural beauty was found in the architectural composition, in the perfect harmony of the parts and the whole and its aesthetic proportions" (1974:66); therefore, the primary value of 'Aesthetics' focused on the composition of the components contributing to the creation of architecture.

The way Villagrán structured the discussion on 'Aesthetics' emerged from the second way of studying aesthetics, as he divided it into two categories: i. architectural means and ii. architectural situations. The 'means' are the material instruments to construct the work of art or architectural project, whereas the situations are the themes and reasons for the creation. The means are constituted by 'built spaces' and their 'formal qualities'. 'Built spaces' are of two types: 'inhabited', which include dwelling spaces, circulations and auxiliary spaces; and 'built elements', which are constituted by vertical supports, horizontal planes and vertical communications. The 'Formal Qualities' have contributed historically to architecture's poetical language and are defined as morphology/figure, metric/dimension, chromatic/colour and haptic/tactile (Villagrán 1962a:100-06; 1964:57). The overarching argument for the understanding of aesthetic values is that there should exist harmony and agreement between the whole and its parts; in Villagrán's words, "if the [architectural] composition does not reach harmony, there will be no aesthetic expression, hence it becomes a juxtaposition of means rather than a [architectural] composition" (1964:58).

For him, other design principles contributed to the architectural composition: architectural character – defined as the psychological effect of a building once we understood or gained knowledge about its programme; the *parti* – envisioned as the distribution of the building's elements and spaces in relation to the whole; architectural order in the pursuit of unity were key; and architectural axis – axiality was conceived as vertical planes used to organise the built spaces. These design concepts were complemented by rhythm, repetition and proportion as principles to bring unity to the building (Villagrán 1964:56-63). Therefore, architectural beauty was achieved through the careful composition of its elements and the consideration of the construction elements vis-à-vis the whole. There

cannot be an authentic architectural oeuvre without beauty, whether it is achieved consciously or unconsciously.

iv. Social

So far, Villagrán's values could be juxtaposed to Vitruvius' classical triad; however, he added one more principle to his theory that set him apart from other architectural discourses: the 'Social' value. In Villagrán's discourse, the social value highlights the impact society and culture had on architecture, and vice versa, the influence of architecture on those two human expressions. There is a symbiotic relationship between society, culture and architecture. Villagrán defined society and culture as:

Society is the human conglomerate organised towards a defined culture. Culture [...] is the part of the environment edified by humankind and is the way of living adopted by an organised collectivity. Therefore, society is the human collective that is organised and geared, through common means, towards a common and well-defined goal – this is for the objectification of a given culture (Villagrán 1964:125).

For him, the social value was of the same importance as usefulness, logic, and aesthetics. He considered architecture as having a social value derived from its relationship with society, as architecture reverberates in society as the cultural concrete expression onto which it unfolds and develops. Through the social value, a work of architecture expresses the ideas of a culture and society via formal aspects, construction techniques, material use, architectural programmes and spatial inhabitation. A true work of architecture will influence society and contribute to building and defining its culture (Villagrán 1964:125). Architecture has an expressive power through its forms and aesthetic principles to represent, consciously and subconsciously, its geographical location and historical time. Also, its formative (educational) aspect aims to embody and communicate aesthetic values and ideals to enrich society and culture (Villagrán 1974:93-95). These two aspects – an expressive and a formative- enrich society and help define culture.

Villagrán's discourse and commitment to the social value of architecture, combined with the vital role of function and the architectural programme,

made his theoretical discourse essential in the architectural debate in the 1950s and 1960s. His importance was validated by the adoption of his architectural theory as an essential part of the academic curriculum in new architectural schools such as the Instituto Tecnológico de Estudios Superiores de Monterrey (ITESM; founded in 1945), the Universidad de Nuevo León (f. 1946) and the Universidad de Guadalajara's School of Architecture (f. 1949). These universities used ENA's curriculum, Villagrán's theory and modernism's concerns to shape the minds of the Mexican architects at the time (Alva Martinez 2004a:232-34). His academic and architectural endeavours embodied the intersection between theory and practice, as he applied his ideas in buildings such as the Instituto Nacional de Cardiología (1937) and the Centro Universitario México (1944). These buildings highlighted the four values advocated in his teachings and architectural theory.

Villagrán's architectural theory is clearly expressed in his architectural practice, and a good example of the intersection of theory and practice is the Hospital de Tuberculosos (1929), which embodied the values predicated by the architect and the social needs of the era. At the turn of the nineteenth century, tuberculosis was one of the most feared illnesses of the time, and the medical advances that allow us to understand the illness's contagion mechanisms today had not been developed. In the 1920s, tuberculosis was thought to be linked with lifestyle, habits and the environment; it was prevalent in the poorest working classes (O'Rourke 2012:63). The hospital served to treat patients, as well as a training facility for doctors and nurses, who could be deployed across the country once their medical training on tuberculosis was completed. The medical method to treat tuberculosis at the time relied on the formula of *sun, light, fresh air, food and rest*; hence, the architectural programme was developed to satisfy these two aspects (De la Rosa & Vargas Parra 2011:30-31)

The original plan for the health complex included sixteen major buildings; however, only five were built, three being patient wards. The buildings were organised around a central courtyard and carefully positioned on site to avoid blocking each other's sun paths and air flows. The buildings were receded from the site's boundaries to avoid noise from the surrounding

street (O'Rourke 2012:63; Image 67). Following Villagrán's ideas, the hospital addressed the institution's useful-economic and useful-mechanical/constructive requirements. The internal circulation (porches, balconies, roof terraces, and long exterior corridors), ventilation and lighting approach were designed to allow fresh air and well-lighted spaces that could facilitate the recovery of patients; simultaneously, the basic services needed to run the hospital were addressed by the resolution of the constructive and mechanical aspects of the facility. An example of the latter was the elevated water tower that ensured the correct water pressure was achieved throughout the building, and it became an iconic element that embodied a simple modern aesthetic for the institution. The tower was a key compositional element of the main elevation. It provided a vertical accent to the horizontal symmetrical facade, which was defined by a rhythm of openings and the play of light and shadows (Pinoncelly 2004:19-20; Image 68 – overleaf).

The building's logic was clearly articulated by the use of reinforced concrete and the honest and truthful relationship between the material and



Image 67: Construction of the 5 building of the Hospital para Tuberculosos in Huipilco, José Villagrán García, 1929.

its formal composition, haptic-tectonic qualities, mechanical-constructive technique, and finally, its conclusive contribution to the embodiment of the architectural programme in the facade and internal spaces. The Hospital de Tuberculosis used simple, unadorned geometries, flat roofs and concrete walls to generate Villagrán's notion of architectural logic – the composition of the health complex was in agreement with the possibilities and nature of reinforced concrete. Symbolically, structural and material honesty embodied the post-Revolutionary agenda, as the buildings moved away from any eclectic influence and adopted a functionalist outlook. The aesthetic proposal of the hospital created a modern image for the institution as it recalled some of the modernist buildings in Europe of the 1920s and 1930s (O'Rourke 2012:62).

Villagrán's aesthetic proposal was based on a symmetrical design that used a rhythmic repetition of construction elements (concrete ribs) to emphasise the relationship between the unities and the whole. The spaces were carefully considered to form well-proportioned, well-ventilated, and generous areas that catered to the recovery of its patients, yet using a modern language of unadorned planes and volumes. A central administrative building complimented the patients' wards, and the whole complex aimed to represent the government's push to provide the most



Image 68: Hospital para Tuberculosos in Huipilco, José Villagrán García, 1929.

basic services to the population. The hospital was the focal point of an ambitious plan to transform the treatment of tuberculosis, and it aimed to improve the working class's understanding of the illness. The hospital would address early-stage tuberculosis patients, who, after recovery, re-entered society with a renewed understanding of the disease. They would become beacons of social change around tuberculosis, and "the finished buildings expressed official attempts to classify, regulate, and reform the behaviors [sic] of the tubercular under-class, and through them, society as a whole" (ORourke 2012:61). The Hospital de Huipulco was an example of the intersection of architectural practice and theory – it embodied theories about health, spaces, functions, users' needs, construction techniques and the capacities of new materials.

The buildings and architectural theory of José Villagrán continue to be a topic of conversation among architects and academics, as his influence is still debated in architectural and academic circles. Examples of this are comments made regarding Villagrán by Prof. Alejandro Aguilar and Dr. Enrique de Anda during interviews in 2017. The construction and application of his theory elicit opposing opinions on how impactful it was and has been since the middle of the twentieth century. On the one hand, Professor Aguilera questioned Villagrán's position as a theorist and how his theory was constructed and published. Aguilera pointed out that architects tend to call him a "theorist; however, his published work was limited, and his architectural discourse was shaped by his disciples who collected his work retrospectively, and in particular Ramón Vargas Salguero, who edited the book *Teoría de la Arquitectura* in 1964" (2017). Professor Aguilera accepted Villagrán's role in the development of the theoretical debate in Mexico, but he strongly suggested paying attention to other architects who wrote extensively, such as Alberto T. Arai and Israel Katzman (2017).

In contrast, Professor Enrique de Anda argued that Villagrán established a "theoretical apparatus of enormous longevity, which has now been overcome and abandoned. The discourse was never properly critiqued, and it simply was considered dated; therefore, it was abandoned without an alternative proposal to substitute it" (2017). De Anda argued that "one of Villagrán's most meaningful contributions to the discipline was the awareness of the architectural programme. [...] This marked a new

departure point in the design process and provided a novel way to prioritise the development of an architectural project" (2017). The architectural programme was a key aspect of Villagrán's legacy. One that is still valid. It is defined "as an understanding of the activities that take place in a building, and not as a list of relationships between spaces" (de Anda 2017).

The contrast of opinions defines Villagrán as a polarising figure even today. Supported by the ideas of de Anda, Canales (2013), and Carranza and Lara (2014), this project contends that Villagrán was a defining figure in developing Mexican functionalist architecture in the first half of the twentieth century. In his architectural practice, he applied a well-considered theoretical position defined by his deep philosophical knowledge and constantly revised by his pedagogic endeavours at ENA. His influence in Mexico until the 1960s can be compared to Le Corbusier's impact in Europe in the same period.

4.8 Conclusions

The aims of chapter 4 were to examine the socio-political and architectural contexts of the middle of the twentieth century (1930s – 1960s) and to reflect on the impact of José Villagrán's theoretical edifice in the architectural practice and thinking at the time. These aims constructed the argument that the connectivity between theory and practice gradually disappeared throughout the middle of the twentieth century, eventually leading to the divorce of both endeavours towards the end of the century.

Chapter 4 examined Mexican architecture from the middle of the 1930s to the middle of the 1960s and pointed out how Mexican architectural theory and practice were defined by Functionalism and the ideas of José Villagrán. These two architectural pillars were complemented by the worldviews of architects and artists who escaped the Spanish Civil War and World War II's devastation by migrating to Mexico in the 1940s and 1950s. Chapter 4 focused on Functionalism's development, its decline in popularity and its eventual crisis in the 1960s as the movement abandoned its social principles and transformed into a variant of the international style. This chapter presented Mexico's broader landscape of architectural practice and

thinking by highlighting the work produced by Félix Candela, Mathias Goertiz, Vladimir Kaspé and Luis Barragán – their work took place parallel to Functionalism.

The work of Spanish architect Félix Candela in the 1950s and 1960s concentrated on designing thin concrete shells. His architectural proposals were characterised by the geometrical manipulation of paraboloids and hyperboloid forms to produce undulating surfaces that challenged the conventional structural concepts of the time; this was exemplified in the Restaurante Los Manantiales in Xochimilco, which he built with Joaquín Álvarez Ordoñez in 1958. Simultaneously, Mathias Goertiz's *Emotional Architecture* manifesto postulated that architecture should be understood through its emotional and artistic values. For Goertiz, the intellectual position of functionalist architects had overstated architecture's rational aspects, which had been achieved at the expense of the connection with people and place. In the *Museum El Eco* (1953), the German artist Goertiz postulated that the main function of the buildings was emotion and space was considered a sculptural element. The Russian architect Vladimir Kaspé viewed architecture as an 'indivisible totality' onto which multiple layers of knowledge, relationships, ideas and techniques came together. In his opinion, architecture was a 'total' cultural object that affected the client, critic and architect differently, as it embodied a totality of hopes, desires, dreams, techniques and knowledge. These foreign architects enriched the architectural culture of the middle of the century and collaborated with some of the most important Mexican architects of the era, such as Enrique del Moral, Mario Pani and Luis Barragán.

Chapter 4 expanded on the notion of regionalism and the work of Luis Barragán, who is considered the quintessential Mexican architect. His work from the 1940s to the 1960s embodied his architectural ethos and set the foundation for the international recognition he achieved in the late 1970s and early 1980s. In the 1950s, he collaborated with Mathias Goertiz on several projects, such as the Capilla de las Capuchinas (1955) and the Torres de Satelite (1957), and from this intersection, he adopted the term Emotional Architecture to define his architectural endeavours. In the 1940s and 1950s, his regionalist approach was determined by an architectural language of massive volumes, rough textures that defined the volumes of

his projects and the application of vivid, saturated colours to enhance the architectural forms. Barragán's manipulation of form and light became essential in creating emotive spaces that carefully interacted with skilfully designed external areas; this relationship produced a holistic inside/outside experience reminiscent of Colonial haciendas and convents. Barragán's international prominence was cemented with the 1976 MOMA exhibition of his work, which was followed by winning the Pritzker Prize in 1980. His influence transcended his lifetime and remained present in the work of architects such as Ricardo Legorreta. In contrast with other architects/writers such as Alberto T. Arai and Enrique del Moral, Barragán did not publish an extensive body of theoretical knowledge, and much of his discourse was developed through his buildings.

Chapter 4 studied the varied architectural production of the middle of the twentieth century, as this was essential to understanding the development of alternative architectural positions that eventually led to the multiplicity of views that characterised the end of the twentieth century. The work of Barragán, Candela, Goertiz and Kaspé joined the architectural and theoretical production of José Villagrán and Mario Pani; it embodied the heterogeneous architectural landscape that gradually moved away from the strict values of Functionalism. Chapter 4 argued that José Villagrán's thinking was the leading architectural discourse in the middle of the century in Mexico, and most importantly for this PhD research, it elaborated on the seamless fusion of architectural theory and practice in his work. The chapter examined in detail José Villagrán's doctrine, which revolved around a system of four values (useful, logic, aesthetic and social) and emphasised social engagement; it pointed out two key contributions of Villagrán to Mexican architecture: the premise that the architectural programme is the main design generator and the importance of the symbiotic relationship architecture has with society and culture. Villagrán disseminated his architectural discourse through his teaching at the ENA, producing a school of thought embodied in the projects of multiple generations of architects; his ideas permeated and defined the work of architects who designed architecture with a modern character yet based on an understanding and adoption of local conditions and principles.

The chapter's leading argument is that the intense connectivity between theory and practice that defined the start of the twentieth century increasingly diminished towards the middle of the century despite the input of national and international architects. The reduction of this connectivity was linked with the country's initiatives to promptly construct a built environment that could embody progress and modernisation; hence, the government's political agenda generated the construction of the infrastructure (hospitals, schools, social housing and business facilities) to host the institutions that expressed a modernising country. In this context, architecture became increasingly pragmatic as the need to build efficiently and economically superseded the opportunities to develop speculative work.

5. Architectural Practice and Thinking towards the New Century

5.1 Introduction

As chapter 4 argued, the second half of the twentieth century was defined by the crisis of Functionalism and the international style, leading to a postmodern multiplicity of architectural approaches in the country. In the 1950s and 1960s, the functionalist architecture of Mario Pani and José Villagrán was complemented by the ideas and projects of foreign architects who resided in Mexico, such as Félix Candela, Mathias Goertiz and Vladimir Kaspé. The departure from Functionalist paradigms in the 1960s, combined with the discipline's reaction to the international style in the 1970s, produced an architectural fragmentation containing new architectural voices and generating meaningful buildings influenced by the principles of European Brutalism, the consolidation of regionalism's ideals and the emergence of individual formal tendencies.

Chapter 5 critically assesses the state of architectural theory in Mexico at the end of the twentieth century and examines its role in the production of architectural practice into the twenty-first century. This chapter will study the country's architectural landscape from the 1970s to the early 2000s; it will elaborate on the contributions of architects practising in the capital, as well as those architects working outside of Mexico City, spearheaded by the work of Luis Barragán. The 1960s and 1970s were defined by several projects of national and international excellence, such as the Unidad Independencia (1960), the Museo Nacional de Antropología e Historia (1964), the Hotel Camino Real Mexico City (1968), the INFONAVIT (1973), the Colegio de México (1975) and the Casa Gilardi (1976). This chapter will argue how the 1960s was a transitional decade in which the importance of the work of Carlos Obregón Santacilia, Mario Pani and José Villagrán García gradually decreased until it stopped being a point of reference for the profession. In the 1970s, the new generation of architects looked for inspiration beyond the well-established functionalist masters; they adopted

some of the ideals of the European Brutalist aesthetic, which were fused with local traditions, materials and craftsmanship. This new approach was embodied in the work of Pedro Ramírez Vázquez, Teodoro González de León, Abraham Zabludovsky, Agustín Hernández and Ricardo Legorreta; this group of architects designed and built some of the most significant and exemplary buildings in the 1980s and 1990s (Canales 2013:270-76), nevertheless they did not engage in the production of architectural theory or held a permanent position in academia.

Chapter 5 elaborates on how the 1980s were defined by a critical revision and critique of the Modern movement, which was generated by the Mexican financial crises of 1976 and 1982, in conjunction with the global debate around Postmodernism. The economic crises in Mexico were the result of international pressures on oil markets; hence, the decrease in oil prices prompted the government to devalue the national currency, which created crippling national inflation accompanied by the country's mounting foreign debts. These two economic disasters halted the nation's growth in every area of human endeavour, leading to the 'lost decade' of the 1980s in architecture (de Anda Alanís 2006:236). The work of the younger generation of architects produced a heterogeneous architectural environment defined by a post-rationalist range of ideas and paradigms; these principles were exemplified by the Museo Tamayo (1981), Hotel Camino Real Ixtapa (1981), Torre de Aviación (1983), Universidad Iberoamericana Campus Santa Fe (1989), Papalote Museo del Niño (1993) and the Edificio de Servicios de Televisa (1995). All these projects embodied a personal approach to architectural design and the adoption of a postmodern philosophy that shifted away from the totalising paradigms of modernity. In the 1980s, Luis Barragán's work was recognised internationally, and his *oeuvre* became the representation of Modern Mexican architecture abroad, even though the national architectural scene was more varied (Canales 2013:286).

Chapter 5 will engage critically with a revision of the development of architectural theory in the second half of the twentieth century by studying the main publications that influenced the profession since 1950. These publications embodied the architectural debates and attempted to clarify the relationships between tradition and modernity, emotions and reason,

the local and global, a single paradigm and multiple paradigms, and the connection of identity and history. The analysis of the 1960s and 1970s architectural publications demonstrates that the literature produced in those decades consolidated the work of the functionalist masters. However, it resulted in a hiatus in the development of architectural ideas and theories. The connectivity between theory and practice originated in the 1930s lost its strength, and eventually transformed in the 1980s and 1990s into the production of historical accounts and categorisation of narratives. The understanding of architectural theory fostered in the first half of the twentieth century gradually changed and eventually became an instrumental and pragmatic interpretation of theoretical thinking with the expectation of direct applicability.

Chapter 5 argues that these factors led to the abandonment of critical theoretical architectural reflections, which were replaced by the production of historical narratives and the classification of Mexican functionalist masters. The self-promotion of architectural firms complemented the historical and categorisation endeavours through the publication of illustrated books, magazines and journals. The increase in these types of publications marked a turning point in the development of architectural theory in Mexico, which was supported by the minimal production of architectural critique and reflection in the last two decades of the twentieth century. In this chapter, we will complete the architectural journey into the twenty-first century by studying the key events that led to the current conditions defining the connections between architectural theory and practice at the end of the twentieth century; the chapter will contend that the profession requires the generation of theory and criticism as these are essential for the development of architecture. Chapter 5 will argue that the connection between theory and practice disappeared in the last three decades of the twentieth century, as theoretical thinking was fused within historical accounts of the country's architectural development and the categorisation of the most prolific and renowned architects of the time.

5.2 A Time of Loss, Conflict and Sporting Celebration (1960s – 1970s)

At the beginning of the 1960s, the architectural community suffered a significant loss due to the death of Carlos Obregón Santacilia (1896-61),

who had been one of the defining architects of the first half of the twentieth century. His architectural production spanned multiple decades, and he designed and built numerous typologies ranging in scale, materiality, and tectonic qualities. His work consistently connected architecture with the city as he believed in the responsibility of the architects to construct a better urban environment (Mijares Brancho 1997:160-61). In the 1960s, the crisis of Functionalism became tangible as the movement transformed towards the commercial adoption of the international style. This shift led the former into a deep state of crisis, as the formal possibilities of the latter were exhausted rapidly, causing monotony and repetition across the country. Functionalism lost the unique social traits that made it a dominant force in Mexico. The paradigm shift thrust the profession to search for genuine Mexican architecture connected with the country's tectonic qualities, construction techniques and local traditions and history.

The country's well-defined economic growth of the 1960s and 1970s enabled the search for an architectural identity due to increasing oil revenues and the nationalisation of the electric power sector, which produced a period of stability and expansion. In these two decades, the state searched again for social and cultural validation in architecture; hence, it focused its efforts on sponsoring cultural and sporting architectural projects that aimed to strengthen the Mexican identity in the national consciousness while leaving a transcendental mark in the country's built environment (Canales 2013:268).

Architects that embraced these new ideas were Pedro Ramírez Vázquez, Teodoro González de León, Abraham Zabludovsky and Ricardo Legorreta, who adopted foreign characteristics and fused them with the country's craftsmanship traditions to respond to the government's agenda, hence creating an architectural expression with a well-defined formal proposal based on monumentality and strong tectonic qualities, while using local crafts and materials to root the architectural projects in the country's tradition (Canales 2013:270-76). These architects searched for a way to embody the political and cultural priorities of the government in a new architectural expression that resulted in exemplary architecture such as Pedro Ramírez Vázquez' Museo de Arte Moderno (1964; Images 69 & 70 –

overleaf) and the Olympic complexes and facilities (1968), and Teodoro González de León and Abraham Zabludovsky's INFONAVIT (1973). The theoretical debates in these two decades centred around Functionalism's crisis, and the discussions shifted gradually to debate the relationship between the local and global, as well as the relevance of tradition in contemporary architecture during the 1980s (Biondi 2007:137).

Despite the government's efforts to generate a national narrative in the 1960s, the decade was defined by two related occurrences that determined the political direction of the country: i. the socio-political conflict and resulting massacre in Tlatelolco's Plaza de las Tres Culturas in 1968; and ii. the XIX Olympic Games in Mexico City (de Anda Alanís 2001:51-52). Both events occurred during Gustavo Díaz Ordaz's presidency (1964-70), and the first was a direct result of his inflexible leadership and strict approach to governance. Díaz Ordaz was elected president in 1964, and he inherited a country that had undergone social and economic modernisation, yet it remained archaic in its political structure and *modus operandi*. The clash between a modernised society, with all the expectations it generated, and an obsolete political apparatus led to the violent conflict in Tlatelolco between the student body and the government in 1968 (Meyer 2010:255-56).

i. The massacre of the Plaza de las Tres Culturas in Tlatelolco

In the summer of 1968, the growing discontent with police brutality resulted in a students' general strike and numerous political rallies and marches between June and September 1968 (Image 71 – p.234). Students manifested across the capital to denounce the corruption of the government and the use of excessive force in dealing with previous student rallies in Morelia and Sonora in 1966. They also denounced the government's lack of engagement in a productive dialogue with the student movement to address and resolve their demands. The constant confrontation between the two sides climaxed on the 2nd of October 1968 in Tlatelolco's Plaza de las Tres Culturas. A large contingent of students and supporters gathered in the square to march into the Zocalo; however, while the contingent of participants waited for the rally to start, and as the organisers called off the march, armed forces surrounded the crowd, and shots were fired upon them. The number of casualties has never been



Image 69 & 70: Museo de Arte Moderno, Mexico City, Pedro Ramírez Vázquez, 1964.



Image 71: Students' demonstration, Mexico City, 27th August 1968.

confirmed, and the official figures stand at 32 people killed; however, the students' version counts between 200 and 300 people who died that day, and many more were arrested (Riding 1985:75-78).

The massacre of Tlatelolco was the result of the socio-political discontent of the 1960s, and it highlighted an outdated and rigid political system that imposed its will through force and was unable to adapt to the modern world. The government of Gustavo Díaz Ordaz was seen as a repressive authoritarian regime unwilling to change, and the massacre served to galvanise the social movements of the time and defined the political landscape of the nation.

It created a rift between the government and the student movement that is still palpable today. The 1968 students' strikes and civil disobedience acts were the final expression of an emerging social conscience that started in the 1950s with the strikes and manifestations by railroad personnel and electricians in 1958 and the doctors' marches of 1964 and 1965. These socio-political events were dealt with harshly by President Adolfo López Mateos (1958-64), who used the army and police to suppress them (Riding 1985:75-77), hence setting the basis for a brutal approach when dealing with civil unrest and democratic protests.

In the 1960s, the country demanded a law-abiding and transparent democratic process and the transformation of the political apparatus that had been in place since the War of Revolution. The 1968 student movement planted the seeds of change, resulting in the political changes

of the 1980s and 1990s and the eventual alternation of power with the election of the opposition's candidate, Vicente Fox, in 2000. The student movement shared the synergies of similar civic movements across the world, such as France's student protests and the marches against the Vietnam War in the USA (Meyer 2010:254-56).

ii. The XIX Olympic Games

The massacre of Tlatelolco was closely related to the XIX Olympic Games, as the negotiations between the student body and the government were the backdrop for the preparations for the Olympic Games. In addition, sectors of society were dissatisfied with the government's expenditure on constructing the infrastructure for the sporting event, and this was added to the already volatile situation between the students and the government. The shooting at Tlatelolco took place ten days before the opening ceremony of the games, and the government of Gustavo Díaz Ordaz argued that the dialogue with the students had been unproductive and that all the possible avenues to resolve their issues had been exhausted without reaching a political solution. Díaz Ordaz's government deemed the use of force necessary to restore order in the capital and to bring the city under control in preparation for the start of the games on the 12th of October 1968. The international press covered the political conflict and the violent clash between the students and the police force, but soon shifted its focus to the opening ceremony of the sporting event. Despite the unsettling conditions at the start of the event, the Olympic Games gave the country a positive international reputation, as it encouraged the government to invest in the construction of cultural and tourism infrastructure to complement the sporting facilities built for the athletes, coaches and staff supporting the event.

The preparation, design and construction of the sporting venues was in charge of an Olympic committee led by Pedro Ramírez Vázquez, and the location of the various sporting facilities responded to the capital's land availability rather than to a unified urban master plan. Therefore, the range of buildings did not espouse a particular architectural style or a uniform vision; the projects were based on the architectural values and ideology of the architects in charge of designing the different buildings. The architecture produced for the Olympic Games showcased to an

international audience the design creativity and technological sophistication of the country's architects and designers (de Anda Alanís 2006:212). The architectural legacy of the 1968 Olympic Games is evident in essential constructions such as Javier Valverde's and Antonio Recamier's Alberca y Gimnasio Olimpicos, which was built with an inverted hanging structure to span the considerable distance needed to host the events and used steel cables to create a tensile structure to support the roof structure (Image 72 – overleaf). The Villa Olimpica (Olympic Village) by Ramón Torres proposed an alternative configuration for multi-familiar accommodation and hosted personnel and staff linked to the games. All these projects were exemplary architecture, yet the most emblematic construction was the Palacio de los Deportes (Images 73 & 74 – p.238) by Félix Candela, Antonio Peyri and Enrique Castañeda, which demonstrated a mature structural and constructional style that combined steel, concrete and timber in the resolution of the roof structure (Rodríguez Viqueira 2009:133-35).

In addition to the Olympic buildings, the artist Mathias Goertiz proposed to the Olympic committee a series of cultural events crowned by 'La Ruta de la Amistad' (The friendship route). The route was the main element of the cultural proposal, and it constituted an artistic corridor stretching over 17 km along the Anillo Periférico and composed of the work of 19 artists from America, Asia and Europe. The creative interventions were large-scale abstract sculptures that were arranged at strategic points along Anillo Periferico; the route explored Goertiz's ideas of public art and their role in the city, and in particular, the interaction of art and automobiles (de Anda Alanís 2001:52).

A building of note that remained at the fringe of the Olympic Games architecture but was linked with the event due to its programmatic nature was Mexico City's Hotel Camino Real by Ricardo Legorreta (1968). Ricardo Legorreta worked in José Villagrán's atelier from 1948 to 1963, and in 1964, he founded his architectural firm. His architectural ethos was defined by the years spent at Villagrán's practice; however, his projects and discourse developed and advanced Luis Barragán's architectural ethos and ideas. He created projects composed of strong volumes, full of colour, playing with natural light and imbued with traditional values and historical references (Canales and Hernández 2017:170).



Image 72: La Alberca Olímpica Francisco Márquez, Mexico City, Javier Valverde's and Antonio Recamier, 1968.

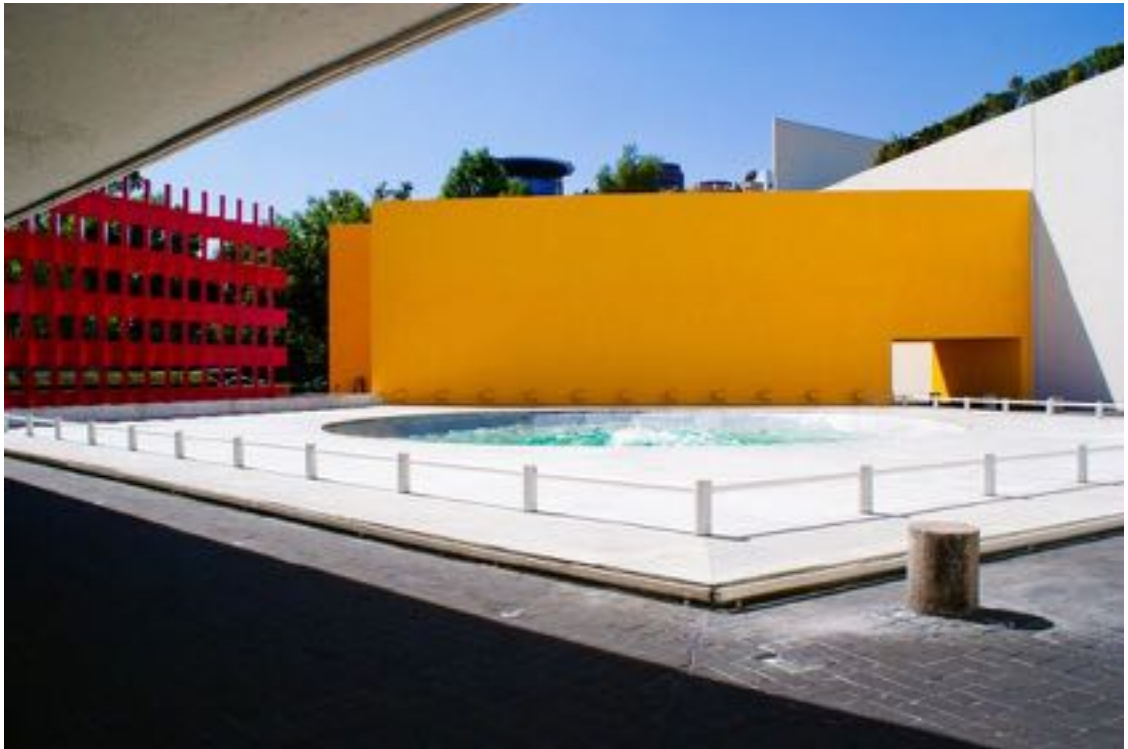
The Hotel Camino Real is a remarkable example of these principles as it is defined by atmospheric and sensuous space within the building, and the project created a sense of intimacy and introspective reflection by giving the rooms interior views of shallow pools, courtyards, and pergolas. Legorreta designed luxurious spaces and atmospheric moments that tried to emphasise the pleasure of 'walking' along architectural and natural elements such as walls, gardens and water features, all accentuated by the use of colour and light (Images 75 & 76 – p.239). The public areas encourage fluidity of movements through stairs and ramps, giving the hotel a sense of dynamism (Legorreta 2022: online). The Hotel Camino Real in Mexico City rejected the 1960s tendencies to build a vertical hotel tower on the site and increase the density of use; instead, he designed a horizontal building where he incorporated the emotional, sensuous and tectonic aspects of Barragán's discourse, yet dealing with the city by providing a building of civic scale and connecting it with the prevailing conditions of the area.

The construction programme linked with the Olympic Games enhanced the city's architectural provision and raised the country's profile internationally. The buildings were designed using functionalist principles, showcasing the

country's technical and constructive advances. The architectural programme was the guiding tool, and the projects responded to a pragmatist architectural theory.



Images 73 & 74: Palacio de los Deportes, Mexico City, Félix Candela, Antonio Peyri and Enrique Castañeda, 1968.



Images 75: Internal Courtyard of Hotel Camino Real Mexico City, Ricardo Legorreta, 1968.



Images 76: Hotel Camino Real Mexico City, Ricardo Legorreta, 1968.

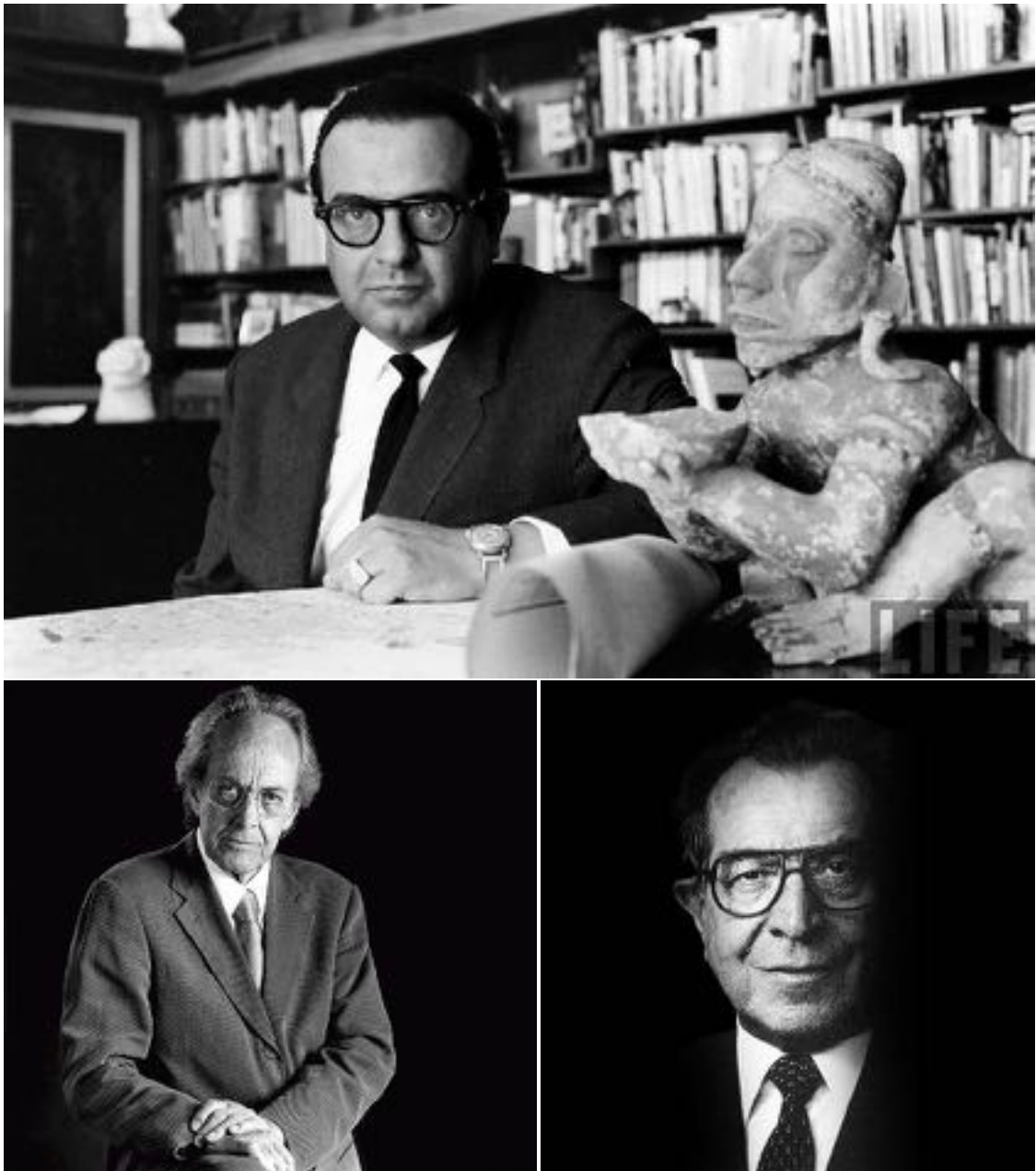
5.3 A Change of Architectural Guard: the architects of the 1960s

The transition between the 1960s and 1970s represented a generational changeover between the architects who dominated the debate and practice since the 1940s and the young practitioners who increasingly became the commanding presences in Mexican architectural practice and academia. The studios of José Villagrán, Mario Pani and Enrique del Moral, which had designed and built the most representative projects in the country through the middle of the century, gradually gave way to the studios of Pedro Ramírez Vázquez, Teodoro González de León, Abraham Zabludovsky, Ricardo Legorreta and Agustín Hernández. Other architects in their fifties, such as Augusto H. Álvarez and Juan Sordo Madaleno, adjusted their practice to the demands of the time and continued with their professional endeavours into the 1980s. In particular, Sordo Madaleno enriched his practice by embracing the commercial aspect of architecture as he was responsible for introducing the North American style shopping centres to the country; this typology would become a defining element of cities across the country and would come to signify the arrival of globalisation in the 1980s and 1990s (de Anda Alanís 2001:52-53).

The new generation of architects graduated from the ENA in the 1940s: Pedro Ramírez Vázquez (g.1943; Image 77 – overleaf), Teodoro González de León (g.1947; Image 78 – overleaf), and Abraham Zabludovsky (g.1949; Image 79 – overleaf) started their professional careers in the 1940s. In the 1950s, Ricardo Legorreta finished his studies (g.1953; Image 82 – p.242) one year later than Israel Katzman (g.1952; Image 80 – p.242) and a year ahead of Agustín Hernández (g.1954; Image 81 – p.242). This is considered the second generation of modern architects in Mexico and was in charge of designing and constructing some of the most accomplished and recognised projects in Mexico in the last third of the twentieth century (Canales 2013:270-76). In architectural history and theory, Israel Katzman would become one of the most important protagonists of the second half of the century, as he published key books such as *Arquitectura del Siglo XIX en México* (1973) and *Cultura, Diseño y Arquitectura* (v.I 1999- v.II 2000). He also published *Arquitectura Contemporánea Mexicana* in 1964, which was an exhaustive account of the

country's architectural history, similar to *4000 años de arquitectura Mexicana* (1956) by Pedro Ramírez Vázquez (Canales 2013:489-90).

The architectural landscape of the middle of the century was dominated by ENA's graduates who had been shaped by the ideas and guidance of José Villagrán and his theory of architectural values; so although Villagrán's built projects decreased during this era, his influence was transmitted through his teaching and academic endeavours at ENA. Towards the end of the 1960s and during the 1970s, architects from other institutions gained



Images 77-79 — : Architects Pedro Ramírez Vázquez (1919 – 2013; top), Teodoro González de León (1926 – 2016; bottom left) and Abraham Zabludovsky (1924 – 2003; bottom right)

prominence, as several universities in the capital and the provinces started to offer degrees in architecture (de Anda Alanís 2001:51; Alva Martinez 2004a:232-34).

In 1955, the Universidad Iberoamericana established the architecture programme, and the Universidad La Salle started it in 1964. The Universidad Anáhuac del Norte began to offer a degree in architecture in 1966. These three private institutions delivered secular education, but their institutional backgrounds were anchored on religious orders: the Universidad Iberoamericana is a Jesuit institution, the Universidad La Salle is part of the Brothers of Christian Schools founded by Saint John Baptist of La Salle in France in 1680, and the Legionaries of Christ established the Anáhuac del Norte. These three universities joined the ENA, the *Escuela Superior de Ingeniería y Arquitectura* (ESIA) of the Instituto Politécnico Nacional (IPN) and the Universidad de Guadalajara's School of Architecture (founded in 1949) in educating the architects of the nation in the 1950s and 1960s (de Anda Alanís 2001:53).



Images 80-82: Architects Agustín Hernández (1924 – 2022; top left), Israel Katzman (1930 – 2021; bottom left) and Ricardo Legorreta (1931 – 2011; right)

The importance of increasing architectural education provision in the country was that it provided a wider scope of perspectives and experiences. From the 1970s onwards, practising architects had a wider range of ideas informing their architecture and defining their theoretical inclinations. This created new ways of understanding, conceptualising, making and judging architecture. In particular, the Universidad Iberoamericana has been responsible for producing the architects that have dominated the profession in the 2000s, such as Isaac Broid (graduated in 1977), Enrique Norten (g. 1978), Javier Sordo Madaleno (g. 1979) and Alberto Kalach (g. 1981) (de Anda Alanís 2006:236-37).

As the Olympic Games impacted the architecture of the 1960s, two events left a significant impression on the architectural context of the 1970s: i. Félix Candela's migration from Mexico to the USA in 1970; and ii. Luis Barragán's exhibition at New York's Museum of Modern Art (MOMA) in 1976. As elaborated in chapter 4, Félix Candela was one of the most internationally recognised foreign architects residing in Mexico in the middle of the twentieth century, however he never found the same level of professional recognition nationally. He migrated from Mexico in 1970 after years of struggling to secure commissions, despite having collaborated or consulted with numerous architects of the time, such as Enrique de la Mora (1955) and Guillermo Rossell and Manuel Larrosa (1958) (Noelle 2007c:312). Candela moved to the USA, becoming a successful consultant and professor at the University of Illinois in Chicago, where he taught from 1971 to 1978. His departure from the country marked the beginning of the decade and deprived Mexico of one of the most dynamic and innovative architectural minds of the time (Mendoza 2015).

Secondly, the MOMA New York organised in 1976 a retrospective exhibition on the work of Luis Barragán (de Anda Alanís 2001:53), which celebrated his work and showcased his ideas to an international audience; on the same year, the Mexican government granted him the prestigious award *Premio Nacional de Ciencias y Artes* to acknowledge his contribution to the discipline in the country. These accolades were followed by the Pritzker Prize in 1980, which recognised Barragán's contribution to the discipline; Barragán was the first Latin American architect to receive such honour, and since then, three Latin American architects have obtained it: the two

Brazilians Oscar Niemeyer (1988) and Paulo Mendes da Rocha (2006) and the Chilean Alejandro Aravena (2016). In his acceptance speech, Barragán advocated for beauty and poetry in architecture and lamented the lack of these values in the architecture of the time – in his own words he said that: "it is alarming that publications devoted to architecture have banished from their pages the words Beauty, Inspiration, Magic, Spellbound, Enchantment, as well as the concepts of Serenity, Silence, Intimacy and Amazement" (Barragán 1980:online).

The international recognition bestowed on Barragán cemented the notion that his work was the quintessential embodiment of Mexican architecture, which came to be defined internationally by solid volumes with carefully orchestrated openings, an affinity for vernacular folk characteristics and forms, the use of natural elements such as light and water, and the enhancement of architecture's dramatic scenographic features achieved through the use of colour (Canales 2013:286; Carranza & Lara 2014:295-96) The critiques he suffered in the 1950s, as he did not align with the dominant thinking of the time, were replaced by praises for his originality, inspired use of vernacular elements and his desire to address the spiritual dimension of architecture over purely functional values (de Anda Alanís 2006:235).

5.4 Postmodernism: A pluralistic expression of architecture (1960s – 1970s)

The work produced in the 1970s represented the extension and consolidation of the reaction against Functionalism and the international style and, to some extent, the rejection of the functionalist ideas of Villagrán. These novel approaches reflected postmodern tendencies and resulted in a pluralistic post-rationalist architectural context, dominated by three architectural avenues: i. a dynamic and monumental architecture that combined ideals from European Brutalist aesthetic in the Mexican context and exemplified by the work of Teodoro González de León and Abraham Zabludovsky; ii. a formally expressive architecture based on the re-interpretation of vernacular and regional influences adjusted to the contemporary times, as showed by the work of Luis Barragán and Ricardo Legorreta; and iii. an architecture based on the individual inclinations and

perspectives of architects, which produced formally unique and individualistic buildings, for example, the work of Agustín Hernández (Rodríguez Viqueira 2009:139-46).

The connection of the second generation of modern architects with Functionalism was still latent, as the influence of Le Corbusier and Mies van der Rohe was a reality in the work of Teodoro González de León, Mario Pani and Luis Barragán (Biondi 2007:138). However, as the decade advanced, Functionalism gradually led to a varied post-rationalist approach. The plurality of the 1970s and 1980s signalled the influence of postmodern ideas in the country and the departure of the single modern paradigm in favour of a discourse of multiplicity; the theoretical debate at the time extended the notion of functionalism's architectural crisis and argued for the need to ground theory on its historical and physical contexts (Biondi 2007:138).

In the early 1970s, the international architectural debate that influenced Mexican architecture was defined by Robert Venturi's *Complexity and Contradiction in Architecture* (1966) and Aldo Rossi's *The Architecture of the City* (1966). These books constructed a critique of the achievements and transcendence of modern architecture in Europe and North America; they gained popularity, so by the 1980s, postmodern architecture was the dominant style in the USA. The discussions generated around postmodern thinking arrived in Mexico with the translation of Rossi's (translated by 1971) and Venturi's (translated in 1972) books, as well as the publication of Charles Jencks' *The Language of Post-Modern Architecture* in 1977, which was translated into Spanish by 1980 (López Padilla 2011:22-23).

These publications are historical cornerstones of the development of architectural theory, and they influenced the thinking of Mexican architects of the time; hence, by the late 1980s, several postmodern buildings had been erected in the Mexican capital, for example, the Hotel Marquis (1990) by Gorshtein Arquitectos that combined Art Deco motives with futurist elements. However, postmodernism was never fully adopted in the country as the severe financial crises of the 1980s and the lack of new architecture prevented the style from becoming widespread in Mexico. The principle of plurality led architects to design buildings using historical and local references and construct buildings defined by an aesthetic plurality that

resulted in a formalist approach to architecture (Rodríguez Viqueira 2009:146). Postmodern architecture in Mexico lacked a clear delineation, yet some of its values influenced the three avenues enumerated above: Brutalist monumentality, Regional architecture and Individualistic expressions.

As chapter 1 postulated, the categorisation of architectural styles can be complicated due to the porosity of the boundaries between styles and how architects adopt and apply design, technical, material and theoretical paradigms in their projects. The three avenues listed above attempt to capture the postmodern fragmentation into general approaches taken by the leading architects of the time; these are a popular division between the main historians and commentators in Mexico, such as Enrique de Anda (2005 & 2006), Manuel Rodríguez Viqueira (2009), Gustavo López Padilla (2011), Fernando González Gortazar (2004) and Fernanda Canales (2013). Nevertheless, the permeability of the categories produced intersections and allowed slippages; for example, the work of Ricardo Legorreta shares the monumentality that defined the work of Teodoro González de León and Abraham Zabludovsky but his use of colour in extensive planes distinguished him from the latter; or Agustín Hernández use of concrete can be linked to the Brutalist influence, yet he infused his buildings with ideas from the pre-Hispanic traditions and forms. The 1970s and early 1980s were defined by the uncertainties brought by diversity and heterogeneity, which replaced the certainties provided by the Modernism singular approach that dominated the discipline until then (López Padilla 2011:24). Additionally, Mexico's architectural scene in the 1960s and 1970s was defined by the construction of commercial architecture, office towers and an extensive housing programme in the major cities of the country.

i. Brutalism's influence: solid monumentality

In the 1970s, the work produced under a Brutalist influence attempted to recover architecture's formal and tectonic qualities, which had been lost with the dematerialisation of buildings represented by the 'glass boxes' of the international style. The new tendency developed a formal design approach based on the composition of buildings through the connection of forms and volumes, which generated the internal weaving of space; the

Functionalist and Modernist paradigms that emphasised spatial freedom and strict function were abandoned in favour of buildings shaped through the connections of forms and volumes. Architects acknowledged that architecture should be experienced externally and recognised the impact of buildings in the built environment and the city; despite this contextual awareness, most buildings designed and constructed under this vision disregarded the urban context as a whole and addressed the city through monumentality. Architecture was defined by its tectonic qualities, material conditions, external perception and solid forms (de Anda Alanís 2006:213-14).

The influence of European Brutalist ideals was evident in the design of unusual shapes and massive forms, which were materialised in reinforced concrete and using rough surfaces (RIBA 2023:online). The architecture of this strand was introverted, with a strong tectonic presence and a dynamic use of forms, volumes and voids. The internal spaces were compartmentalised and interconnected by carefully studying the interactions between the parts and the whole within the building. The internal fragmentation of spaces was complemented by vertical spatial connections, which produced expressive and powerful internal areas; using enclosed or opened internal courtyards as architectural distributors was essential to these buildings. The elevations were designed using unbroken planes and applying carefully crafted openings of different sizes within the same surface. The buildings of this tendency introduced oblique planes and axes to create a dynamic composition that moved away from traditional symmetrical configuration (de Anda Alanís 2006:214-15). The primary construction material was reinforced concrete, which was often finished with a chiselled texture; the flexibility of the construction method and malleability of concrete contributed to the creation of monumental buildings that used well-defined volumes to manifest a solid presence (Rodríguez Viqueira 2009:141-42). These projects were in opposition to the transparency championed by the Intentional style.

Teodoro González de León and Abraham Zabludovsky were part of this architectural position. In the 1960s, they moved away from the rationalist paradigms connected with Modernism and elaborated a dynamic architectural language based on well-defined design premises: the

development of active internal spaces, the importance of walls and their tectonic qualities in defining spatial qualities, a respectful approach to context, the essential role of the access to the building and the de-coupling of the plan from the limitation of the architectural programme (Conrado 1990:33). The latter was a clear move away from Villagrán's principles that enshrined the architectural programme as a main design generator – González de León was one of the first architects to move away from Villagrán's approach. Their projects embodied these characteristics, which were merged with Brutalist principles in the pursuit of a high standard of tectonic resolution, haptic experience and sophisticated formal expression. Examples of their work are the INFONAVIT offices (1973) and the Colegio de México (1975; Images 83 & 84 – overleaf), both projects embodied a strong formal proposal.

In particular, Teodoro González de León's early career was shaped by his time in Mario Pani's architectural office; subsequently, his architectural approach was informed by Le Corbusier, with whom he worked in Paris from 1948 to 1949. He developed a design theory based on the design process and how the building must satisfy spatial, functional, and formal aspects beyond the details included in the schedule of accommodation (de Anda Alanís 2006:216).

The INFONAVIT (Instituto del Fondo Nacional de la Vivienda para los Trabajadores) was a public institution founded in April 1972. Its objective was to collect a 5% salary contribution from employers per registered worker and gather it in a national fund, allowing workers to obtain a credit to purchase affordable housing or the right to claim back their savings (INFONAVIT 2020: online). INFONAVIT's head office was built in the capital, and it embodied a robust architectural identity that aimed to project trust and confidence to the visitors. The public building was designed around a central courtyard that organised the horizontal circulations and created an internal focal space to distribute the offices and working spaces; the building's access was located at the far end of a generous civic square which was framed by imposing concrete walls, that guided the visitor into an angled entrance hidden from the street view (Image 85 – p.250). The building had a strong tectonic presence, using concrete as the main construction material and adopting a chiselled finish



Images 83 & 84: Colegio de Mexico, Mexico City, Teodoro González de León and Abraham Zabludovsky, 1975.

to create a rough surface that captured the light in different ways; the main architectural elements, such as walls, platforms, courtyards and water features were used to guide the user into and throughout the building and created a dynamic internal space (Conrado 1990:39; Images 86 & 87 – overleaf).

ii. The advances of Regionalism

The second architectural avenue that produced meaningful buildings in the 1970s was linked to the ideals of regionalism and the use of local traditions and conditions. In Mexico, the buildings and theories related to regionalism in the 1970s can be defined as those that “interpreted the character of vernacular spaces, and appropriating the resources of the local traditions produced an expressive and original vocabulary of great aesthetic value” (de Anda Alanís 2006:221). Regionalism's discourse absorbed the search for historical integrity embedded in the nationalist narratives of the early twentieth century; however, it was not a historicist revival that looked back to neo-Colonial or pre-Hispanic principles. Regionalism's approach represented the resistance of architects to the paradigms of Functionalism and the international style that dominated the 1950s and 1960s. The discourse was embodied in the work and ethos of Alberto T. Arai, Luis Barragán and Ricardo Legorreta, who developed their architectural practice



Image 85: INFONAVIT's entrance, Mexico City, Teodoro González de León and Abraham Zabludovsky, 1973.



Images 86 & 87: INFONAVIT, Mexico City, Teodoro González de León and Abraham Zabludovsky, 1973.

closely connected with the notions encapsulated in regionalism.

The work of these architects can be considered as a 'new' regionalism, as they were influenced by the modernist masters of the 1930s and 1940s; however, they were committed to the local cultures, traditions and forms, which were merged with modern ideals. Lawrence Speck described Barragán's work as "rooted in the 20th-century Mexican fervour for modernity", as he "is extending a tradition, and not freezing a tradition, and he welcomes the evolution that comes from incorporating the interest of each new generation" (1987:77). Lawrence's description and analysis of Barragán's work and approach to design can be applied to the other architects on this avenue, as they strived to designed and built contemporary architecture that is rooted on it place and time.

Chapter 4 discussed the ideas of Alberto T. Arai and Luis Barragán, but it did not elaborate on one of the most relevant contemporary architects of regionalism in the 1970s and 1980s – Ricardo Legorreta. Legorreta's body of work explored local and historical traditions, connecting them with modern ideas and a proclivity for monumentalism. Legorreta's professional career was shaped by the years he spent working at José Villagrán's architectural firm, first as a draftsman (1948 to 1955) and then as a partner (1955 to 1960); after leaving Villagrán's office, he engaged in freelance work and built several independent commissions, among them is the Edificio Celanese Mexicana (1966) in Mexico City.

The office building had a unique and innovative structural solution that provided internal flexibility while allowing the company incremental growth, and considering the area's environmental conditions (Legorreta 2022a: online; Image 88 – overleaf). The tower's reinforced concrete core functioned as the main support for numerous steel structures on which all the floors were hung. The central core reached the street level by resting on a concrete base that alludes to the pre-Hispanic platforms and slope planes of the Aztec architecture. The entrance is hidden at an underground level, which is reached by a monumental staircase that descends into a generous lobby. The office tower became an urban landmark that embodied an innovative structural system and symbolised the impact of modern technological advances in the design of the building.



Image 88: Edificio Celanese Mexicana, Mexico City, Ricardo Legorreta, 1966.

Legorreta founded Legorreta Arquitectos in 1965, and despite Villagrán's influence on his work, his projects from the 1970s onwards embodied and developed Luis Barragán's philosophy. Yet, Legorreta's projects addressed the urban scale in a way Barragán's architecture did not. Legorreta used massive volumes and forms, creating inward-looking spaces with rich atmospheric values and a deep sense of introspection while considering the local environmental conditions to inform his projects. Legorreta's work embodied and disseminated Barragán's language; however, he is not simply a disciple of Barragán, but his work developed a language of its own, carrying within it his ideological positions and theory (Toca Fernandez 2004a:288-90). In the 1970s and 1980s, Barragán and Legorreta were the best-known architects outside of Mexico.

The building that was a watershed in Legorreta's career was the Hotel Camino Real Mexico City (1968), which was a predecessor to other national and international projects such as the Hotel Camino Real Ixtapa in Mexico (1981; Image 89) and the Children's Discovery Museum de San José (1989) in California. Legorreta's buildings and architectural vocabulary were expressive, and they integrated the country's identity and used its cultural inheritance in a contemporary way.

iii. Individualistic architecture

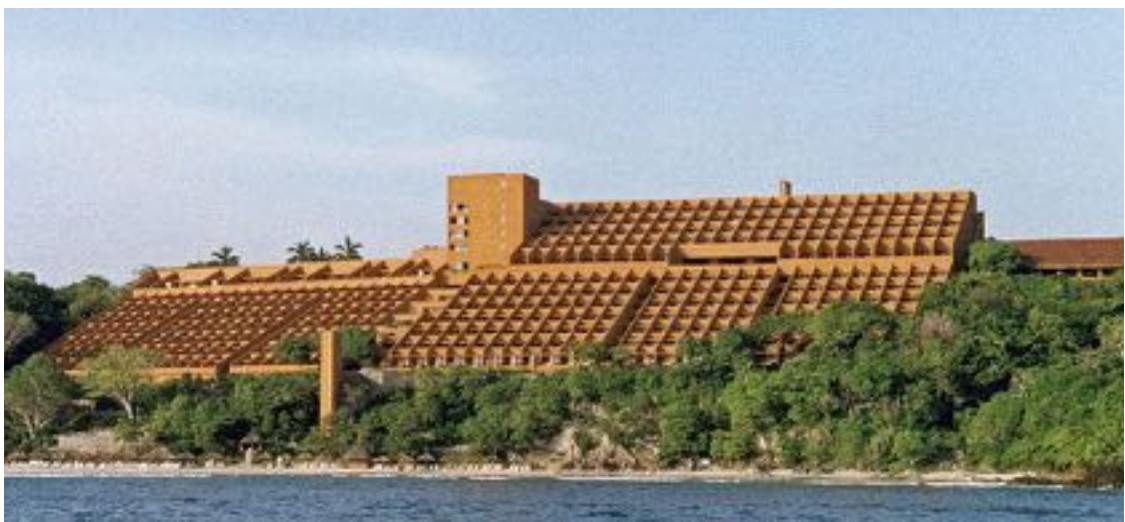


Image 89: Hotel Camino Real Ixtapa, Ricardo Legorreta, 1981.

It is noticeable that architecture embodying Brutalist and Regionalist ideals dominated the 1970s; nevertheless, the postmodern ideals that arrived in Mexico in this decade provided architects with the opportunity to explore and create an array of alternative pathways to create more individualistic work. Architects and designers approached the design of buildings by embracing a particular perspective of reality, hence discarding visions and possibilities that they considered unsuitable to their ethos. Architects' individual perspectives and professional practice were influenced by multiple trends rather than a single unified paradigm, such as what occurred with Functionalism in the first half of the twentieth century. The architects' attitudes towards the built environment adopted a combination of elements from various lines of thinking, hence fusing ideas from rational idealism and formal symbolism with the reinterpretation of vernacular traditions and the use of new technological and novel spatial concepts (Conrado 1990:77-94). The architects who developed individualistic architecture are difficult to categorise as their ethos was a hybrid discourse shaped by a range of ideas, knowledge, perspectives and experiences, which found their expression in formally daring architecture.

For example, the architect Agustín Hernández Navarro had a dynamic formal expression based on a personal interpretation of pre-Hispanic art, the original use of emotive forms reinforced by solid materiality and the creation of fascinating internal spaces in the production of unique, expressive architecture. His buildings proposed a personal expression that embodied strong influences from the Náhuatl past and masterful manipulation of geometrical forms. His work includes the Escuela de Ballet Folklórico de México (1965; Image 90 – overleaf) and the Colegio Militar (1976; Images 91 & 92 – p.257). The latter showed an evident influence of the pre-Hispanic architecture in the use of platforms and large slopes, as well as alluding to the spatial qualities of the indigenous ceremonial centres. Hernández's work had a strong architectural expression and original manipulation of forms and volumes (Rodríguez Viqueira 2009:144).

The plurality of the 1970s embodied postmodernist ideas, but the country never fully embraced and adopted the style. The import of architectural ideas and motives that defined the nineteenth and early twentieth-century



Image 90: Escuela de Ballet Folklórico de México, Mexico City, Agustín Hernández Navarro, 1965.

styles was partially mirrored by postmodern architects gazing back into history to retrieve motives from the pre-Hispanic past. However, the postmodern architecture produced in the USA and Europe did not find fertile ground in Mexico, as the severe economic crisis of 1982 restricted the construction of new architecture throughout the decade. By the time the country's economy had recovered in the 1990s and NAFTA had been signed (1994), Postmodernism had lost its strength, and the movement had fragmented into several discrete formal paradigms: Deconstructivism, High Tech and Minimalism (Carranza and Lara 2014:281-86) and theoretical positions, as demonstrated in the numerous anthologies and compilation explored in chapter 1.

5.5 Into the New Millennium: the 1980s' economic turmoil and the 1990s' political transition

The consistent economic growth displayed in the 1970s, which was fuelled by extraordinary oil revenues, proved to be a fragile mirage of expansion and development that fed the needs of a young and expanding population. Luis Echeverría's (1970-76) presidency championed an ambitious land distribution programme and the



Image 91 & 92: Colegio Militar, Mexico, Agustín Hernández Navarro, 1976.

implementation of an accessible mechanism to obtain financial credits to purchase homes. The two pillars of his government were to provide homes and economic prosperity to the population (Meyer 2010:257-58). In order to address the social programmes and political expectations they generated, the government turned to costly loans from national and international banks, accruing a large financial debt. In the 1970s, the external debt went from 7,627 million USD in 1971 to 18,381 million USD in 1975 and finally to 57,574 million USD by 1980. Echeverría's policy was labelled as 'populist', and his initiatives led the country directly to the financial crisis of 1976, which resulted in the devaluation of the national currency by 130%. The Mexican Peso went from 12.50MXN per 1 USD to 29MXN and created crippling inflation across the nation (Cosío 2003:170-73).

The change of political administration in 1976 brought reforms in the political arena, as José López Portillo (1976-82) created legislative reforms that allowed a number of opposition parties to become officially registered, and the presidency proactively encouraged free speech in the press (de Anda Alanís 2005:181). These changes were the first steps in the political reform that the country needed after the events of 1968. The nations demanded a modern political system and a true democracy where the alternation of political power was a reality rather than the oppressive dominance of a single party. Despite the political and economic stability of the 1960s and early 1970s, the devaluation of the national currency in 1976 generated a context of uncertainty and volatility that resulted in national and international investors losing faith in the country's ability to manage and sustain stable growth (Cosío 2003:173-74). These conditions provided unpredictability in the country, eventually resulting in the financial crisis of 1982.

The prosperity generated by newly found oil and gas deposits in 1977 was short-lived as the country faced the international fall and subsequent levelling of oil prices in 1981. López Portillo's government mismanaged oil revenues, leading to the second national currency devaluation in February 1982, which produced severe inflation and deep recession (Riding 1985:172-86). By August 1982, the Mexican Finance Minister– Jesus Silva Herzog, informed the International Monetary Fund

(IMF) managing director, the US Treasury secretary and the Federal Reserve chairman that the Mexican government was unable to service its debt as the country's cash reserves were exhausted, with only enough cash to cover the country's needs for the next three weeks. Mexico's notice was followed by sixteen Latin American countries that were in a similar position; among them were Argentina, Brazil and Venezuela (Sims and Romero 2013:online).

The IMF and World Bank stepped in and provided loans and restructured the debts of these nations. However, the support was conditioned to the implementation of structural adjustment that ensured the implementation of the neoliberal agenda spoused by these financial institutions (el-Ojeili and Hayden 2006:56-57). Simultaneously, Mexico decided to nationalise the private banking system to avoid its bankruptcy while installing a moratorium on debt services. It started devaluing the national currency to the point that by 1985, the exchange rate was 350MXN per 1 USD. These grave financial conditions led to austerity, high unemployment rates, a decline in per capita income and a deep recession due to negative and stagnant growth. The 1980s decade has been referred to as the 'lost decade' for many Latin American countries (Sims and Romero 2013:online), as governmental budgets were tightened and public expenditure was heavily controlled. This significantly impacted architecture as the government withdrew from investing in public infrastructure and buildings, opening the door to private investment to gradually replace it in this historical role (de Anda Alanís 2005:183 & 2006:236).

In addition to the austerity measures imposed by President Miguel de la Madrid (1982-88) and the financial hardship it brought to the country, on the 19th of September 1985 at 7:18am, Mexico suffered the strongest earthquake in its recorded history. The earthquake was magnitude 8.1 on the Richter scale, with its epicentre on the coast of Michoacan; its path of destruction affected the states of Jalisco, Guerrero, Michoacan and the capital. The earthquake and its subsequent aftershock of magnitude 7.0 on the 20th of September had a death toll of 20,000 people; they partially or totally destroyed more than 2,200 buildings in Mexico City, with another 10,500 buildings severely

damaged and more than 100,000 families left homeless (Buenrostro 2004:online).

The earthquake had a profound impact on architecture and the construction industry as it prompted a series of emergency revisions to the Building Regulations Code for Mexico City. The Building Regulations Code had been in place since 1977, so the immediate revisions addressed the structural safety of constructions in the capital. Subsequently, a fourth edition of the Building Regulations Code was issued in 1987, and it addressed design criteria for Mexico City by considering the impact of seismic coefficients linked to the various types of soils in the city (Buenrostro 2004:online). The 1985 earthquake brought together the nation in a show of national unity and support for the hundreds of families touched by the natural disaster (Meyer 2010:259), and it transformed the way architecture was constructed in the capital.

The end of the decade brought with it the first political victory of the PAN, with the triumph of Ernesto Ruffo (1989-95) in the elections for Governor of Baja California; from this point onwards, the PAN would gain strength across the country which eventually led to the election of Vicente Fox as president in 2000. In the 1990s, Mexico entered the global stage with the signature of the North American Free Trade Agreement (NAFTA) in January 1994, which resulted from three years of negotiations by the government of President Carlos Salinas de Gortari (1988-94).

The economic treaty linked Mexico with Canada and the USA and created an economic bloc with preferential treatment between the three nations. NAFTA embodied the neoliberal agenda espoused by Salinas de Gortari's regime and opened the country's physical, cultural and social borders without granting free movement of workers between the three countries. The treaty positively affected the country as it increased its exports, improved the availability of raw materials, improved job opportunities and attracted foreign investments and corporations looking for investment opportunities. However, small and medium companies that formed the backbone of Mexico's domestic market and were pervasive in the small towns and cities across the country were

directly competing with global corporations (Krauze 2010:266). These businesses struggled to survive the impact of the global economy and gradually were replaced by the outlets of transnational companies, which asserted their presence across the country.

Modernisation and globalisation brought several changes and developments to the country. The global connectivity of financial markets and the movement of goods was accompanied by advances in telecommunications and technologies, which transformed our understanding of space and time. As the world became increasingly connected and interdependent, the perceptions of time and distance shrank as information flowed freely from one continent to another in seconds. The increasing information flows influenced the shaping of cultures, which gradually began to be defined by global aspirations (López Padilla 2011:24-25). In Mexico, some of these developments had a positive impact, as they generated a discussion about the relationship between 'the global' and 'the local'; however, there were adverse effects of these advances, as the difference in socio-economic levels was emphasised and the gap between classes was widening, which produced a clear class segregation. In the words of Octavio Paz, "there exist two Mexicos, one developed, and the other underdeveloped" (1972:284) – one living in the wealthy neighbourhoods of the cities and the other inhabiting the slums of the metropolises.

On the 1st of January, the day NAFTA came into force, the country was shocked by the launch of the Zapatista rebellion in Chiapas in the southeast of the country. This was the first armed conflict since the War of Revolution, and it was led by the Sub-Commandante Marcos, who declared war on the state. The movement searched for the cultural, social and economic vindication of the indigenous population, who had been left in poverty and suffering from endemic racism in the country. After several battles between the army and the Zapatistas, the government proposed a cease-fire and commenced negotiations to find a peaceful political solution to the indigenous problem. The government of Ernesto Zedillo (1994-2000) implemented a number of initiatives to support the indigenous population and had a continuous dialogue

throughout the 1990s and into the 2000s; however, at the end of his six-year period, there was no viable solution to the indigenous plight.

One of the first acts of Vicente Fox's (2000-2006) government was to invite Sub-Commandante Marcos to march into the capital and present a legislative initiative addressing the indigenous concerns in Congress. Marcos marched into the capital and passionately defended the initiative in Congress; nevertheless, the efforts to embed indigenous rights and concerns into the constitution were not supported by the political classes. After this political disappointment, the Zapatistas withdrew to the jungle in Chiapas and lost momentum as a political movement (Krauze 2010:268-69). The Zapatistas' rebellion highlighted the impact of neoliberal initiatives that affected the Mexican underclasses of society, and the conflict contributed to the debate about the effects of globalisation on the country.

The turmoil and conflict in 1994 were increased by severe political unrest caused by the assassination of the PRI's presidential candidate – Luis Donaldo Colosio, on the 23rd of March. This resulted in the PRI nominating Ernesto Zedillo, who had been the Secretary of Education from 1992-93, as the presidential candidate for the 1994 election. He won with 48.96% of the popular vote, and his regime (1994-2000) finally brought openness and transparency into the political apparatus, resulting in meaningful changes to the ruling classes. Examples of the transition in the political arena were the PRI's defeat in the elections for representative for the Chamber of Deputies, so the party lost its majority for the first time since 1920; also, the PRI lost the election for Mayor of Mexico City, which went to the Partido Revolucionario Democrático's (PRD) candidate Cuauhtémoc Cárdenas (Krauze 2010:262).

The country's political and social instability in the 1990s was compounded by the third financial crisis in as many decades, triggered in December 1994 by Zedillo's government devaluing the Mexican peso. Although the initial blame was assigned to Zedillo's government's economic policy and strategy, the root cause of the crisis was found in the previous regime's neoliberal financial approach. The structural changes imposed in the 1980s by the IMF and the World Bank created a

system linked to global markets and international economic indicators; hence, the neoliberal agenda embraced by Carlos Salinas de Gortari's government opened the country to international investment and global input, yet leaving it vulnerable to the synergies and processes of global markets.

Ernesto Zedillo followed the same financial philosophy as his predecessor. However, the mismanagement of peso-denominated short-term debt, whose face value was indexed to the USD, generated a context of uncertainty and fear amongst investors. This resulted in the withdrawal of capital from the country at the start of Zedillo's presidency. The government responded by devaluing the Mexican peso by 15%, which generated further panic and additional capital flight. As the peso-denominated short-term bonds were indexed against the USD, the country could not maintain the repayments, and its reserves were depleted, with the financial system nearly collapsing in 1994 (Truman 1996:online). At this point, the IMF and the US treasury intervened and arranged a 15 billion USD bailout for the country; despite avoiding total collapse, the crisis led to high inflation, unemployment and economic recession throughout the rest of the decade (McKenzie, 2003). One of the most profound results of the crisis was the loss of political credibility by the official party, which had trivialised the identity discourses as populist and demagogic. By the end of the millennium, these discourses seemed to have lost their place in the global reality of Mexico (Dussel, 2004). Its impact was felt across South America as Chile and Brazil experienced the contagion of capital flights that started in Mexico, leading to their own financial crises in 1995.

5.6 The Architecture of the End of the Century (1980s – 2000s)

Between 1920 and 1970, architecture was tightly connected with the different political agendas of each administration; hence, the architectural production happened in state-sponsored public buildings that aimed to elevate and strengthen the political profile of the ruling party – the PRI and its revolutionary doctrine. As explained in chapters 3 and 4, the identity of Mexican architecture in those five decades was defined and manifested in two principles: i. the embodiment of the

social and political demands that emerged from the 1920 Revolution; and ii. the need to modernise the country and benefit from modernity's advances (de Anda Alanís 2000:31-32). From 1920, the search for a national identity informed the architectural debate, so architects sought "to be 'modern' and at the same time 'Mexican'" (Dussel 2004:online); in the threshold of modernity, Mexico embraced its 'mythical' past as the representation of the 'own' – the 'Mexican', and viewed modernity as the embodiment of the 'other' – the 'foreign'. This translated into various styles that attempted to produce a unified identity by responding to the dilemmas of identity and belonging. Nevertheless, as the century progressed and the aspirations for universality were not achieved, the Mexican identity fragmented into a complex network of populist stereotypes. As Octavio Paz wrote in 1985:

The Revolution began as a discovery of our own selves and a return to our origins; later it became a search and an abortive attempt at a synthesis; finally, since it was unable to assimilate our tradition and to offer us a new and workable plan, it became a compromise. The Revolution has not been capable of organizing its explosive values into a worldview, and the Mexican intelligentsia has not been able to resolve the conflict between the insufficiencies of our tradition and our need and desire for universality (1985:168).

It is a double gaze —one looking back to the 'mythical' past while the other looking forward to the modern 'utopian' world ahead of us— that defines the character of contemporary Mexico and creates a melancholic identity.

Between 1920 and 1970, architecture and politics had a symbiotic relationship aiming to establish a national identity. The use of neo pre-Hispanic, neo-Colonial, Functionalism and the international Style ideas responded to the portrayal of a national project that looked either into the country's past for inspiration or the future in search of hope and development. In the middle of the twentieth century, Functionalism captured "the modernness of the post-Revolutionary government and the hope of a new future, a future that would include Mexico among the most 'progressive' countries in the world" (Méndez-Vigatá 1997:61).

Nevertheless, the combination of government-sponsored public buildings and private domestic and corporative architecture in the 1970s and 1980s created a heterogeneous postmodern approach that Méndez-Vigatá described as “diverse but schizophrenic” (1997:63). The financial and political crises of the 1980s and 1990s forced the state to withdraw from its historical role in financing public architecture and infrastructure, hence the construction of schools, hospitals and markets decreased significantly in those two decades. The impact of globalisation in the country from the 1980s onwards meant that private investors gained prominence and eventually replaced the government in constructing Mexico’s built environment (de Anda Alanís 2005:178).

As mentioned in the previous section, the architectural production of the 1980s was curtailed by the financial crisis of 1982 and the earthquake of 1985; these two transcendental situations created a complicated context whereby funding for architectural projects was limited. The few economic opportunities for architects were restricted by the government’s austerity measures, and private investors managed their budgets conservatively. One of the most meaningful projects in this decade was the Universidad Iberoamericana in Santa Fe by Francisco Serrano and Rafael Mijares. The campus was built in two stages – 1987 and 1992, and the project was formed by six buildings organised around a multi-level open-air central square that followed the ascending topography of the site. The project’s master plan was defined by a north-south diagonal axis that created movement from the south buildings into the main square, which was located on the north end of the axis. The square served as a communal meeting place and central distributor to the main campus buildings. The project embodied the architects’ return to the importance of craftsmanship, as the buildings were built in brick, which was designed and used simultaneously as the formwork for the reinforced concrete elements (Carranza & Lara 2014:285; Serrano 2021:online; Image 93 – overleaf).

This increase in private capital resulted in the Mexican architectural scene of the 1990s being defined by private projects and corporative complexes designed to accommodate the arrival of multinational corporations searching for investment opportunities (de Anda Alanís

2005:183). In the last two decades of the twentieth century, architecture was defined by political and financial conditions and by the cultural and social transformations brought in by globalisation. As the world moved increasingly towards a “single network of flows of money, ideas, people and things” (Rennie 2001:10), architecture’s influences became more varied and widespread. After 1994, the influence of international paradigms was rapidly visible in Mexico’s built environment, as a series of commercial centres and middle and high-class suburbs erupted in the outskirts of the main urban centres. Examples of these are Las Lomas de Chapultepec and Santa Fe in Mexico City, which were designed following North American models and prompted Mexicans to coin the phrase “we are not really in Mexico” about these neighbourhoods (Ingersoll 1996:12).

In particular, the business district of Santa Fe was designed to host multinational companies that were investing in Mexico in the late 1980s. Santa Fe is situated in the southwest of Mexico City, and the irony of this enclave of contemporary architecture is that from the 1960s until the 1980s, the area was the largest rubbish landfill in the city; the population that inhabited the area lived in slums that surrounded the



Image 93: Universidad Iberoamericana Campus Santa Fe, Mexico City, Francisco Serrano y Rafael Mijares, 1987 & 1992

open-air garbage site under precarious conditions. The inhabitants of Santa Fe worked as scavengers who collected recyclable and sellable material from the piles of rubbish that the city produced (Ingersoll 1996:13-14).

In the 1980s, the government invested large sums of money to relocate Santa Fe's inhabitants and transform it into a high-end business park. Santa Fe became a kaleidoscope of pretentious architectural statements, and its architectural and urban identities were determined by the construction of high-rise buildings and iconic architecture (Image 94). On the north and southwest boundaries of the neighbourhood, expensive and formally ostentatious housing and apartment towers were constructed, which contrasted with the old Town of Santa Fe, which was predominantly domestic architecture with low income (Ingersoll 1996:13-14). In this area, we witnessed the clash between the two Mexicos that Octavio Paz alluded to; each Mexico embodied an opposing architectural identity. It is a surreal environment where wealth rubs shoulders with misery and poverty (Image 95 – overleaf).

In Santa Fe, buildings like Teodoro González de León's Arcos Bosques Santa Fe (1996; Image 96 – p.269), which is the largest and most ambitious office tower building developed by private investors in Mexico City at the end of the century and Agustín Hernández's Corporative



Image 94: Santa Fe, Mexico City, Contemporary architecture

Calakmul (1997; Image 97 – overleaf), which was designed by using simple geometries (triangle, square and circle), to produced platonic volumes in the formal expression of the building, are in proximity to a variety of humble neighbourhoods and slums perched from the hillside (Image 98 – p.270). These areas are formed by self-built cinderblock houses in permanent and unfinished conditions; these informal urban clusters are a collage of shapes, materials, textures and colours that lack any architectural planning or overall strategy. They represent the 'patched' urban and postmodern architectural identities of the city and embody the hopes of their occupiers (García Coll and Villalobos 2004: 354-57).

Between 1980 and 1994, the government still had “enough money to finance and build infrastructure and public and cultural buildings of regional and national importance” (Dussel 2004). However, 1994 represented a watershed, as the country’s precarious economic, political and social conditions resulted in the government’s further withdrawal from its historical responsibility in providing services and public architecture. The financial crisis of 1994 nearly collapsed the construction industry, and the administrations of Carlos Salinas de



Image 95: Urban landscape in Santa Fe, Mexico City - 'Unequal Scene', 2018



Image 96: Arcos Bosques Santa Fe, Mexico City, Teodoro González de León, 1996.



Image 97: Corporative Calakmul, Mexico City, Agustín Hernández, 1997.

Gortari and Ernesto Zedillo opened the door for the private sector to overtake the government in the creation of architectural, urban and



Image 98: Santa Fe Slums in Mexico City - cinderblock constructions, 2007.

infrastructure projects (de Anda Alanís 2005:199-200).

As the passing away of Carlos Obregón Santacilia marked the 1960s, the 1980s architectural community witnessed the sad loss of some of the main pillars of the discipline: the functionalist masters José Villagrán and Juan O’Gorman died in 1982, and Augusto H. Álvarez did so in 1985. Enrique del Moral passed away in 1987, and as the decade ended, the quintessential Mexican architect Luis Barragán departed in 1988 (Canales 2013).

The neoliberal economic model adopted from the 1980s onwards was accompanied by the adoption of new technologies and the belief in the positive effects these could bring to society. These hopes were embraced by a generation of young architects who used technology in the 1990s to shape the country's ‘novel’ national and international architectural image; it reflected a new type of architectural culture, one closer to the USA and the underpinning philosophies of globalisation. Its architectural identity was neither firmly rooted in tradition nor traced back to the 1950s and 1960s modernist masters; it looked outside the

national boundaries into the international scene and produced works mainly with 'ferrovitreous' techniques, metal tension structures and rationalist layout. This group was known as the Mexican *Tendenza* (Ingersoll 1996:pp11-12). This group of architects was influenced by the 1970s' European High Tech ideas, which arrived on the national scene in the 1980s. High Tech proposed an industrial aesthetic that used new technologies and systems in the construction process, and it adopted technical details as an expressive language (Rodríguez Viqueira 2009:150-51).

Their ideas were best expressed in private dwellings, where they constructed architecture that explored issues of fragility, provisional materials and transparency. Their interests were linked with the chaotic urban phenomenon of Mexico City and the radicalness of its constructions rather than with the past and its traditions (Dussel 2004). These new architects understood the role of Mexico in the twenty-first century and moved away from the prevailing stereotypical Mexican architectural identity defined by monumentality, colour and functionality. The architecture of the 1990s was dynamic as it reinterpreted modernity's ideas and reflected the symphony of sounds, images and ideas coming from the global village. It was "an architecture of variable and even unpredictable canons" (Ricalde 1994:17)

In this group of young architects, several graduates from the Universidad Iberoamericana, such as Enrique Norten, Alberto Kalach and Isaac Broid, joined by Luis Vicente Flores from the ENA (g.1977). They all approached architecture from different angles but with a renewed contemporary perspective. Enrique Norten (TEN Arquitectos) was one of the architects with the most experience within the Mexican *Tendenza*, and he produced some of the most interesting projects nationally in the 1990s and early 2000s. His work was highly expressive and showed international tendencies, which he was exposed to during his Master's in Architecture at Cornell University (1980). He designed buildings composed of eccentric shapes and angles, and used novel technology to resolve the architectural programme and achieve carefully crafted details. His architecture embodied a sense of contemporaneity and generated a sense of technological sophistication. All of these features

were utilised “to involve Mexican architecture in a process of globalization. [...] Norten’s work can be seen as a constant provocation to abandon the chains of folklore” (Ingersoll 1996:11) and to create an architecture that took advantage of the potential of modernity. The architectural image he projected nationally, and internationally, moved away from the traditional conception of Mexican architecture embodied in the architectural language of Barragán and Legorreta. His architecture responded to issues of locality, although he adopted a modern approach to form, volume and materials (Canales and Hernández 2017:202)

For example, these principles can be identified in Norten’s contribution to the Centro Nacional de las Artes (CENART) – the Escuela Nacional de Teatro (1994). The CENART was the flagship cultural and educational project from Carlos Salinas de Gortari’s government and one of the few projects that received state funding in the 1990s. The projects were coordinated by Ricardo Legorreta and contained contributions from Teodoro González de León, who designed the Conservatorio Nacional de Música; Luis Vicente Flores, who was in charge of the Escuela Nacional de Danza; and the Teatro Nacional was executed by Alfonso López Baz and Javier Calleja. The project was controversial as the involvement of numerous architects meant a fragmentary result without a unifying principle (Rodríguez Viqueira 2009:148-49).

The Escuela Nacional de Teatro was defined by the metallic truncated cylindrical roof that sheltered and unified a complex composition of juxtaposed volumes and displaced planes; these forms were materialised through different tectonic qualities (Image 99 – overleaf). Internally, the building was defined by a dynamic composition of various levels, platforms and viewpoints, which were brought together by the overarching cylindrical shell that protected the school's thriving life. The roof was open on one of its sides, allowing natural ventilation and lighting to reach the internal spaces. The roof simultaneously becomes an icon for the cultural facility and an element that is in permanent dialogue with the chaos of the metropolis. Norten took advantage of international trade, so the structural beams were bent into shape in Houston, and some materials were imported from the USA, such as the



Image 99: Escuela Nacional de Teatro, Mexico City, Enrique Norten, 1994.

redwood slats used in southern facades (Ingersoll 1996:11-12; Images 100 & 101 – overleaf).

A contemporary of Enrique Norten, Alberto Kalach moved away from the traditional clichés and stereotypes that dominated the late 1970s and early 1980s architecture and produced projects engaged with the challenges and issues emerging in the capital. He was a founding member of the group *México: Ciudad Futura* with Teodoro González de León, Gustavo Lipkau and José Castillo; the group developed solutions and proposals to improve the city, for example, in 2002 the group proposed the plan *Vuelta a la Ciudad Lacustre* (A return to the city of lakes), which entailed the recovery of the lakes underneath Mexico City (Canales and Hernández 2017:150). Kalach's work has been developed at various scales, from the domestic to urban, and it is based on strong theoretical foundations obtained during his Master of Architecture at Cornell University in 1985 (de Anda Alanis 2005:242)



Image 100 & 101: Escuela Nacional de Teatro, Mexico City, Enrique Norten, 1994.

His early work contrasted local materials (brick and timber) with a modern sensibility and materiality, which was embodied in reinforced concrete, glass and steel structures. Examples of this approach are the House in Valle de Bravo (1994), Negro House (1997) and the San Juan de Letran Tube Station and Public Building (1992-94). The latter stands out from his initial projects as he successfully refurbished one of the tube stations at the heart of Mexico's historical centre, which had been damaged during the 1985 earthquake. Kalach confronted the programme's complexity with an original and sculptural solution; the primary intervention was a tall building constructed in exposed concrete, hosting a circular courtyard that perforated the ground to reveal the circulation to the tube station (Image 102). The courtyard brought natural light and ventilation into the main building's interior spaces. In the station, he reinterpreted the traditional colonial internal courtyard and transformed it into an open window to the sky, limited by curved concrete walls and glass planes. Kalach's reinterpretation of European models and the honest use of materiality – steel, concrete and timber- gave his building a poetic nature (Carranza and Lara 2014:335; Image 103 – overleaf)



Image 102: Estacion de metro San Juan de Letran, Mexico City, Alberto Kalach, 1992.

The Mexican architects of the last decades of the twentieth century and the twenty-first century tend to be interested in the urban conditions and the complexities of large metropolises rather than in the glory of past ideas and methods. Cities are considered palimpsests of meaning, which inform the architectural production and help to define the nation's identity. The debates and questions surrounding Modernism, and the multiplicity engendered by Postmodernism, generated a renewal of the architectural culture that concluded with accepting diversity as a necessary condition of the twenty-first century. Mexico moved away from rigid rules and paradigms and accepted the notion that no absolute concepts can define 'good' architecture anymore (López Padilla 2011:23-24).

At the end of the twentieth century, architects adopted an open attitude towards the influence of 'foreign' tendencies and architects. The conditions generated by globalisation encouraged the arrival of foreign firms to the country. As the arrival of migrating architects and artists enriched the architecture of the mid-twentieth century, a combination of foreign and national ideals produced a syncretism that helped



Image 103: Estacion de metro San Juan de Letran, Mexico City, Alberto Kalach, 1992.

architecture to move forward at the start of the new millennium. The translation of foreign ideas and tendencies into the national conditions was advantageous for the country's architectural culture and aided in the development of architecture. Examples of projects by foreign architects in Mexico City are Cesar Pelli's Residential del Bosque (1997) and Zeidler Roberts Partnership's Torre Mayor (2003); Carme Pinos' Torre Cube (2005; Image 104) was located in Guadalajara, and Chien Cheng Pei, Rossana M. Gutierrez, Robert A. Levy, Victor Viera and Kaveri Singh built the Biblioteca Estatal de Guanajuato (Image 105 – overleaf) in Guanajuato (López Padilla 2011:43-44). At the start of the twenty-first century, cities like Guadalajara, Monterrey and Merida gained prominence in the creation of projects.

The arrival of new perspectives questioned the traditional notion of 'Mexican architecture' as increasingly Mexican architects had the opportunity to undertake postgraduate studies in Europe and the USA, hence bringing back other visions and perspectives. Similarly, globalisation opened the door for Mexican architects to work abroad, so architects like Teodoro González de León, Francisco Serrano, Ricardo Legorreta and Enrique Norten produced good quality projects in Europe and the USA; for example, the Mexican Embassy in Berlin (2000) and



Image 104: Office Block Torre Cube, Guadalajara Mexico, Carme Pinos, 2005

Guatemala (2003) by González de León and Serrano; Legorreta's numerous houses, offices and museums in the USA; and Norten's design projects emerging from his office in New York (López Padilla 2011:46). The projects of these architects took into consideration their context, reflected on the past without being precious about it and adopted 'foreign' influences brought by globalisation; however, despite the crossover of contributions from and into Mexico, the impact of Mexican architecture at a global level remained marginal and the concept of 'Mexican architecture' is still connected with the language used by Barragán and Legorreta (de Anda Alanis 2005:176-77). The picture of Mexican architecture from 1920 to the early 2000s is captured in Diagram 04 (overleaf and Appendix 2), which illustrates the key events in the country and the main buildings and architects of the century.

5.7 Architectural Theory at the End of the Century

Books are the sounding board that materialise the discipline's ideas and concepts, and they are the primary mechanism to disseminate and gradually develop architectural theory and critique. The written word is the



Image 105: The Biblioteca Estatal de Guanajuato, Chien Cheng Pei, Rossana M. Gutierrez, Robert A. Levy, Victor Viera and Kaveri Singh, 2006

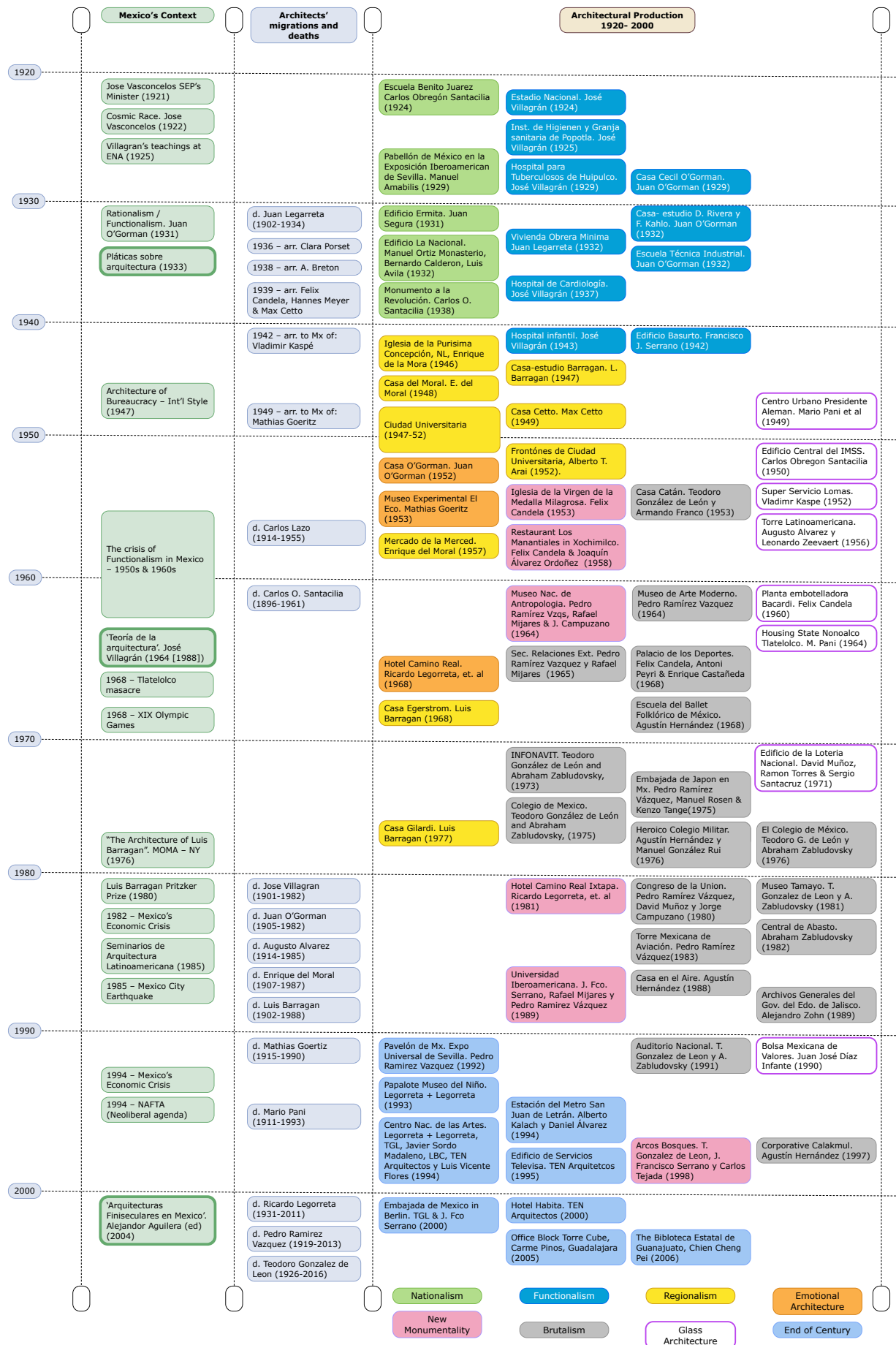


Diagram 04: Mexican Architecture 1920- 2010

essential source of architectural theory, even though theoretical discourses can be found in conversations, debates and events in academic institutions and practices worldwide (Canales 2013:498). Some of these intellectual elucidations might find their way into published material; however, in other instances, they will remain part of the architectural culture of practices and institutions. Architects, architectural academics and authors use publications to articulate and express their line of thinking and to concretise a position vis-à-vis reality. This can be considered the essential role of architectural theory: to underpin all aspects of architecture and contribute to its evolution by providing the foundations from which one can ascertain an architectural stance (Smith 2012:4).

All phases of architecture are presented to a specialised audience, or the general public, through a range of publications adopting different formats: books, edited volumes, monographs, academic journals, illustrated catalogues, magazines and newspaper articles. These written expressions are complemented by other audio-visual manifestations presenting architectural knowledge, such as interviews, documentaries, architectural shows, videos, blogs and other outlets found on online platforms. The body of knowledge that forms architecture is extensive as it encompasses different epistemological areas that use various methods to produce and collect knowledge; architecture includes areas such as design and practice, technology and construction techniques, sustainability and environmental issues and theoretical and historical themes. Hence, architectural publications tend to focus on a well-defined area of study within the larger field of architectural knowledge. The particular focus is usually defined by the author's interests and field of expertise, yet in some instances, institutional and editorial agendas will determine the direction of a publication.

In the case of architectural theory publications, they aim to shape and develop the discipline's thinking by cataloguing, investigating, challenging, reflecting and presenting architectural ideas and manifestoes. Texts usually stand on their own, but they can be accompanied by graphic analysis of projects in the form of visuals, drawings and photographs. It is worth remembering that architectural theory tends to emerge from the reflections and experiences of architects, academics and authors interested

in architecture; therefore, theory is connected with the author's subjective and individual experiences (de Anda 2017). The roots of these publications can be traced to theoretical elucidations and conclusion emerging from the professional practice of an architect(s) or the speculative discourse and critique of a particular body of work or discourse; additionally, publications can be the result of academic endeavours which are tested and presented in colloquia, symposia and conferences in universities and institutions across the world. These events show how architectural theory provides the intellectual foundations and positioning from which to 'construct' a reality of the world that supports the evolution of culture and society (Smith 2012:5); therefore, they are essential to the discipline.

The relationship between theory and praxis is a symbiotic, multidirectional process informed by the tangible and intangible synergies, events and circumstances defining the architects' subjective experiences and objective conditions. This PhD argues that the generation of ideas, manifestos and theories is an essential complement to the practical and constructive aspects of the discipline; this argument has been supported by the proliferation of theories and manifestos questioning, criticising and developing Modernism and Postmodernism's ideas in the second half of the twentieth century (Jencks and Kropf 2006). Furthermore, architectural theory should not be defined as a narrow concept but as one that embraces all aspects of architecture; therefore, theory should include the speculative, artistic, pragmatic, technical, and professional aspects of the discipline, as all of these areas can provide a unique position vis-a-vis reality.

Architectural practice and theory should be supported by an external and internal multidisciplinary dialogue that contributes to generating a robust process to develop and materialise architectural thinking. The external influences should aid in questioning, adjusting or rejecting methods, practices, ideas and paradigms from other epistemological fields. As chapter 1 argued, external paradigms enrich architecture by creating productive disciplinary intersections, such as with the use of post-colonial theory, critical theory and phenomenology (Borden and Rendell 2000). On the other hand, the internal debate should assist in interrogating the discipline's inner conditions and the currency of its core values and

discourses, fostering improvements and innovations that will aid in the profession's evolution. These continuous dialogues should exist to ensure architectural practice and theory remain relevant, current and responsive to the challenge of the era they come to embody and define (Smith 2012:4-6).

At the start of the twentieth century, the publication of theories and manifestos in Mexico was a necessary condition for the construction, development, and cementing of the ideas defining the nationalistic architectural tendencies emerging after the War of Revolution. These theories and manifestos created a functionalist architectural school and shaped the debates on architectural identity at the time. They consolidated the construction of the 'modern' political project by reflecting on the tributaries feeding into the national identity debate and questioned the role of modernity in creating a built environment that embodied the notion of progress (Biondi 2007:129-31; Canales 2013:485-86). Unfortunately, in the middle of the century, architectural theory's development slowed down as architects' attention turned to the construction of the spaces and infrastructure to host the institutions created by modernity. From the 1950s onwards, the theoretical production did not match the increasing pace of architectural production. A strong argument supporting this assertion is that the literature published from the 1940s to the 1970s centred around cataloguing, consolidating and distributing the work of Mexican functionalist masters. Therefore, in the 1950s, historical books and illustrated catalogues dominated the country's architectural publications, as they presented and celebrated the work of Mexican architects while developing the historical narrative of the evolution of the nation's architectural identity (Canales 2013:486).

In the 2017 interview, Alejandro Aguilera pointed out that "there was no theoretical work produced in Mexico at the time, and the majority was related to cataloguing architecture" (2017); he continued by stating that

in the 1950s and 1960s, architectural publications were produced by practising architects who had a theoretical inclination, yet their vocation remained anchored in practice. The result was a body of work published by architects/authors who had a proclivity for writing

and based their literary production on their professional experiences but without a rigorous approach to research (2017).

Aguilera's assertion is supported by the type and quantity of books published in those decades.

The dual role of the architect/author that proliferated in the first half of the twentieth century became problematic towards the end of the century; eventually, its absence became a cause for the decrease in the production of theoretical work. In an interview with Enrique de Anda, he criticised the notion that architects should be "pluri-disciplinary beings that should produce architectural history, should write architecture theory, should create architectural critique and should design and build projects" (2017). For him, the problem of this conception is the wide breadth of these activities, which preclude architects from attaining expertise in all areas simultaneously. In de Anda's opinion, the last architect to achieve this synthesis was José Villagrán (2017). Architect Eduardo Cadaval, who practices architecture in Spain and Mexico, agreed with de Anda's assessment and argued instead for productive collaborations between people, either across groups of individuals, for example between one architect positioned in practice and another in theory, "rather than strive for the combination of all these skills into one single figure" (2019). The collaborations would be beneficial for both parts, as practising architects would be able to instil a theoretical framework to their work, and theoreticians would be connected with the reality of the profession rather than remaining isolated from it. In Cadaval's view, "theory has always existed [...]; without it, we [architects] are only laying bricks together. Theory is a worldview, and it encapsulates all our influences" (2019).

Another important point extracted from the interviews about Mexico was the recognition that the combination of architectural practice and theory, as well as other pedagogic endeavours, has been curtailed by the growth of the main urban centres, particularly Mexico City. The movement between key loci of activities in the capital has become a challenge due to the scale of the metropolis, which has become a barrier to simultaneously engaging in practical, theoretical and pedagogic activities. Enrique de Anda described his experience of travelling from his office in Mixcoac to the Facultad de Arquitectura in the UNAM (6 miles journey) to deliver a two-

hour session as 'challenging'; the impact on his daily planning was 'meaningful', as he needed to block the whole morning for just one class (2017). It is similar for practising architects who traversed the city to reach on-site projects, leaving no time to get involved in academia; as acknowledged by Cadaval, it is difficult to maintain both activities in Mexico as "once you get busy, you basically stop teaching; there is no time to go back and forth from and to the office" (2019).

The lack of availability of architects and academics has fractured the relationships between praxis, theory and teaching. It has obstructed the development of theoretical thinking and the creation of discourses that could have become identifiable schools of thought, such as the cases of José Villagrán's or Luis Barragán's ethos. It has been argued that practising architects develop and articulate their architectural position in their studios while designing and resolving the challenges posed by architectural projects; this is complemented by the conversations and debates occurring within and outside their studios. In the past, architects would communicate and disseminate those ideas in publications and, most importantly, through their teachings; however, the connectivity of these activities has decreased in the twenty-first century. For example, Teodoro González de León and Ricardo Legorreta did not hold a permanent teaching position in any of the country's academic institutions, so they did not disseminate their architectural position through academia but via architects who worked in their offices and subsequently set up their studios (de Anda 2017)

5.8 Architectural Publications – a vehicle for architectural thinking and debate (1960s – 2000s)

In the book *Arquitectura en México: 1900-2010. La Construcción de la Modernidad: Obras, Diseño, Arte y Pensamiento* (2013), Fernanda Canales split the country's architectural publications of the last century into six thematic maps: i. books published in Mexico; ii. books published overseas; iii. monographs; iv. books about Mexico City; v. magazines; and vi. essays. Her classification was based on key ideas and manifestos, rather than through particular architects or buildings; it aimed to project the country's architectural image from within and outside the country (2013:483). Her categorisation demonstrated in-depth knowledge of the body of work

published about Mexican architecture in the twentieth century; nevertheless, it highlighted two critical issues: on the one hand, it was geared towards the work produced in Mexico City, as demonstrated by devoting one section to this area; and secondly, there was not enough recognition of the academic and theoretical work produced in the country. Due to these factors, the categorisation will be rebalanced into five thematic groups for this thesis: i. architectural history; ii. architectural theory; iii. monographs: architects and buildings; iv. magazines and illustrated catalogues; and v. academic journals and essays. This five-part division will help to materialise the relationship between the type of architectural literature published and the state of theoretical thinking in the second half of the twentieth century.

i. Architectural history

In the 1950s and 1960s, most books and articles published about Mexican architecture, nationally and internationally, were historical accounts that portrayed its development, described the conditions that defined it and constructed the country's historical narrative. José Villagrán published two brief historical texts on Mexican architecture: *Panorama de 50 Años de Arquitectura Mexicana Contemporánea* (1950), and the revised and expanded version, *Panorama de 62 años de arquitectura mexicana contemporánea (1900-1962)* (1962). These two articles were joined by the *Guía de arquitectura mexicana contemporánea* (1952) by Lorenzo Carrasco and Guillermo Rossell and *50 años de arquitectura mexicana, 1900-1950* (1952) by Carlos Obregón Santacilia. In 1956, Pedro Ramírez Vázquez edited the seminal book *4000 años de arquitectura mexicana*, which is considered one of the most influential compendiums about Mexican architecture of the middle of the century and a meticulous account of the historical roots of Mexican architecture. Nearly a decade after Ramírez Vázquez's book, Israel Katzman published *Arquitectura contemporánea mexicana: precedentes y desarrollo* (1964), which was the most complete investigation of the emergence and development of Mexican modern architecture. Katzman also published one of the most important books about nineteenth-century architecture: *Arquitectura del siglo XIX en México* (1973 [1993]). These two decades were seminal in producing

architectural history books that captured and documented the development of Functionalism in the country.

There were no architectural history books published in the 1970s; however, the last two decades of the twentieth century saw the resurgence of this type of publication in the country. Antonio Toca Fernández published *Arquitectura contemporánea en México* (1989) and *Nueva arquitectura en America Latina: Presente y Futuro* (1990); these two books were followed by Fernando González Gortázar's edited volume *La Arquitectura mexicana del siglo XX* (1994 [1996 & 2004]), which gathered the work of multiple academics and architects to construct the historical narrative of Mexican architecture. One of the most prolific authors and architectural historians from the 1980s onwards has been Enrique de Anda Alanís. In the 2017 interview, he acknowledged that his professional endeavours have been "fully dedicated to architectural historiography, and to understand architecture's problems from the point of view of history. History comprehended as a totality and not only ancient events" (2017). De Anda has published numerous books on this field in the last four decades, for example, *Evolución de la Arquitectura en México: épocas prehispánica, virreinal, moderna y contemporánea* (1987), *Historia de la arquitectura mexicana* (1995 [2006]) and *Una mirada a la arquitectura mexicana del siglo XX (Diez ensayos)* (2005).

A number of books authored by foreign architects and historians were published in the 1950s and 1960s; these publications captured the image of Mexican architecture from abroad and presented it to an international audience. In New York, Irving Evan Myers published *Mexico's Modern Architecture* (1952) with texts from architects Enrique Yañez and Richard Neutra, and three years later, Henry-Russell Hitchcock produced *Latin American Architecture since 1945* (1955). In the middle of the 1960s, the Argentinian Francisco Bullrich included Mexico in his book *Arquitectura Latinoamericana, 1930-1970* (1966), and Clive Bamford Smith published *Builders in the Sun: Five Mexican Architects* (1967). Bamford Smith's book adopted a historical perspective but could also be considered a monographic volume. These publications were accompanied by three issues across four decades of the French journal *L'Architecture d'Aujourd'hui*: num. 59 – *Architecture Mexicaine* (1955) and num. 109 –

Mexico (1963), both edited by Andre Bloc and num. 288 – *Mexique* (1993) published by Francois Chaslin.

There was a renewed interest in Latin American architecture from the middle of the 1980s. Mexico was included in several publications, for example, Ramon Gutierrez's *Arquitectura Latinoamericana en el siglo XX* (1996), *Beyond Modernist Masters: Contemporary Architecture in Latin America* (2010) by Felipe Hernandez, and *Modern Architecture in Latin America: Art, Technology, and Utopia* (2010) by Luis E. Carranza and Fernando L. Lara.

In 1997, Edward Burian edited *Modernity and the Architecture of Mexico*, which straddled historical and theoretical themes. The book was a historical compilation of essays by academics and architects that analysed the works and ideas of several Mexican architects from the first half of the twentieth century, such as Carlos Obregón Santacilia (1896-1961), Francisco Serrano (1900-1982), Juan O'Gorman (1905-1982) and Mario Pani (1911-1993) among others. In Burian's view, "[...] relatively little has been published in English regarding this era of Mexican architecture, and virtually nothing in terms of critical commentary" (1997:7); hence, the book attempted to deal with the intersection of architecture and modernity by looking at architects, buildings and their discourses. The essays acted as critical commentaries that untangled modernity's ideological influence in the country and the profession.

Another essential publication at the start of the millennium was Enrique de Anda Alanís' edited volume *Ciudad de México: Arquitectura 1921-1970* (2001), which accompanied the namesake exhibition that took place in Mexico (July 2000) and Seville (November 2001). The book is a collection of essays by leading academics and architects (Ramón Vargas Salguero, Gustavo López Padilla, Rodolfo Santa María and Carlos González Lobo) who explored the socio-economic, political, cultural, architectural and urban conditions that supported the development of modernity in Mexico and its capital. Despite the narrow geographical focus of the publication – Mexico City, and the temporal boundary – 1920 to 1970, the various contributors approached the topics by adopting a broader perspective to construct a general picture of the prevailing conditions in the country rather than just in the capital.

Lastly, one of the most recent books that attempted a comprehensive historical account of Mexican architecture was *Arquitectura en México: 1900-2010. La Construcción de la modernidad. Obras, Diseño, Arte y Pensamiento* (2013) by Fernanda Canales. The two-volume edition explored in depth the historical development of architecture in Mexico and constructed a narrative that reflected the rich and heterogeneous context of Mexican architecture. The book was accompanied by an exhibition in 2015, which showcased selected projects of 160 architects. Canales' analysis and interpretative approach were based on a broader vision of design and architecture in the country, and she attempted to widen the geographical boundaries of the book by including architecture produced outside the capital. Despite its inclusive intentions, one of the critiques of the book is that it was based on a single author's narrative that represented one perspective and interpretation; this contrasted with previous edited books, such as González Gortázar (1994), Burian (1997) and de Anda (2001 & 2005), which encompassed the voices of several authors and generated a more balanced interpretation of the country's architecture.

ii. Architectural Theory

As argued in chapters 3 and 4, at the beginning of the twentieth century, architectural theory books and articles were essential elements for the development of the country's architecture; however, by the middle of the century, architectural history books gained prominence and accounted for the main type of publications in the nation. From the 1970s onwards, architectural literature was defined by illustrated books and monographs depicting and disseminating the work of Mexican functionalist masters. The shift of emphasis highlighted the transformation of priorities in each era and the weakening of architectural theory as the century unfolded. The last century started with the generation of ideas and debates, moved into cataloguing and consolidating architectural knowledge and culminated in the celebration and dissemination of the work of the most representative architects of the country (Canales 2013:486).

As elaborated previously, from the 1950s onwards, the production of manifestos and theoretical texts did not match the pace of either the publication of historical volumes or the construction of buildings. The

analysis of architectural history books and theoretical volumes published in the last third of the twentieth century and the first decade of the new millennium highlighted that architectural history and theoretical publication fused after the 1960s (Conrado, 1990; Adria, 1996; Aguilera, 2004; González Gortázar, 2004; de Anda Alanís, 2005 & 2006; López Padilla, 2011; Canales, 2013); this meant the reduction of theory to a historical narrative of architectural movements and tendencies. The historical books increasingly became accounts of the past without a critical approach or vision for the future. Canales argued that in Mexico, the divorce of theory and practice at the end of the century meant that architectural theory had become nothing more than an accessory for practice at the start of the twenty-first century (2013:498-501).

Some of the key theoretical publications in the 1950s were Mathias Goertiz's *Arquitectura Emotional* (1953), which was a manifesto postulating the need to transition from functionalist architecture to a renewed vision of Mexican architecture defined by tradition and emotion, and Alberto T. Arai's article *Caminos para una arquitectura mexicana* (1952) that illustrated his theoretical position and ideals to produce architecture that responded to its time. In 1961, the German architect Max Cetto published in New York the book *Modern Architecture in Mexico* (1961), which provided an insightful analysis and diagnosis of the architectural situation in the country; his book was followed in 1964 by the publication of José Villagrán's theoretical edifice, which was encapsulated in the book *Teoría de la Arquitectura* (1964 [1980]). This book cemented Villagrán's architectural doctrine in the profession and articulated years of teaching architectural theory at the ENA in a single source. Luis Barragán's Pritzker Prize acceptance speech in 1980 was a short text expressing a clear theoretical position.

At the end of the century, Israel Katzman published his book *Cultura, diseño y arquitectura* vol.1 (1999) and vol.2 (2000), which compiled his teachings on architectural theory from the 1950s onwards at the ENA and Universidad Iberoamericana. The two volumes advocated a wider understanding of architecture beyond reducing buildings to a functional or aesthetic dimension. In Aguilera's view, "Katzman's book is the only theoretical work in the last 30 years" (2017), as the country lacked a systematic critique, reflection and interpretation of architecture. In the

1980s and 1990s, architectural theory publications were absent in Mexico, and increasingly, the production of illustrated magazines, catalogues and monographs replaced the creation of ideas with visual content accompanied by architectural descriptions (López Padilla 2011:27-31). This is exemplified by the lack of translations into Spanish of the anthologies, compendiums and edited books discussed in chapter 1, which demonstrated that these theoretical publications did not arrive in the country in these decades and had a minor impact on determining theoretical thinking in Mexico as they were accessible to a minority of architects and academics. In *Arquitectura Contemporánea: Arte, Ciencia y Teoría* (2008), Catherine Ettinger-Mc Enulty and Salvador Jara-Guerrero elaborated on the lack of publications and stressed the importance of theory in architecture (2008:12).

The decrease in prominence of manifestos and theoretical texts post-1960s raised questions about the importance of architectural theory in Mexico and its role in practice. Some commentators suggested that the rejection of certain areas of theoretical thinking in Latin America was the result of the notion that philosophy and architectural theory have their origins in, and have been developed by, the American and European intelligentsia (Hernández, Millington & Borden, 2005). Hence, these discourses were considered foreign imports into Latin America and symbolised an environmental neo-colonialism designed to foster dependence on the advanced nations of the West. For example, in Mexico, this dependency can be identified in Functionalism's and Postmodernism's connections with European and North American paradigms and exemplary projects; despite the hybridisation of these discourses within the national context, there was a cultural dependency from their inception that was highlighted by the uncritical adoption of forms and ideas from abroad (Vejar Perez-Rubio 2007:96-97).

It can be argued that the uncritical adoption of foreign models is the result of the absence of theoretical frameworks that can generate a critique and resistance to the imposition of ideas, forms and techniques. This void is also attributed to the change in the understanding of the role of architectural theory in Mexico. As Alberto Pérez-Gómez pointed out, at the start of the twenty-first century, the understanding of theory in Mexico is

fundamentally instrumental, or in other words, it should be of direct consequence in practice (Burian, 1997:p.22-24). In Mexico, architectural thinking is pragmatic and instrumental, not speculative and theoretical; this instrumentality exposes the discipline to the import of foreign architectural discourses brought to the country by globalisation.

It is encouraging to recognise that the critical intellectual skills required to question and resist foreign impositions have started to emerge in Mexico with the establishment of postgraduate degrees in the 1980s; these are complemented by the subsequent proliferation of architectural research, reflection and critique in the 1990s and 2000s (Aguilera 2017). It is important to stress that the cultural dependency described above is not exclusive to Mexico, as other Latin American countries experienced the same conditions imposed by globalisation. These circumstances are perpetuated by the control of the means of communication by developed countries; as López Padilla stated, "industrialised countries, which possess and control the majority of the means of communication, have used these conditions to continue imposing their models of development, economy and lifestyle, through the world of images" (2011:30). The homogeneity of a universal global culture contains the dangers of losing local traditions and levelling the cultural richness in each country, for example this was embodied in the architecture of Santa Fe, in Mexico City, and the urban experience of its inhabitants who coined the expression – "we are not really in Mexico".

iii. Monographs: architects and buildings

In the last three decades of the twentieth century, two of the principal types of publications were Mexican architects' biographies and monographs of particular buildings. These publications focused on the description, dissemination and consecration of exemplary architects and their oeuvre; however, they lacked a critical component or theoretical position onto which anchor these architects (López Padilla 2011:30). The exploration of the work produced by determined architects highlighted the increasing interest by society, and the public at large, about architecture towards the last third of the century. The architects with the most monographs at the end of the twentieth century were Luis Barragán, Mario Pani, José Villagrán, Teodoro González de León, Abraham Zabludovsky, Ricardo

Legorreta, Pedro Ramírez Vázquez, Juan O’Gorman, Mathias Goertiz and Félix Candela (Canales 2013:487).

iv. Magazines and illustrated catalogues

Magazines and illustrated catalogues were essential in capturing the development of architecture in the previous century. These publications included architectural news, critiques, challenges and concerns on their pages. Architectural production can be read through magazines, as they printed the styles and new architecture of each period on their pages and publicised the most representative architects of the century. An account of the most important magazine of the twentieth century in Mexico was done in section i.5 of this thesis; however, it is important to remember the names of the most influential ones: *El Arquitecto* was established by SAM to promote the profession and was published between 1923-27 and 1932-36; Federico Sanchez Fogarty exalted the virtues of reinforced concrete in his two magazines – *Cemento* (1925-30) and *Tolteca* (1929-32); *Mario Pani edited Arquitectura/México* and it was the longest tenure magazine in the country in the twentieth century as it was published between 1938 and 1978. *Obras* (1973-today) and *Arquitecto* (1976-83), the latter edited by Carlos Somorrostro, dealt with the nature and challenges of the profession.

In the 1990s, a group of magazines emerged from the economic difficulties of the 1980s, and these were *Arquitectura a*, which was edited by Adriana León and Isaac Broid from 1991 to 1993 and *Arquine*, edited by Miquel Adrià from 1997 to today. These magazines, in various degrees, informed society about the benefits of architecture and contributed to the architectural debate of each era; nevertheless, at the end of the century, publications of this type resorted to the seductive effect of visuals and photographs and dismissed the critical element that should have contributed to the construction of an architectural culture and intellectual position. Globalisation deeply impacted the transmission of these publications, as digital technologies have disintegrated national boundaries and facilitated the dissemination of publications at a global level. The availability of magazines, architectural literature, and other audio-visual expressions presented new challenges to architects, academics, and the general public. Access to a wealth of information through the World Wide

Web has demanded a more rigorous effort to critique, identify and judge trustworthy material (López Padilla 2011:29-30), so the task for architects has increased to discern and find relevant information amid a torrent of possibilities.

v. Academic journals and essays

In parallel to magazines and illustrated catalogues, several academic journals were published in Mexico in the second half of the twentieth century; each covered a different period and adopted particular themes, depending on the ideals of its founders and editors. These journals were listed in section i.5 together with the magazines. It is relevant to point out *Cuadernos de Arquitectura* (1961-66 & 1970-86), which was initially edited by Ruth Rivera, and published by the Instituto Nacional de Bellas Artes (INBA)/Secretaría de Educación Pública (SEP); the journal contributed to creating the architectural culture of the country. As with magazines, the financial crisis of the 1980s produced a hiatus in the publication of journals; however, Humberto Ricalde managed to edit *Traza* (1983-86) and published several issues in the 1980s.

The 1990s witnessed the return of *Cuadernos de Arquitectura – Docencia* (1991) edited by the Facultad de Arquitectura at the UNAM, and *Arquitectura Crítica/ArquiTectónica* (1997), which the Departamento de Arquitectura y Urbanismo of the Universidad Iberoamericana edited. The journal *Bitacora Arquitectura* (1999) was published by the Facultad of Arquitectura at the UNAM and directed by Juan Ignacio del Cueto. These three journals were produced by two of the most important universities in Mexico and covered academic, professional and design themes. If books were the best way to understand the architecture of the first half of the twentieth century, then magazines, conferences/symposia and academic journals were the most direct sources to comprehend and map out the evolution of ideas in the last third of the twentieth century (Canales, 2013).

The establishment of postgraduate courses in the 1980s and the increasing amount of research in the 1990s were mirrored by conferences, symposia and a growing network of events that honoured architectural thinking and practice, for example, the *Bienal Nacional de Arquitectura Mexicana*

(BNAMX) was established in 1990. It aimed to celebrate, reflect upon and disseminate nationally the architecture of the country; for nearly three decades, theorists, academics, and critics have gathered every two years to judge and reward the best architectural projects across the nation (Rodriguez Viqueira 2009:152). The event's longevity indicates the discipline's appetite and need for debating architecture and reflecting on the direction of the discipline. One criticism of the event would be that its final product has been an illustrated catalogue with descriptions of the projects (BNAMX online). However, these publications have not contained a critical analysis or summary of each period's dominant positions and discourses (de Anda 2006:247). This has prevented a reflective exercise connecting the lines of thinking between events.

Conferences and symposia are other avenues that have embodied the discourses that dominated Latin American and Mexican thinking. The *Seminarios de Arquitectura Latinoamericana* (SAL) provided a profound reflection on the connections between architecture, modernity and identity in the 1980s; these themes were explored in Cali (1980), Buenos Aires (1984-85), Manizales (1987) and Tlaxcala (1989) (Biondi 2007:116-17). The SAL has continued fostering Latin American architectural debate and has produced seventeen gatherings between 1985 and 2018. Other international conferences and seminars of note are those organised by the publisher Arquine. These events have included professionals and academics from other disciplines, who have contributed to creating a broader understanding of the conditions influencing architecture and urbanism. An example of these seminars was the July/August 2020 series on Mexican modern architecture, which had presentations by Juan Manuel Heredia ["The first Modern house in Mexico"], Luis Carranza ["Transparency and the international style"], Juan Ignacio del Cueto ["Architecture and exile: Félix Candela"], Georgina Cebey ["Architecture and Failure"] and Miquel Adrià ["Mexican architects following the path of Le Corbusier"]. The events have not produced printed records of their discussions, which has impacted their ability to generate further analysis and critique (López Padilla 2011:29).

Another forum that has championed architectural critique and history is the *Foro de Historia y Crítica de la Arquitectura Moderna* (FHCAM), organised

in 2003 by the Facultad de Arquitectura at the UNAM and the Departamento de Arquitectura y Urbanismo of the Universidad Iberoamericana. Enrique de Anda and Alejandro Aguilera founded the forum to gather architects, academics, and critics and provide a platform for discussing architectural history and criticism. Since its inception in 2003, there have been nineteen forums hosted by national universities in different states, such as Michoacan (2007), Merida (2009) and Guanajuato (2010). The forum has become an international platform with participants from Latin America and Europe (FHCAM online 2023). Lastly, in 2000, Alejandro Aguilera organised the colloquium *Arquitecturas Finiseculares en México*, which brought together 21 architectural academics and authors to discuss the state of contemporary architecture in Mexico. The event produced the namesake book published in 2004, which will be discussed in the next section.

The theoretical discourse in Mexico from the 1950s onwards revolved around the conflict produced by (i) Functionalism's transformation into the international style, (ii) the discussion about 'general' and 'local' and (iii) the relationship between Modernism and tradition. However, in the 1980s, the arrival of postmodern thinking generated a fragmentation of concepts that resulted in a variety of architectural expressions, which moved away from modern canons, such as brutalism and regionalism architecture, or created a critical re-interpretation of modernity through deconstructivist and high-tech buildings. Additionally, the discussions at the end of the twentieth century interrogated the place of Mexico in the global scene, as an increasing number of architects have done postgraduate studies abroad, bringing back the ideas espoused by other international institutions. It is also worth noting that international architects have built projects in the country; therefore, architects and theoreticians have asked themselves: What is 'Mexican architecture'? A summary of the publications discussed in section 5.8 has been captured in Diagram 05 (overleaf and Appendix 3), which materialises the production of written work from 1920 to the 2010s in the country.

5.9 Arquitecturas Finiseculares (2000s)

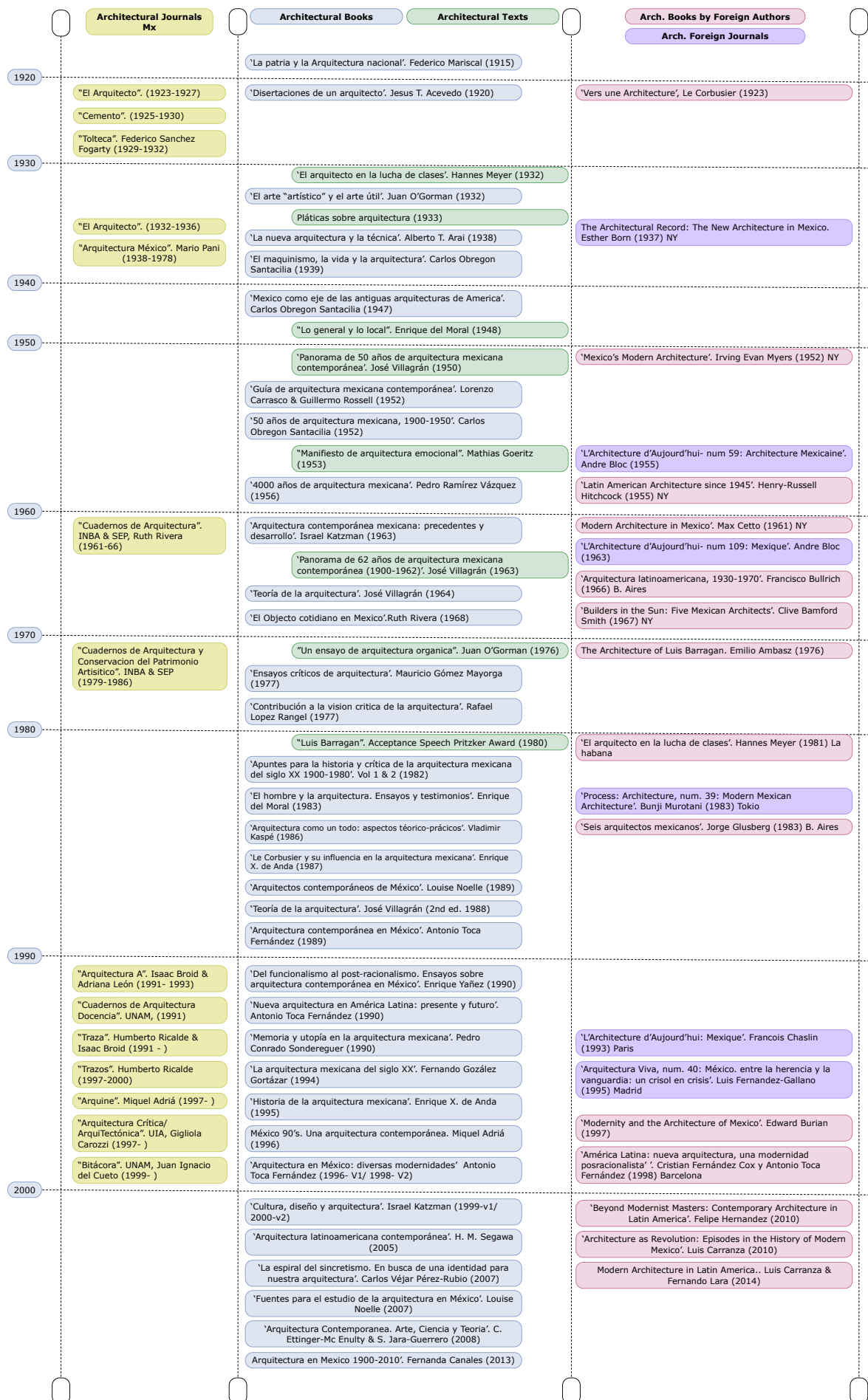


Diagram 05: Mexican Architectural Publications 1920 -2015

On the 12th May 2000, twenty-one researchers and academics gathered at the Universidad Iberoamericana campus Santa Fe to debate the state of contemporary Mexican architecture at the turn of the century. The participants belonged to a range of institutions, hence providing a cross-section of ideas and views; the contributors were: Carlos González Lobo (Facultad de Arquitectura [FA] UNAM), Rafael López Rangel (UAM – Azcapotzalco), Sara Topelson (INBA), Ramon Vargas Salguero (FA UNAM), Louise Noelle (Instituto de Investigaciones Estéticas [IIE] UNAM), Alejandro Ochoa (UAM – Xochimilco), Antonio Toca, Juan Palomar (ITESO), Enrique de Anda (IIE UNAM), Héctor García Olvera (FA UNAM), Miquel Adrià (Arquine), Ernesto Alva (FA UNAM), Alejandro Hernández (Arquine), Humberto Ricalde (FA UNAM), Rodolfo Santamaría (UAM – Xochimilco), Victor Arias (UNAM), Juan Dolores (Ad-Hoc magazine), Carlos Ríos Garza (IPN), Manual Larrosa Irigoyen (Anahuac del Norte), Juan Ignacio Barragán and Alejandro Aguilera (UIA). The colloquium was structured around eight questions sent to the participants in advance, together with the book *Mexican Architectures* (2000), to establish a common base. The questions were based on the book and were used to inform the event's discussions. Alejandro Aguilera edited the publication and it was an illustrated book containing a wide range of projects from across the country and reflecting on the current condition of the country; in the words of Alejandro Aguilera, "the book included all kinds of projects, some I did not like them, but I tried to showed a balanced sample of projects and geographical locations" (2017). The outcome of the colloquium was the book *Arquitecturas Finiseculares en México* (2004) which collated the responses of all the contributors and transcribed the colloquium's debate (Aguilera 2004:13-14).

The colloquium's eight questions were:

- i. At the end of the century, the architectural landscape showed a great range of architectural expression, some of which critics outrightly qualified as non-architecture; in the book *Mexican Architectures* (2000), architecture has been grouped into two large categories: rationalist and expressive, with some subdivisions within each group. So, how do you explain the existence of architectural practices with different formal languages?

- ii. Is there a divorce between society's demands and the architectural proposals produced at universities?
- iii. Which compositional tendencies did you identify in Mexico at the end of the century? And how developed are they?
- iv. Do you find any aspects from architectural practice that characterise our development, alongside other countries with emerging economies? What are these characteristics?
- v. As per Charles Jencks' assertion, is it true that the Modern movement died on the 15th of July 1972 at 3:32 pm?
- vi. Why don't our architectures manifest a meaningful interest and concern for protecting the environment?
- vii. Do you think architectural education in Mexico has an adequate focus? Which challenges should universities respond to?
- viii. In your opinion, which are the 25 most significant buildings in Mexico during the twentieth century? (Aguilera 2004:17-18).

The questions posted by Aguilera reflected key concerns that could be summarised in three main areas: firstly, an attempt to catalogue Mexican architecture at the end of the century – questions i, iii, v and viii; then, a reflection on the focus and role of architectural education in forging a connection between contemporary architecture and society – questions ii and vii; and finally, the challenges faced by architecture in countries with emerging economies – questions iv and vi. The analysis of the eight questions revealed a historical emphasis and an interest in cataloguing architecture at the end of the millennium; hence, the questions embodied a vital omission: the event did not ask the attendees to elaborate or define their theoretical position, as most of the questions were linked with history rather than theory.

It is not the intention of this thesis to reproduce the responses of the twenty-one participants, as the breadth and complexity of their answers created an interconnected network of ideas and points of view; instead, the thesis will adopt the three themes proposed above to review the responses and colloquium's dialogue to elaborate the emerging lines of

thinking, as well as to point out their differences. Stefani Biondi arrived at a similar conclusion about the colloquium's connectivity of ideas in her publication *Una visión hermenéutica de la teoría de la Arquitectura en México* (2007:158), and her book was a valuable sounding board for the development of this section.

i. Mexican architecture at the end of the twentieth century

The researchers and academics agreed on the notion that the hegemony of the Modern movement had ended, as the world had adopted ideals from the postmodern movement in the 1980s and 1990s. They acknowledged that postmodern thinking had failed in Mexico, hence triggering a re-evaluation of modernism's paradigms. Irrespective of their stand on the 'death of the Modern movement', they recognised that a line of thinking still exists in Mexico that embodies the ideals of the modern movement. Sara Topelson expressed this view by stating that "the modern movement hasn't died. [...] after the failure of postmodernism as an international trend, there has been a revision of the plastic elements of modernism" (Aguilera 2004:24). In Aguilera's *Mexican Architectures* book, the revised modern strand was labelled 'rationalism', and it encompassed a group of buildings with a well defined aesthetic proposal.

Rationalism developed in parallel to numerous formal tendencies, which were difficult to group under one single title, so Aguilera grouped the various manifestations of alternative formal languages under the term 'expressionist', which was presented in opposition to rationalism (Aguilera 2000). The book proved controversial amongst all the contributors to the colloquium as they disagreed with the conceptual principle of a multiplicity of architectures and with the two categories (rationalism and expressionism) used by the author to catalogue Mexican architecture. For example, Antonio Toca offered the alternative term 'eclecticism' to replace the notion of expressionism (Aguilera 2004:17), whereas Alejandro Hernández (Aguilera 2004:81) and Humberto Ricalde (Aguilera 2004:118) opposed Aguilera's classification as they considered it restrictive and reductivist in essence. Ramon Vargas Salguero rejected the outdated notion that some of the architectures encompassed within the expressionist group could not be

qualified as architecture, so he disagreed with the category (Aguilera 2004:114-15). Rodolfo Santamaría accepted the term rationalism, but he was not convinced about the efficacy of the expressionist classification, as "it didn't account for the other architectures that are produced in the country" (Aguilera 2004:89).

Some of the other participants, such as Victor Arias (Aguilera 2004:41) and Juan Palomar (Aguilera 2004:51), discarded the proposed classification and suggested different criteria which involved the compositional analysis of works of architecture or tracing back the origins of the canons of Mexican architecture. Enrique de Anda, Carlos González Lobo and Louise Noelle propose other labels such as 'signature architecture', 'eloquent', 'congruent', and 'regionalist'; Louise Noelle used the latter concept and it gathered meaningful support among architects, as it is not a "visual or formal expression, but it indicates a way of approaching architectural solutions" (Aguilera 2004:97) – it is an attitude more than a style.

Overall, there was no consensus about the classification of architecture in the country at the turn of the century, and the attempt to produce a taxonomic division was a cause of discomfort and debate amongst the members of the colloquium. In the 2017 interview, Aguilera described how critical and confrontational the discussion around the idea of multiple architectures was, as the attendees queried, "Why Mexican architectures if there is only one Architecture?" (2017). The plurality of views and approaches at the end of the twentieth century is interpreted as a testament to the influence of postmodern thinking in the Mexican architectural scene. This was mirrored when the attendees focused on discussing compositional tendencies and languages. In most cases, the authors attempted to produce a classification to organise the multiplicity of formal tendencies; however, Victor Arias (Aguilera 2004:42) and Enrique de Anda (Aguilera 2004:63) argued that it would be difficult and dangerous to classify them without the benefits provided by the distance granted by time elapsed. Ramón Vargas Salguero (Aguilera 2004:116) and Humberto Ricalde (Aguilera 2004:119) found the debate unnecessary and were critical of the attempt to divide these expressions

while the profession was traversing a period of transformation and revision.

ii. Architectural education, contemporary architecture and society

All the participants agreed that a 'divorce' exists between the work produced in academia and society; however, there were meaningful variations in terms of the degree and type of separation between them. Antonio Toca (Aguilera 2004:18), Sara Topelson (Aguilera 2004:22), Manuel Larrosa (Aguilera 2004:47-48), Carlos González Lobo (Aguilera 2004:69) and Rodolfo Santamaría (Aguilera 2004:89) stressed that there is no engagement between the universities and the different communities that form Mexican society; they considered that often, architectural exercises are geared to develop creativity and visual solutions, rather than developing awareness about society's needs and problems. Juan Palomar (Aguilera 2004:53), Alejandro Hernández (Aguilera 2004:84), Héctor García Olvera (Aguilera 2004:106-07) and Ramón Vargas Salguero (Aguilera 2004:115) argued that the separation is the result of designing and imitating architecture that aims to satisfy the demands and requirements of a reduced, yet dominate, sector of society and the impact of capitalism in the discipline.

Other voices in the colloquium agreed on the existence of a divorce between academia and society; however, they advocated for a more balanced understanding of the responsibility and reach of academic endeavours. Ernesto Alva (Aguilera 2004:37), Victor Arias (Aguilera 2004:42) and Carlos González Lobo (Aguilera 2004:69) were measured when they pointed out that it was not the sole responsibility of universities to instil social awareness and to try to resolve society's problems. Ernesto Alva and Miquel Adrià (Aguilera 2004:101) stressed that the projects produced at universities should be experimental and creative but connected with social themes. Finally, Humberto Ricalde (Aguilera 2004:119) changed the debate by shifting the emphasis from a divorce between academia and society to an insightful questioning of the role of universities in creating an understanding and reflection about 'society's demands'. He asked a broader question: how can academia

generate an architectural culture that encourages a reflective response to society's demands through the creative endeavours of architects?

All the colloquium participants condemned the focus and state of architectural education. Antonio Toca (Aguilera 2004:20) and Enrique de Anda (Aguilera 2004:62) considered it problematic due to the inferior preparation and knowledge of academics and practitioners involved in academia. At the same time, Sara Topelson (Aguilera 2004:25), Ernesto Alva (Aguilera 2004:38) and Alejandro Ochoa (Aguilera 2004:78) pointed out the lack of experimentation, creativity and free critical thinking in higher education. The disconnect between reality, its problems, and architectural solutions was mentioned by Juan Palomar (Aguilera 2004:58) and Juan Dolores (Aguilera 2004:142); the latter was joined by Héctor García Olvera (Aguilera 2004:111-12) and Ramón Vargas Salguero (Aguilera 2004:117) responses about the dominance and attention devoted to a wealthy, yet reduced sector of society. Victor Arias (Aguilera 2004:44) elaborated on the different challenges and contrasting approaches between public and private institutions. Finally, Alejandro Hernández (Aguilera 2004:87) and Louise Noelle (Aguilera 2004:99) criticised architectural education's focus due to the insufficient production of architectural critique and theory in the academic environment.

iii. Challenges faced by architecture in countries with emerging economies

The panel's responses to the challenges faced by the discipline in the new millennium were encapsulated in two aspects: the characteristics of architectural practice in the country and the discipline's position concerning environmental concerns. These two topics were defined by Mexico's realities as an emerging economy.

All the members expressed the view that Mexico is subjected to a cultural and architectural dependence on the dominant countries in the West, e.g. Europe and the USA. Antonio Toca (Aguilera 2004:19), Ernesto Alva (Aguilera 2004:38), Hector García O. (Aguilera 2004:109), Juan Dolores (Aguilera 2004:140) and Alejandro Aguilera (2004:133-34) commented on how this dependency has been expressed through cultural homogeneity,

which has been reinforced by the absence of critical theoretical positions and the imitation of architectural models and ideas. Some of the participants articulated the challenges confronted by emerging countries, so Sara Topelson (Aguilera 2004:24) and Victor Arias (Aguilera 2004:42-43) dwelled on how architecture in Mexico must deal with the disorganised and anarchic growth of its cities and a disparity between urban centres and rural towns; Enrique de Anda (Aguilera 2004:64) and Carlos González de Lobo (Aguilera 2004:70) revisited the argument about the dominance of a minority, that is the wealthy and powerful sector of society that can afford iconic architecture. Juan Palomar (Aguilera 2004:56) added to the latter argument by pointing out that a large amount of self-constructed and anonymous architecture remains unrecognised by the profession in the country. Alejandro Ochoa (Aguilera 2004:77-78) and Rodolfo Santamaria (Aguilera 2004:90) argued for the production of architecture based on its time and place – an 'own' architecture that is 'appropriate' for the country and based on its cultural and historical inheritance.

The colloquium materialised a worrisome tendency demonstrated by the participants' lack of sensibility and apparent accountability towards the impact of architecture on the environment. In their responses, the attendees did not dwell on or recognise the importance of these challenges to the discipline in the new millennium. This alarming tendency was attributed to insufficient education, shortage of technical knowledge, poor investment in technology, the absence of political will to enact urgent solutions and even the misguided opinion that environmental concerns were a trend of no consequence to Mexico due to its benign weather.

It was surprising the short-sightedness of the responses in the questionnaire to this topic, and 23 years on, it seems surreal some of the positions adopted in the colloquium. The discussion on sustainability highlighted the participants' lack of architectural accountability for the environmental concerns of our era. Antonio Toca (Aguilera 2004:19) and Juan Palomar (Aguilera 2004:57-58) labelled contemporary environmental concerns as 'trends'; however, Toca advocated for architects to carefully reflect on the application of passive energy strategies in their buildings. Sara Topelson (Aguilera 2004:25) assigned the shortcomings of the

profession to the absence of political will to implement policies and rules to deal with sustainability and the environment; Juan Ignacio Barragán (Aguilera 2004:33), Ernesto Alva (Aguilera 2004:38) and Louise Noelle (Aguilera 2004:99) pointed to the financial cost of the technologies and the paucity of environmental knowledge as the main causes for the disengagement with these matters. Finally, other contributors expressed a range of reasons for the disconnect between architecture and environmental concerns in Mexico: Humberto Ricalde (Aguilera 2004:120) blamed it on the imitation of styles and ideas from developed countries, and Carlos González Lobo (Aguilera 2004:71) postulated the notion that capitalism's interests are not aligned with architecture's sustainability and environmental requirements in the twenty-first century.

In conclusion, the colloquium was a meaningful event at the start of the millennium as it gathered academics from different institutions and architectural positions, fostering an open dialogue about architectural culture and history. The event created heated polemics, and the debate was passionate, yet held under collegiate conditions; it used a common platform – a questionnaire and a book, to encourage the exchange of ideas in a respectful environment. The discussion was moderated by Alejandro Aguilera, who collected and edited all the points of view in the edited book *Arquitecturas Finiseculares en México* (2004).

The value of the event rested on the exchange of ideas and the materialisation of intersections between practice, history and, to some degree, critique. Nevertheless, the subject of architectural theory is absent from the elucidations and conclusions of the majority of the attendees; Stefani Biondi confirmed this assessment as she stated that she was "surprised by the complete omission of theoretical themes in all the participants' conclusions, except for Ricalde [...], as well as by the absence of themes connected to the concept of identity" (2007:166). The collective debate was reminiscent of the discussions that formed *Pláticas del 33*; however, *Arquitecturas Finiseculares en México* did not reach the level of relevance or impact that the 1933 assembly had, and Aguilera agreed with this notion (2017). One of the most sobering assessments of the significance of the colloquium came from the organiser's reflection about the colloquium's importance and influence; Aguilera stated that the

colloquium “had no influence at all” (2017) in the architectural debate of the 2000s.

The event’s initial discussion revolved around Aguilera’s proposal to define Mexican Architectures as the condition of the end of the century. This conceptual position was the root of intense debate as some attendees, such as Sara Topelson and Juan Palomar, who agreed with the notion of multiplicity as it captured the variety of theories, ideas and practices in the country. However, other participants, such as Manuel Larossa and Rafael López Rangel, considered it unnecessary to define a plurality of directions because architecture's essence was one: building inhabitable spaces. Louise Noelle took a balanced position, agreeing that both terms could be acceptable. The transcription of the discussion showed an animated debate, which was confirmed by Aguilera, who stated in 2017 that “at the start of the event attendees were very critical and aggressive [...]; after lunch, the debate became more reasonable and at the end, they accepted the existence of an eclectic situation” (2017).

After the polemic caused by the ‘singular’ or ‘multiple’ categorisation of architecture in Mexico, the event’s participants turned their attention to the book *Mexican Architectures* and critiqued the essence of the publication. Aguilera stipulated that the book was a trigger to ignite the debate, and it functioned as a mirror that showed to the profession the various practices and expressions taking place in the country (2017). The book fell within the category of illustrated catalogue or book; it had the flaws of said type of publications. An essential critique is that it did not propose a set of theoretical positions or provide a framework to structure or position the country's architecture. *Arquitecturas Mexicanas* proposed the division of rationalism and expressionism, yet the projects contained in the publication were presented only visually and by providing brief descriptions. This was problematic as the merits of such classification were unclear. The categorisation of architecture should try to provide a way to understand the reasons and ideas behind a project or group of projects and judge them by the profession's historical and critical frameworks. The book presented a set of formal languages that, without a defining line of thinking, were grouped in the dichotomy of rationalism vs expressionism.

The dialogue between participants produced some positive results: firstly, the authors acknowledged the need for a theory that can structure, predict and explain architecture (Aguilera 2004:190); secondly, they suggested the need to construct a new way to read history that is not linear and that allow to understand architecture within all its connections and influences (Aguilera 2004: 201); also, the development of a critical reflection that is not subject to trends and that can support the development of architecture; and finally, despite the disengagement of some of the architects and authors to the issues related to sustainability and the built environment, the members of the colloquium seem to regain an awareness of the importance of the subject during the concluding comments of the event. In this regard, they demonstrated an understanding of the complexity of the challenges, as they embodied social, political, economic, cultural and ethical dimensions – not all of these connected directly with architecture. These key points should have been valuable platforms to facilitate a continuous internal and external dialogue to develop these areas of knowledge; hence, 23 years on, it is disheartening to hear Aguilera's indictment about the little impact the colloquium had, beyond encouraging discussion about architectural history.

5.10 Conclusions

As chapter 4 argued, the departure from Functionalist paradigms in the 1960s and the discipline's reaction to the international style in the 1970s produced an architectural fragmentation in the last three decades of the twentieth century. The new approaches encompassed a range of architectural perspectives influenced by European Brutalism, the creation of a new architectural monumentality, the consolidation of regionalism and the emergence of individual formal tendencies. These architectural positions developed in parallel to José Villagrán's architectural theory, which was eventually superseded towards the end of the twentieth century.

The objectives of chapter 5 were to assess the state of architectural theory in Mexico at the end of the twentieth century and to examine its role in the production of architectural practice into the twenty-first century. This chapter argued that Mexican architecture from the mid-1960s to the early 2000s was determined by strong cultural (the 1968 Olympic Games), socio-

political (the 1968 massacre of Tlatelolco, the 1994 Zapatista rebellion and the election of Vicente Fox in 2000), and economic (the financial crises of 1976, 1982 and 1994 and the impact of globalisation in the country) circumstances. These conditions presented complex challenges for the discipline, which increasingly were resolved through a pragmatic and instrumental approach to architecture.

An important factor in architecture's development in the last third of the twentieth century was a change of architectural guard between the 1960s and 1970s. The transition between decades embodied a generational shift from the functionalist masters to a new generation of architects. The projects of Carlos Obregón Santacilia, Mario Pani and José Villagrán García stopped being an architectural reference; the new generation of architects searched for inspiration beyond their functionalist work and adopted ideals from other perspectives. Hence, the emergence of a new monumentality influenced by the European Brutalist aesthetic, the consolidation of the regionalist discourse and the multiplicity of ideas brought by postmodern thinking were expressed in the work of Pedro Ramírez Vázquez – the Museo Nacional de Antropología e Historia (1964); Teodoro González de León and Abraham Zabludovsky – the INFONAVIT offices (1973) and the Colegio de México (1975); Agustín Hernández – Heroico Colegio Militar (1976) and Ricardo Legorreta – the Hotel Camino Real Mexico City (1968) and Luis Barragán – Casa Gilardi (1976). This group of architects designed and built some of the most significant and exemplary buildings in the 1980s and 1990s (Canales 2013:270-76), and their projects became the basis for the biographies and monographs that dominated the context of architectural publications in those two decades.

Chapter 5 elaborated on how a critical revision and critique of the Modern movement defined the 1980s. The opportunity for intellectual and architectural debates was generated by the Mexican financial crises of 1976 and 1982, in conjunction with the arrival of Postmodernism's ideas through the books of Robert Venturi and Aldo Rossi. The chapter examined how the financial crises were triggered by international pressures on oil prices, which prompted the Mexican government to devalue the national currency. This economic strategy produced a crippling national inflation that was accompanied by the country's increasing foreign debt. The

chapter pointed out how these economic disasters halted the country's growth in every area of human endeavour, leading to the 'lost decade' of the 1980s in architecture and preventing postmodern architecture from taking root in the country. In the 1980s, the work of the younger generation of architects produced a heterogeneous architectural environment that was defined by a post-rationalist range of ideas and paradigms; these principles were exemplified by the Museo Tamayo (1981), Hotel Camino Real Ixtapa (1981), Universidad Iberoamericana Campus Santa Fe (1989), Papalote Museo del Niño (1993) and the Edificio de Servicios de Televisa (1995).

Chapter 5 argued that the architectural production of the 1980s, which shifted away from the paradigms of modernity, was impacted by two meaningful events: firstly, the international recognition of Luis Barragán work implied that his *oeuvre* became the representation of Modern Mexican architecture abroad; and secondly, the 1985 earthquake that destroyed large parts of the built environment in Jalisco, Guerrero, Michoacan and Mexico City. These occurrences were complemented by the implementation of structural financial adjustments requested by the IMF and World Bank after the 1982 crisis; the restructuring of the country's finances was a condition stipulated by the IMF and World Bank to provide loans and restructure the debt of Mexico. These initiatives ensured the implementation of the neoliberal agenda that would define the nation's economic policy until the 2010s.

Chapter 5 engaged critically with a revision of the development of architectural theory in the second half of the twentieth century by positioning the main publications that influenced the profession since 1950. These publications embodied the architectural debates and attempted to clarify the relationships between tradition and modernity, the local and global, and the connection of identity and history. As argued in chapter 4, the analysis of architectural publications in the 1960s and 1970s demonstrated that the literature produced in those decades consolidated the work of the functionalist masters, but it highlights a hiatus in the development of architectural ideas and theories. Chapter 5 argued that the strong connectivity between theory and practice that originated in the 1930s lost its strength, and eventually transformed into historical accounts

and narratives in the 1980s and 1990s. This chapter's argument indicated that the understanding of architectural theory fostered in the first half of the twentieth century gradually changed and eventually became an instrumental and pragmatic interpretation of theoretical thinking with the expectation of direct applicability.

Chapter 5 argued that these factors led to the abandonment of theoretical reflections in architecture in Mexico, which were replaced by the production of historical narratives and the classification of Mexican functionalist masters. The self-promotion of architectural firms complemented the historical and categorisation endeavours through the publication of illustrated books, magazines and journals. The analysis of publications showed how the increase in these types of publications (history books, illustrated books and magazines) marked a turning point in the development of architectural theory in Mexico, which was combined with minimal production of architectural critique and reflection in the last two decades of the twentieth century. This chapter contended that the profession requires the generation of theory and criticism as these are essential elements for developing a reflective architectural practice at the end of the twentieth century. Chapter 5 argued that the connection between theory and practice disappeared in the last three decades of the twentieth century and the start of the new millennium, as theoretical thinking was fused with historical accounts and replaced by the categorisation of the most prolific and renowned architects of the time. At the beginning of the twenty-first century, the colloquium *Arquitecturas Finiseculares* attempted to re-ignite the architectural debate in Mexico.

The *Arquitecturas Finiseculares* colloquium and its namesake publication dealt with important topics concerning the profession at the start of the twenty-first century. The event generated a lively debate on architectural history and critique, architectural tendencies and formal languages, architecture and the environment, and academia and society. Nevertheless, chapter 5 pointed out that the most important omissions in the event's discussion were the lack of an architectural theory position and the absence of connectivity between theory and praxis. This reinforced the leading argument about the divorce between architectural theory and practice in Mexico at the beginning of the twenty-first century. The three

interviewees expressed these ideas as well. Aguilera stated that “there is neither theoretical work nor interpretive attempts in the country [...]” (Aguilera 2017); Enrique de Anda expressed his view by saying that “there is an enormous void in theory in the country” (2017). And finally, despite Eduardo Cadaval prefacing his answers by stipulating that “theory always exists and it’s present”, he concluded that the pragmatic nature of architecture in Mexico “made it difficult to differentiate between practice and theory” (2019). These statements reinforced the leading argument that the state of architectural theory in Mexico is underdeveloped and weak, and that there is no connectivity between practice and theory in the architectural endeavours in Mexico.

6. Conclusions

6.1 PhD Aims

This PhD Thesis investigates the intersection of architectural theory and practice in Mexico throughout the twentieth century by examining the influence of European thinking on Mexican architecture in that period; the PhD Thesis postulates that architectural theory constitutes a fundamental aspect of all architectural endeavours, as it underpins the capacity of architects and academics to articulate a position that responds to the complex demands of the twenty-first century. This PhD Thesis contends that architectural theory emerges not only from theoretical or historical reflections, but from all other areas of architectural knowledge, as well as from an array of interdisciplinary intersections and practical engagements that contribute to shaping the discipline.

The Aims of the PhD Thesis are to examine the development of Mexican architecture in the twentieth century through an understanding of the intersection of theory and practice, and to determine the status of architectural theory in Mexico in the late twentieth century by investigating the diminishing connectivity between theory and practice throughout the century. The PhD Thesis questions the role of theory in shaping Mexican architecture at the beginning of the twenty-first century, arguing that the intersection of theory and practice should help to generate critical discursive frameworks that mediate architectural thinking and production within broader socio-political and cultural contexts.

This PhD Thesis draws on a comprehensive literature review encompassing works on late twentieth-century architectural theory, Mexican architectural history, and the historical construction of Mexican identity. Particular emphasis is placed on the impact of three key books that embody the intersections of theory and practice in Mexican architecture during the twentieth century: *Pláticas sobre Arquitectura*

(1934), *Teoría de la Arquitectura* (1964 [1988]), and *Arquitecturas Finiseculares en México* (2004). Primary data were collected through semi-structured interviews with leading Mexican architects and scholars, who provided their perspectives on the state of Mexican architecture at the dawn of the twenty-first century.

6.2 Response to the Aims and Objectives

The PhD Thesis contribution to knowledge is to recognise the importance of the intersection of theory and practice in architecture during the twentieth century, and to utilise this perspective to study Mexican architecture of that era. This PhD Thesis employs the notion of architectural theory as a lens to examine the development of Mexican architecture in the twentieth century and to investigate the state of the intersection between theory and practice in Mexico at the beginning of the millennium. These research areas provide the main lines of enquiry and define the structure of the PhD Thesis.

To address the PhD Thesis' Aims and Objectives (p.25), chapter 1 begins by examining the relationship between theory, history, and architectural criticism, focusing on their convergence at the end of the twentieth century. The goal of this chapter is to elaborate on the understanding of architectural theory in the 1980s and 1990s and to propose a definition that moves beyond those ideals. To accomplish these objectives, the PhD Thesis investigates and analyses architectural theory anthologies, compendia, and edited volumes published in the 1990s and 2000s, highlighting how critical theory, philosophy, structuralism and other disciplines defined the development of architectural theory at the end of the twentieth century. The research asserts that, since the 1960s, architectural theory was predominantly influenced by the intellectual constructs established by Frankfurt School thinkers. These discourses were commonly grouped under the broader school of thought known as critical theory, and its intersection with architectural theory came to be defined as a 'critical' approach. The interdisciplinary exchanges, thematic intersections, and critical paradigms contributed to shaping a 'critical' architectural theory at the end of the twentieth century.

One of the main contributions of chapter 1 is to identify the limitations of the available literature, particularly regarding the geographic and linguistic origins of its contributors. The systematic analysis of architectural theory anthologies, compilations, and edited volumes reveals that this body of knowledge is predominantly produced in Europe and the USA, with most authors originating from these geographical regions, and with limited representation from Latin America, Africa, and Asia. A further key finding articulated in this chapter is that access to these publications is hampered in Mexico due to the scarcity of Spanish translations, which limits the reach of these theoretical discourses. The first chapter argues that a byproduct of the interaction between critical theory and architectural theory was the creation of a narrow and specialised 'critical' perspective that was predominantly centred in academia and had become increasingly disconnected from architectural practice by the end of the twentieth century. The analysis of the literature review reflects a Eurocentric and Anglo-Saxon perspective that requires re-evaluation considering the changing global conditions of the current century. The first chapter advocates and proposes a more inclusive definition of architectural theory that acknowledges the influence of other areas of knowledge, accommodates contemporary concerns and highlights its expanding scope at the end of the millennium. The literature examined in chapter 1 supports a renewed understanding of architectural theory suited for the twenty-first century. The PhD Chapter 1 establishes architectural theory as the lens through which to study the development of Mexican architecture in the twentieth century.

Chapter 2 presents and articulates the ideological construction of Mexican national identity through an analysis of the nation's history beginning in 1521 with the fall of Tenochtitlan. The PhD research contextualises the country's main armed conflicts within broader national and international socio-political agendas, explaining their influence on the cultural and architectural discourses of each era. A central paradigm in chapter 2 is the identification of the ideological dichotomy — foreign versus local — as a central tenet of the development of Mexican identity, which has been expressed since the 1520s in contrasting positions such as Spanish/indigenous,

peninsulares/criollos, conservatives/liberals, European/ American, and global/local.

The historical account in chapter 2 emphasises the increasing influence of nationalist sentiments in shaping architectural thought after the War of Revolution, which led to a preference for national paradigms over foreign models in the 1920s. The second chapter affirms that this ideological shift informs the architectural debates that define Mexican-ness in the built environment of the 1920s, culminating in the discussions of *Pláticas sobre Arquitectura* in 1933. The objective of chapter 2 is to articulate a historical narrative that materialises the connections and influences of socio-political agendas in the development of architectural discourses from the Colonial period through to the architectural ideologies in the 1920s. The PhD Thesis contends that it is essential to understand the historical construction of Mexican identity, and the influence of foreign ideologies in the country, to comprehend the formation of national consciousness in the twentieth century. Chapter 2 demonstrates that the intersection of foreign and national discourses laid the foundations for the development of architectural practice and theory at the beginning of the twentieth century.

Following the discussions about architectural theory and the nation's historical development, Chapter 3's objective is to critically analyse the influence of emerging political agendas and socio-cultural discourses in Mexican architecture between 1920 and 1934. The chapter emphasises the prominence of the debates collected in the seminal book *Pláticas sobre Arquitectura* (1934), as they embodied the architectural ideologies of the time, including the nationalists' neo-Colonial and neo-indigenous proposals, and the emergence of Functionalism. The first two architectural styles drew inspiration from Mexico's Colonial and pre-Hispanic past; however, they were abandoned by the profession by the start of the 1930s as they were deemed outdated. The PhD research asserts that the adoption of modern European principles as the driving forces for the nation's socio-political project facilitated the establishment of Functionalism as the dominant architectural discourse in the 1930s.

Chapter 3 scrutinises the views expressed in *Pláticas sobre Arquitectura* (1934) and stresses the publication's importance, as it embodies the spectrum of architectural positions of the time — traditionalist, moderate functionalist, and radical functionalist. Additionally, the publication embodied the schism in architectural education between the two leading academic institutions: the ENA curriculum was defined as 'academic', whereas the ESC was Functionalist. The 'academic' syllabus was deemed historicist and humanist, with an individualistic and subjective approach to architecture and lacking social awareness. On the other hand, the Functionalist curriculum was closely aligned with the left-wing inclination of the government's agendas, and it was considered an objective and technical approach with a social consciousness, serving the majority of the population. By analysing *Pláticas sobre Arquitectura* (1934), the chapter demonstrates the significance of the intersection of theory and practice in the 1920s and 1930s, and how these crossovers contributed to the formation of a modern national identity following the War of Revolution. The objective of chapter 3 is to construct an understanding of Mexico's post-revolutionary architectural landscape and to demonstrate that architecture was shaped by social, political, and cultural forces, culminating in the adoption of Functionalism as the primary approach to construct a modern built environment.

Chapter 3 develops and sustains one of the core premises of the PhD Thesis: the intersection of theory and practice in the 1920s and 1930s was essential for the discipline, as architects used architecture as the vehicle to materialise their architectural thinking and adopted new ways to shape a modern built environment. The analysis of existing literature demonstrates that this connection was fundamental to the development of Mexican architecture, validating that the foundations of Functionalist Mexican architecture, and its theory, were laid in the 1930s through the intersection of theory and practice. Chapter 3 establishes the significance of such crossover by investigating the connections of theory and practice in the work of the leading architects of the time, who considered architectural theory an essential aspect of their practice.

The fourth chapter examines the intersections of political agendas, social ideologies, and architectural discourses that influenced Mexican architecture in the mid-twentieth century, specifically the period from 1934 to the 1960s. The research in chapter 4 interrogates the relationship between the government's agendas and the evolving architectural discourses of the time. The PhD Thesis analyses the intersection of theory and practice in this period by exploring five architectural intersections: the influence of socialist agendas on architecture in the 1930s; the impact of modernist European architects fleeing the Spanish Civil War (1936-39) and World War II (1939-45) in the 1940s and 1950s; the institutionalisation of Functionalism in the 1940s, and its decline due to the rise of the International Style towards the 1960s; the emergence of Regionalism in Mexico, particularly through the work of Luis Barragán in the 1950s and 1960s; and the fragmentation of the discipline into heterogeneous architectural expressions in the 1960s that foreshadowed postmodernism's influence. The fourth chapter argues that the crisis of Functionalism opened the door for a range of architectural expressions that gradually moved away from the reflective use of architectural theory, as they established their approach on a pragmatic understanding of the discipline.

Following the examination of these five architectural positions, chapter 4 focuses on a central figure of this period – José Villagrán García and his theory of architectural values. The research asserts that Villagrán García established a well-defined architectural theory that dominated architectural thinking in the middle of the century and shaped architectural production until the 1960s. His theory of architectural values was influenced by European classical theorists and was based on four primary values: Useful, Logic, Aesthetic and Social, and it was the positive contribution of these four principles to a project that constituted the overarching 'Architectural' value. His theory was captured in the edited book *Teoría de la Arquitectura* (1964 [1988]). The objective of chapter 4 is to present the heterogeneous architectural expressions that defined the middle of the twentieth century and to emphasise the importance of José Villagrán García's theoretical framework.

Chapter 4's leading premise is that despite Villagrán's impact in the middle of the century, the intersection of theory and practice in Mexico weakened as architects increasingly adopted an expedient and pragmatic approach to architecture. The PhD investigation emphasises that architects prioritised functional solutions and searched for techniques, materials, and processes to produce architecture in a timely and economically efficient manner. The research affirms that by the 1950s, theory had become instrumental, focusing on the practical resolution of architecture rather than developing a critical discourse. The study of Mexican architecture in the mid-twentieth century demonstrates the decline of the intersection between theory and practice, as architecture was driven by the country's social and political needs. The systematic analysis of architectural publications in Mexico proves a substantial shift in the type of books published in the middle of the century, as the literature produced in those years focused on the historical account of Mexican architecture and the consolidation of Mexican functionalist masters, rather than the exploration and development of a critical architectural position or discourse.

The final chapter of the PhD Thesis maps the evolution of Mexican architecture from the 1970s to the twenty-first century, contextualising it within the broader conditions of the period. The research highlights the impact of the financial crises of 1976, 1982, and 1994, which prompted austerity policies and triggered the government's withdrawal from public architectural patronage. This shift coincided with the emergence of a new generation of architects who embraced heterogeneous architectural outlooks, which included a new monumentality influenced by European Brutalism, the consolidation of Regionalism, and the exploration of individualistic architectural expressions. The PhD research states that, despite the emergence of multiple avenues of architectural expression, the financial crises hindered architecture's development in the 1980s, resulting in architectural commentators referring to those years as the 'lost decade'. The economic difficulties impacted architecture's development and prevented postmodernism from establishing itself in Mexico as an architectural force. Chapter 5 advances that globalisation became the primary driving force towards the end of the twentieth century, as

multinational corporations and private investors increasingly became the driving forces shaping the built environment.

Chapter 5's objective is to assess the state of architectural theory in Mexico at the end of the twentieth century and reflect on its connection with practice. To achieve this goal, the PhD Thesis analysed the relevant architectural publications of the second half of the twentieth century and complemented them with data obtained from interviews with Mexican architects and scholars. The study of architectural publications from the last three decades of the twentieth century in Mexico makes a meaningful contribution to the field of knowledge, as it exposes that the production of architectural literature was primarily centred on historical books, monographs, and illustrated magazines. These publications aimed to catalogue and articulate the historical narrative of Mexican architecture, consolidate the position of mid-century leading architects, and promote the work of prominent architectural firms. The texts and publications containing architectural theory debates were marginalised and found limited space within the discipline's national literary production, for example Israel Katzman's two-volume book *Cultura, Diseño y Arquitectura* (1999 & 2000) was an exception.

The PhD Thesis research exposes the significant schism that existed between architectural theory and practice in Mexico at the end of the twentieth century and it contends that by the late twentieth century, theory had become increasingly pragmatic and instrumental, hence lacking the strength of earlier reflective approaches and producing a separation between theory and practice. Chapter 5 articulates and underscores the erosion of the theory-practice dialogue that characterised Mexican architecture at the start of the twentieth century, denoting a shift toward a utilitarian and pragmatic architectural culture. The academics and practitioners interviewed for this PhD Thesis discussed the lack of connectivity between theory and practice in Mexico at the start of the twenty-first century, and agreed on the importance of nurturing the intersections of these activities. This PhD Thesis core premise was further emphasised by the analysis of the contributions encapsulated in the book *Arquitecturas Finiseculares* (2004), which revealed an animated debate on architectural history and design;

however, it did not capture any theoretical content, reflection, or approach.

6.3 Contribution to Knowledge and PhD Findings

The PhD Thesis contribution to knowledge is developed through the historical study and analysis of architectural theory, and it affirms that a once-symbiotic relationship between architectural theory and practice – strongly evident during the 1920s and 1930s – progressively diminished over the century. Therefore, by the end of the twentieth century and into the early twenty-first century, this relationship had disintegrated, resulting in a disconnect between architectural thought and built practice. The PhD thesis thus contributes to a deeper understanding of the historical evolution of Mexican architecture, emphasising the critical implications of this theoretical-practical divorce.

The main findings of this Thesis are organised into three areas.

i. The intersections of theory and practice

The analysis of architectural anthologies, compilations, and edited books published from the 1990s onwards highlights the evolution of architectural theory through its intersection with critical theory and philosophy. The crossovers among these disciplines – critical theory, philosophy, and architectural theory – fostered a critical understanding of architectural theory that contributed to questioning the validity of architecture's discourses, methods, and practices. This PhD Thesis advocates for a more inclusive conception of architectural theory that welcomes knowledge from all areas of the discipline and enables architects, academics, and authors to address the challenges emerging in the twenty-first century. A key finding of the PhD Thesis' literature review was the notable omission of authors from regions outside European and Anglo-Saxon contexts. The absence of voices from Latin American, Asian, and African countries in the architectural debates exposed a gap in the field of knowledge, and it motivated the

investigation into the influence of European architectural theory on Mexican architecture throughout the twentieth century.

The PhD Thesis contributes to existing knowledge by underscoring the significance of the intersection between theory and practice in architecture during the twentieth century, and by employing this intersection as a lens for studying the development of Mexican architecture in that period. In particular, it offers a critical assessment of the theory-practice relationship in Mexican architecture at the close of the twentieth century and the beginning of the new millennium.

ii. The role of architectural theory in Mexico

This PhD thesis investigated the development of Mexican architecture in the twentieth century through the lens of architectural theory. It examined the evolution of the intersection between theory and practice and the role it played in defining Mexican architectural thought. The PhD Thesis dissects the investigation into three key periods: the post-Revolutionary years (1920–1934), the mid-century decades (1934–1964), and the late twentieth century (1970s–2000s). In each era, the PhD Thesis studied architectural output and publications, examining their relation to the prevailing socio-political and economic conditions of each period, as well as questioning the condition of the intersection between theory and practice.

The first period underscores the critical relationship between socio-political agendas and architectural discourse in Mexico following the War of Revolution, affirming that in the 1920s, architecture was a tangible manifestation of each administration's political project. The literature review findings confirm that during this period, the intersection between theory and practice was crucial in expressing Mexico's ideological identity. This convergence was evidenced in the events that formed *Pláticas sobre Arquitectura*, which significantly influenced the adoption of Functionalism in the 1930s.

The literature pertaining to the second period demonstrates that by the mid-twentieth century, two dominant architectural discourses had

emerged: Functionalism and the architectural theory of José Villagrán García. In the 1930s and 1940s, Functionalism became the principal architectural paradigm, as it was closely tied to the government's goals and symbolised the nation's aspiration toward modernity. Concurrently, José Villagrán García emerged as a central figure in architectural thinking and practice. His theory of architectural values and his architectural approach fused modern ideals with local influences, reflecting a nuanced understanding of Mexico's cultural context. Villagrán's architectural theory significantly contributed to Mexico's architectural discourse up until the 1960s.

In the third era, this PhD Thesis explores the diminishing influence of José Villagrán García's discourse and the emergence of new architectural positions at the end of the twentieth century. The PhD thesis contends that architecture adopted a pragmatic approach, marginalising the exploration of speculative or critical discourses. The analysis of architectural publications from the mid-century onwards revealed a growing preference for historical narratives, monographs and illustrated magazines that celebrated the legacy of functionalist architects and promoted prominent Mexican architectural firms and projects. These works displaced theoretical engagement, transforming architectural theory into an instrumental field focused on addressing practical concerns rather than fostering critical or conceptual reflections.

The PhD Thesis findings demonstrated the evolution of the intersection between architectural theory and practice in Mexico in the twentieth century. The contribution to knowledge is using architectural theory as a lens to explore the impact that architectural theory has had on Mexican architecture. The PhD research proves that the connection between the two endeavours was fundamental in the 1920s and 1930s, but the discipline shifted away from this connectivity towards the middle of the century due to socio-political and economic circumstances. This led eventually to the divorce of theory and practice in the last decades of the century and into the twenty-first century.

iii. The divorce of architectural theory and practice after 2000

The development of the central argument of this PhD research – namely, the disjunction between architectural theory and practice in Mexico – was reinforced in the second half of the PhD Thesis. Despite the nation's increasing international connections, including Mexican architects studying abroad and the presence of foreign architects in Mexico, the discipline approached foreign models by imitating and applying external ideas rather than aiming to foster a syncretism that could lead to a deeper adoption and adaptation of foreign discourses. As established in Chapter 1, architectural theory literature remained largely inaccessible to Mexican architects due to the absence of translated materials, which was compounded by the limited participation of non-European and Anglo-Saxon authors in the global theoretical discourse at the end of the twentieth century. These limitations, intensified by the socio-economic difficulties of the 1980s and 1990s, entrenched a pragmatic architectural approach dating back to the 1970s, which relegated theory to a secondary or accessory role.

The literature reviewed in the PhD Thesis revealed a gap in the field of knowledge: the disconnection between theory and practice in Mexican architecture at the end of the twentieth century. Thereby, the PhD's contribution to knowledge addresses this gap by identifying, interrogating, and discussing the relationship between theory and practice in the twentieth century and the role of architectural theory at the beginning of the twenty-first century. A notable example of the divorce of theory and practice was the colloquium *Arquitecturas Finiseculares en México* (2000) and its subsequent publication (2004), which, while fostering dynamic historical debate and architectural design discussion pertaining to the twentieth century, failed to address the theoretical underpinnings or inclinations of Mexican architectural practice.

Insights from the interviewees, who represented historical, theoretical, and professional perspectives, further substantiated the absence of a strong theoretical discourse at the start of the millennium. The PhD Thesis maintains that at the end of the twentieth century, the development of Mexican architectural thinking was directed towards a pragmatic understanding and generation of architecture; therefore,

Mexican architecture tended to adopt foreign ideas uncritically and lacked reflective engagement. The research establishes that the profession has focused on cataloguing and recording architectural history instead of analysing and producing theoretical discourses which has created a void in architectural theory in the country. Despite the theoretical void identified within the country, this PhD Thesis argues that redefining architectural theory as a more inclusive and interdisciplinary field of knowledge can enable architects to adopt and develop positions to better address the challenges of the new millennium. The research contends that by drawing on diverse areas of architectural knowledge – beyond purely historical or theoretical reflections – architects may produce more responsive and comprehensive approaches to contemporary practice.

The PhD Thesis elaborated on these ideas and positions, and although consensus was reached regarding the theoretical deficiencies in the profession, no clear resolution was proposed, making this a potential area for future research beyond the scope of the present study.

6.4 Limitations of the research and Future research

This section outlines key limitations encountered during this research and identifies potential avenues for future investigation. A primary limitation concerns the geographical bias of the publications used to trace the development of architectural theory in the West. The anthologies, compilations, and edited volumes examined in the PhD were published in Europe and the United States of America, highlighting the dominance of these hegemonic centres of power at the end of the twentieth century. The literature review exposed the widespread distribution of European and American intellectual perspectives and architectural discourses. This narrow geographical scope excluded alternative discourses, reinforcing the centre-periphery dichotomy and marginalising theoretical contributions from non-Western contexts. Future research could address this gap by re-examining architectural theory through a post-colonial framework, incorporating emerging narratives from the so-called 'peripheral' nations and interrogating

concepts such as environmental colonialism and cultural dependency in Latin America.

The research revealed thematic limitations in Mexican architectural journals and illustrated books towards the end of the twentieth century. While the 1982 financial crisis led to a temporary decline in architectural theory publications, the 1990s witnessed the emergence of architectural journals that disseminated historical narratives, debated design approaches, and published the most significant architectural projects of the time. Journals were complemented by architectural illustrated books, which served as an exercise in professional promotion for architects and provided a visual representation of architecture, without offering critical commentary or a theoretical perspective. The PhD stressed that Mexican architectural literature at the end of the century was primarily concerned with the practical and historical aspects of the discipline, while disregarding architectural theory. The scarcity of architectural theory publications in Mexico, along with a lack of Spanish translations of key foreign works (only two books were translated – Evers (2006 – transl. 2015) and Davies (2011 – transl. 2011)), highlighted the underdevelopment of theoretical discourse in the country and emphasised the need to fill the gap in knowledge related to architectural theory in Mexico. The focus of these publications contributed to shaping the direction of the PhD thesis and provided a rationale for concentrating on anthologies, compilations, and edited collections.

Finally, an important area for future research is the role of architectural education in shaping theoretical engagement among Mexican architects. A detailed analysis of curricula at major institutions, such as the Escuela Nacional de Arquitectura (ENA), the Anahuac del Norte, Universidad La Salle and Universidad Iberoamericana, could offer valuable insights into how architectural theory is taught and integrated into architectural training in academia. Student surveys could complement this to assess perceptions of the relationship between theory and practice within architectural pedagogy and ascertain the perceived value in the design and creation of architecture. Furthermore, the interviews revealed potential future research areas related to the connections between

practising architects and academia, as well as the negative impact that urban conditions have on the intersection of these two worlds.

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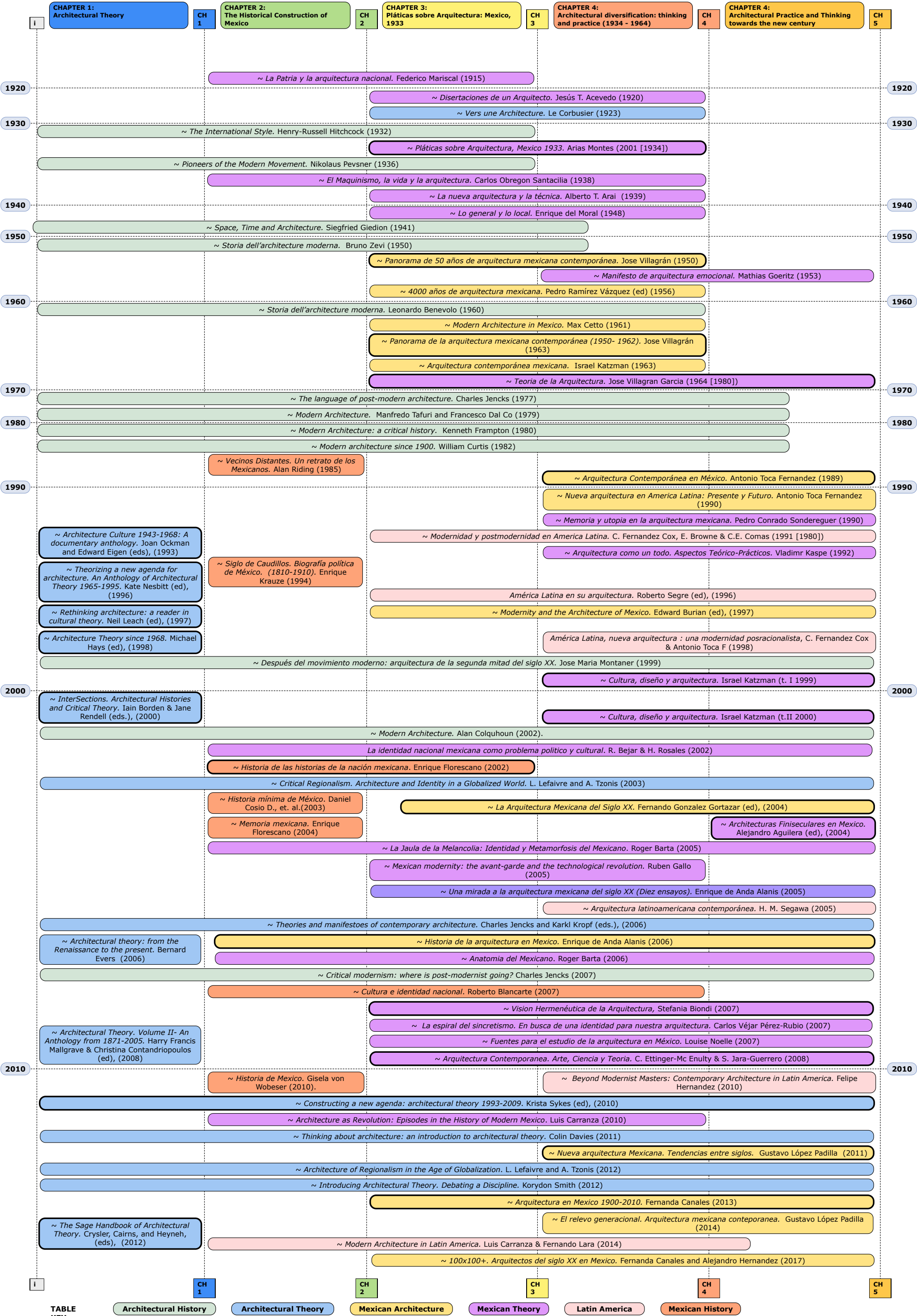
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Appendices

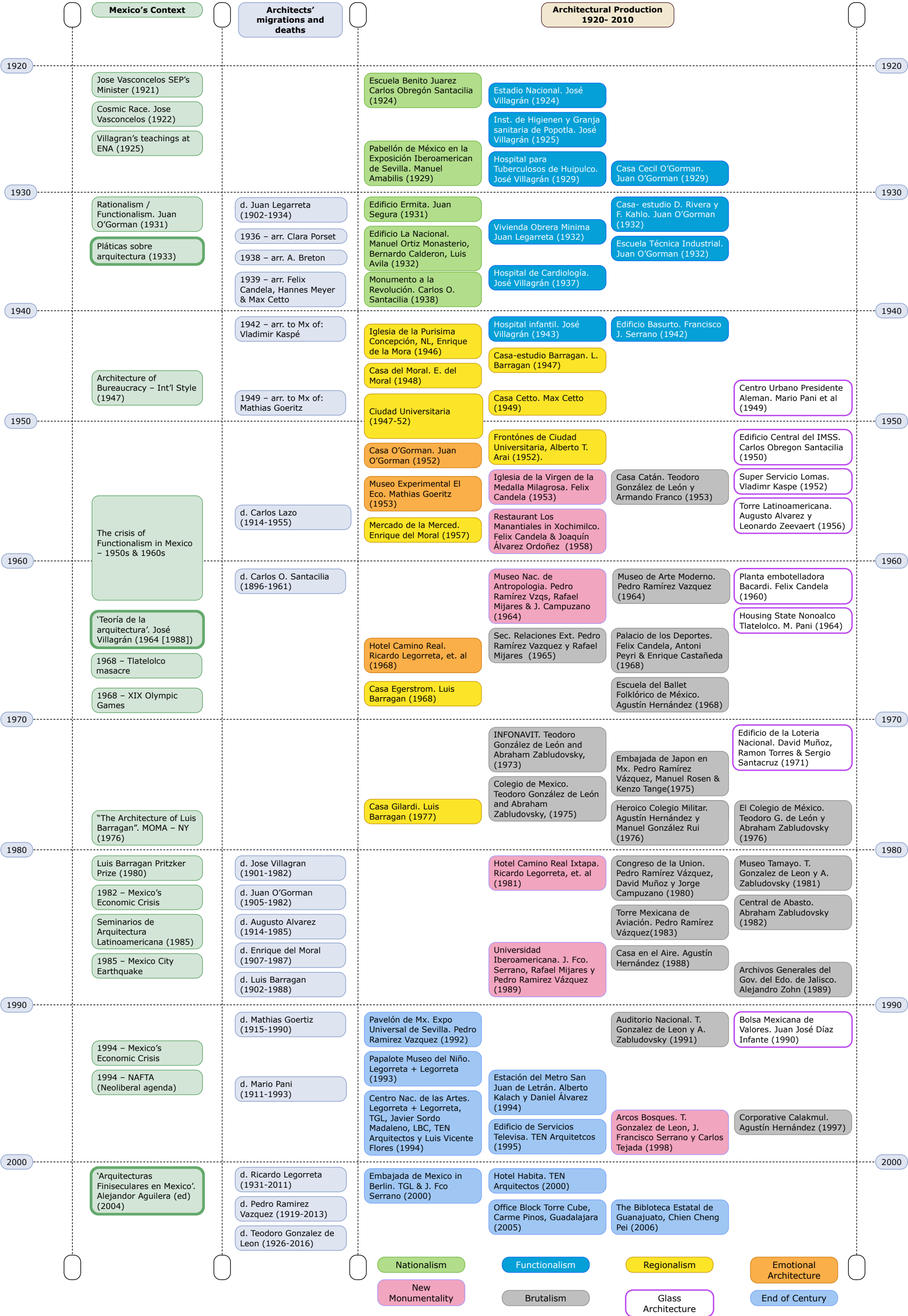
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The appendices containing the transcripts of the interviews with Mexican academics and architects have been removed, as they remain confidential and unavailable to the general public.

Appendix 1 - Literature Review Map (A3 format)



Appendix 2 - Mexican Architecture: 1920- 2010 (A3 format)



Appendix 3 - Mexican Architectural Publications: 1920- 2015 (A3 format)

