

**INFLUENCE OF MODERNITY VERSUS
CONTINUITY OF ARCHITECTURAL IDENTITY
ON HOUSE FACADE IN ERBIL CITY, IRAQ**

SALAHADDIN YASIN BAPER AL-SHWANI

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**INFLUENCE OF MODERNITY VERSUS CONTINUITY OF
ARCHITECTURAL IDENTITY ON HOUSE FACADE IN ERBIL CITY, IRAQ**

by

SALAHADDIN YASIN BAPER AL-SHWANI

**Thesis submitted in fulfillment of the requirements
for the degree of
Doctor of Philosophy**

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DEDICATION

THIS IS FOR
SUSAN,
ZHEEN,
AND ALAN
WITH LOVE AND APPRECIATION
FOR THEIR CONTINUOUS
SUPPORT AND ENCOURAGEMENT



الحمد لله رب العالمين والصلاة والسلام على سيد المرسلين، سيدنا محمد وعلى آله وصحبه أجمعين

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LIST OF ABBREVIATIONS

KEU	Kurdistan Engineers Union
UNESCO	United Nations Educational, Scientific and Cultural Organization
UN SCR 968	United Nations Security Council Resolution 968
HCECR	High Commission for Erbil Citadel Revitalization
HT	Hough Transform
SPSS	Statistical Package for the Social Sciences Software

PENGARUH MODEN DALAM ARUS KELANGSUNGAN IDENTITI SENIBINA PADA FASAD RUMAH DI BANDAR ERBIL, IRAQ

ABSTRAK

Tesis ini membincangkan salah satu daripada isu utama dalam perdebatan senibina mengenai identiti moden dan senibina. Ia bertujuan mengukur pengaruh moden terhadap identiti senibina pada fasad rumah di Bandar Erbil, Iraq. Objektif penyelidikan ini ialah untuk menyedia faktor ukuran terhadap tahap perubahan, membangun model untuk analisis visual, menilai variasi dalam persepsi responden, dan memeriksa korelasi antara faktor moden pada fasad rumah dengan arus kesinambungannya terhadap identiti senibina. Berasaskan kajian literatur yang dijalankan, kajian ini menilai model berkonseptual modenisasi dengan membangun formula ciri-ciri identiti senibinanya. Kajian ini menggunakan kaedah metodologi bercampur iaitu kombinasi bancian kualitatif dan kuantitatif. Pemilihan sampel bancian kualitatif menggunakan kaedah berstrata yang mana kawasan-kawasan yang dipilih dalam kajian ini dibahagikan kepada empat zon (Zon 1 hingga 4), manakala proses persampelan rawak-mudah diaplikasikan untuk bancian kuantitatif semasa kertas soalan bancian diedarkan kepada para responden terdiri daripada pelajar jurusan senibina di universiti tempatan dan arkitek di Bandar Erbil. Untuk analisis kualitatif, kaedah pemerhatian secara langsung dan pendokumentasian visual digunakan. Analisis ini adalah berkaitan dengan membuat perbezaan stail pada fasad rumah. Analisis kuantitatif walaubagaimanapun mengandungi hasil daripada analisis deskriptif, faktor, korelasi dan regresi berganda. Penemuan kajian hasil daripada analisis ini menyokong andaian kajian dengan bukti data statistik yang menyatakan bahawa faktor modenisasi pada fasad rumah memberi pengaruh terhadap arus kelangsungan identiti senibina. Kajian ini menyimpulkan bahawa “Jisim dan Artikulasi” dan “Perincian Senibina” merupakan faktor yang paling berpengaruh dalam interpretasi arus kelangsungan identiti senibina. Kajian ini memaparkan sumbangan penting kaitan dialek antara modernisasi dan identiti senibina yang dapat menyelesaikan konflik dalam kaedah pendekatan teori pengaruh moden dan identiti senibina. Penemuan-penemuan kuantitatif ini merupakan bukti statistik yang menunjukkan faktor-faktor kemodenan fasad rumah mempunyai pengaruh langsung pada kesinambungan identiti senibina.

INFLUENCE OF MODERNITY VERSUS CONTINUITY OF ARCHITECTURAL IDENTITY ON HOUSE FACADE IN ERBIL CITY, IRAQ

ABSTRACT

This thesis discusses one of the most distinctive issues of architecture debates about modernity and architectural identity. It aims to measure the influence of modernity to architectural identity on house facade in Erbil City, Iraq. The objectives of this research attempt to evaluate the factors' degree of change, develop a model for visual analysis, examine the variations in the perceptions of the respondents and investigate the correlation between house facade modernity factors and its continuity of architectural identity. Through the literature review, the study investigates a conceptual model for modernity and formulates the properties of architectural identity. The study adopted a mixed-methodological approach, which combines qualitative and quantitative surveys. Sample selection for qualitative survey uses stratified method in which the selected areas in this study are divided into four zones (Zone 1 to 4), whereas simple random sampling process is applied for quantitative survey when distributing the questionnaires to the selected respondents who are architecture students at the local university and architects in Erbil City. For qualitative analysis, the methods used rely on direct observation and visual documentation. This analysis deals with stylistic differences of the house façade. Quantitative analysis however comprises results of descriptive, factor analysis, correlation and multiple regression analysis. Findings from the results of this analysis support the research assumption with statistical evidence that house façade modernity factors have direct influence on the continuity of architectural identity. The study concludes that “Mass and Articulation” and “Architectural details” are the most influential factor in interpreting the continuity of architectural identity. The study makes an important contribution to address dialectical relationship between modernity and architectural identity, by ending the conflicting theoretical approaches regarding the influence of modernity on architectural identity. The quantitative findings provide statistical evidence that house façade modernity factors have direct influence on the continuity of architectural identity.

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I wish to extend my deep gratitude to staff members of Zhen consultant bureau, who contributed directly or indirectly to the success in my journey. Thanks to the architects (Krekar, Karzan, Hardi, Rebwar, and Ali) for their support during the process of house façade documentation in Erbil City.

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LIST OF ABBREVIATIONS

KEU	Kurdistan Engineers Union
UNESCO	United Nations Educational, Scientific and Cultural Organization
UN SCR 968	United Nations Security Council Resolution 968
HCECR	High Commission for Erbil Citadel Revitalization
HT	Hough Transform
SPSS	Statistical Package for the Social Sciences Software

PENGARUH MODEN DALAM ARUS KELANGSUNGAN IDENTITI SENIBINA PADA FASAD RUMAH DI BANDAR ERBIL, IRAQ

ABSTRAK

Tesis ini membincangkan salah satu daripada isu utama dalam perdebatan senibina mengenai identiti moden dan senibina. Ia bertujuan mengukur pengaruh moden terhadap identiti senibina pada fasad rumah di Bandar Erbil, Iraq. Objektif penyelidikan ini ialah untuk menyedia faktor ukuran terhadap tahap perubahan, membangun model untuk analisis visual, menilai variasi dalam persepsi responden, dan memeriksa korelasi antara faktor moden pada fasad rumah dengan arus kesinambungannya terhadap identiti senibina. Berasaskan kajian literatur yang dijalankan, kajian ini menilai model berkonseptual modenisasi dengan membangun formula ciri-ciri identiti senibinanya. Kajian ini menggunakan kaedah metodologi bercampur iaitu kombinasi bancian kualitatif dan kuantitatif. Pemilihan sampel bancian kualitatif menggunakan kaedah berstrata yang mana kawasan-kawasan yang dipilih dalam kajian ini dibahagikan kepada empat zon (Zon 1 hingga 4), manakala proses persampelan rawak-mudah diaplikasikan untuk bancian kuantitatif semasa kertas soalan bancian diedarkan kepada para responden terdiri daripada pelajar jurusan senibina di universiti tempatan dan arkitek di Bandar Erbil. Untuk analisis kualitatif, kaedah pemerhatian secara langsung dan pendokumentasian visual digunakan. Analisis ini adalah berkaitan dengan membuat perbezaan stail pada fasad rumah. Analisis kuantitatif walaubagaimanapun mengandungi hasil daripada analisis deskriptif, faktor, korelasi dan regresi berganda. Penemuan kajian hasil daripada analisis ini menyokong andaian kajian dengan bukti data statistik yang menyatakan bahawa faktor modenisasi pada fasad rumah memberi pengaruh terhadap arus kelangsungan identiti senibina. Kajian ini menyimpulkan bahawa “Jisim dan Artikulasi” dan “Perincian Senibina” merupakan faktor yang paling berpengaruh dalam interpretasi arus kelangsungan identiti senibina. Kajian ini memaparkan sumbangan penting kaitan dialek antara modernisasi dan identiti senibina yang dapat menyelesaikan konflik dalam kaedah pendekatan teori pengaruh moden dan identiti senibina. Penemuan-penemuan kuantitatif ini merupakan bukti statistik yang menunjukkan faktor-faktor kemodenan fasad rumah mempunyai pengaruh langsung pada kesinambungan identiti senibina.

INFLUENCE OF MODERNITY VERSUS CONTINUITY OF ARCHITECTURAL IDENTITY ON HOUSE FACADE IN ERBIL CITY, IRAQ

ABSTRACT

This thesis discusses one of the most distinctive issues of architecture debates about modernity and architectural identity. It aims to measure the influence of modernity to architectural identity on house facade in Erbil City, Iraq. The objectives of this research attempt to evaluate the factors' degree of change, develop a model for visual analysis, examine the variations in the perceptions of the respondents and investigate the correlation between house facade modernity factors and its continuity of architectural identity. Through the literature review, the study investigates a conceptual model for modernity and formulates the properties of architectural identity. The study adopted a mixed-methodological approach, which combines qualitative and quantitative surveys. Sample selection for qualitative survey uses stratified method in which the selected areas in this study are divided into four zones (Zone 1 to 4), whereas simple random sampling process is applied for quantitative survey when distributing the questionnaires to the selected respondents who are architecture students at the local university and architects in Erbil City. For qualitative analysis, the methods used rely on direct observation and visual documentation. This analysis deals with stylistic differences of the house façade. Quantitative analysis however comprises results of descriptive, factor analysis, correlation and multiple regression analysis. Findings from the results of this analysis support the research assumption with statistical evidence that house façade modernity factors have direct influence on the continuity of architectural identity. The study concludes that “Mass and Articulation” and “Architectural details” are the most influential factor in interpreting the continuity of architectural identity. The study makes an important contribution to address dialectical relationship between modernity and architectural identity, by ending the conflicting theoretical approaches regarding the influence of modernity on architectural identity. The quantitative findings provide statistical evidence that house façade modernity factors have direct influence on the continuity of architectural identity.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter is an introductory chapter that intends to clarify the background of the study and discuss several related studies to identify its problem statement. Based on these discussions, the study determines the specific research problem. Accordingly, the research question, research objectives, and research assumption will be formulated. Finally, the chapter presents the scope of the study, research framework, and the structure of the thesis organization.

1.2 Research Background

Recently, concept of modernity and its influences on architectural identity has become a common topic in architectural debates. Scholars in the field of building design explain that “architecture” is affected by two conflict directions, the first forcing it toward new horizons based on upgraded technologies, whereas the second is trying to stabilize its norms, through the local traditions (Tomlinson, 2003; Zein, 2004; Todd, 2005). Consequently, identity is a key concept of the modern era due to the massive changes that have turned modernity into a powerful force bringing unusual transformations (Popescu, 2006).

The pertinent studies show that our new era is marked by increasing globalization and the affirmation of modernity, which is under constant tension with traditional identities (Saleh, 1998; Mehrotra *et al.*, 2004; Zein, 2004; Welz, 2005; Vale, 2008).

As a reaction to this sweeping trend, the phenomenon of architectural identity is observed in many parts of the world. In case of Erbil city in this study, this historical city has passed through rapid transformations after Iraq liberation 2003. Profits from Kurdistan region oil revenues have allowed Erbil city to initiate its reconstruction and rapid development programs much faster than other cities in Iraq. The political, economic, and cultural transformations have impact on the visual appearance of the buildings' façades in Erbil. These rapid developments lead to a state of disintegration in architectural forms that reflected, in many cases, a strange ideological orientation.

In other words, the deterioration of the traditional scheme requires a need to re-emphasize the local identity. It is the result of modernization forces, strengthened by the maturation effects of globalization. In this regard, Tomlinson (2003) argues that globalization is really the globalization of modernity and that modernity is the harbinger of identity.

Generally, the process of approaching the issue of identity in architecture urges architects to create proposals in social development. As the concept of identity refers to lived experiences and all the subjective feelings connected with everyday consciousness, experiences, and feelings are supposed to be embedded within wider norms of social relations (Zein, 2004). Hence, the importance of the identity issue refers to its relationship with the nation's cultural behavior, languages, beliefs, attitudes, and values. Therefore, this concept of identity enables design issues to be debated in social and political terms (Rose, 1995).

Based on Carmen (2006), architecture is a worldwide feature of human experience, which derives its meaning from cultural concepts of place, time, and a certain form of the reaction between man and place. It appears as a unique medium of expression, which conveys local identity. Hence, identity is people's source of meaning and experience. It is a sort of collective treasure for local communities (Castells, 1997; Tomlinson, 2003). In light of the above, the study investigates the influence of modernity versus continuity of architectural identity on house façade in Erbil City. The focus is limited to the process of continuity and change of house façade in different periods of the city's evolution.

1.3 The Rationale behind this Study

The main reasons for conducting this study are as follows:

- i. The architecture in Erbil city is undergoing a transformation from traditionalism to modernism due to globalization. These changes ultimately have transformed the appearance of buildings and created various challenges in architectural expression in all economic, cultural, and social aspects of life (Heshmati, 2007).
- ii. The lack of studies measuring the influence of modernity on the issue of architectural identity and the absence of an obvious professional discourse about the directions of these two conflicts are the main reasons behind conducting this study.
- iii. Modernity creates new disintegrated architectural forms within the body of local traditions in Erbil City. The generation of these forms affects the process of cultural continuity and leads to ruptures in the physical and moral aspects of architectural identity (Moreira, 2006; Egenter, 2008).

- iv. The conflict tension between the desire for modernization and the nostalgia for traditions in housing design creates a state of chaos and confusion in house façades. This tension affects local architects' attitudes to design new modes of structure, order and regulation on the one hand, and the spirit of conventions and traditions on the other (Chadirji, 1986; Asfour, 2004).
- v. The shortage of housing projects and the poor quality of existing structures encouraged the investors to make rapid developments in housing sector (Nagy, 2006). Most of these developments translated into Western concepts and neglected the fundamental aspects of local identity traditions.

1.4 Previous Related Studies

To understand the distinctive attitudes regarding the concept of modernity and its role on architectural identity, many similar studies have illustrated, described and summarized their approaches and methodologies. These previous related studies will be classified in main categories namely philosophical approach, descriptive approach, analytical approach, and experimental approach. The following sections describe each approach accordingly.

1.4.1 Philosophical Approach

This section discusses relevant philosophical approach studies regarding the influence of modernity to architectural identity. The aim is to clarify the dialectic relationship between architectural identity and modernity. These studies are listed as follows:

- a) Tomlinson (2003): The role of globalization and its effects on cultural identity is the main direction of Tomlinson's inquiries. This study uses a philosophical

approach toward the issues of identity in architecture based on the assumption that globalization destroys identities. It explains the role of globalization in reproducing cultural identities as a sort of collective treasure of local communities. The main conclusion of this study sheds light on cultural identity as a product of globalization and suggests that globalization is the most significant force in creating the cultural identity rather than destroying it.

b) Cripps (2004): How the concept of identity is embedded in architecture is the main focus of Cripps's investigation. Through the assumption that modernity in architecture is above and beyond culture, this study examines the formation of local identities in terms of architectural design. It explains the conflictual relationships between identity and modernity. Moreover, it clarifies that identity comprises two main aspects; the first urges human beings to organize themselves in a system of meaning, whereas the second resists the idea of a universal language "Global Architecture" in which the issues of race and identity are marginalized.

c) Zein (2004): This study discusses the idea of reflexive modernization to explain the issue of identity in contemporary architecture. It suggests the idea of appropriate modernity that provides a proper balance between the importance of the past (heritage values) and the needs of the present (better living opportunities). Appropriate modernity is the equilibrium between opposite dead ends (modernity and identity). The study reveals a strong correlation between identity and modernity. As a result, the study concludes that any consideration of cultural identity leads to a careful thought toward modernity.

d) Todd (2005): This study explains identity change in terms of three variables: existing identity structures, power relations, and resources. It presents the path of identity change in six possible directions: reaffirmation, conversion, privatization, adaptation, assimilation, and ritual appropriation. The study proposes a model of analysis to recognize the six identity categories, their internal complexity, their effects in framing interactions, and the possibility of both gradual, and sudden changes.

1.4.2 Analytical Approach

This section focuses on the most important analytical studies discussing the concept of identity and modernity. These studies use an analytical approach (i.e., quantitative methodology) to analyze the vocabulary and elements of creative works through their physical characteristics. The most relevant studies are as follows:

a) Salama (2007): The study focuses on “Surface Treatment” by analyzing buildings’ visual elements. It clarifies two types of identity: visual identity and activity-based identity, and it suggest a fresh look at the issue of meaning in architecture. The study adapted the visual analysis of building façades to identify the physical aspects of architectural identity by classifying the visual world into fixed features (components of the built environment: walls, doors, windows, entrances, etc.). The process of analysis relies on a number of physical characteristics that define objects and their relationships in the comprehensive whole. The study concludes that perceiving and interpreting the visual environment is a complex process involving the interaction of cultural sets and values.

b) Asfour (2004): “Identity in the Arab Region” is the title of Asfour’s investigation. The study adopted an analytical approach to understanding the negative impact of modernism on Arab architecture and urban fabric. It explains the phenomenon of traveling theory as a simplistic version of modernism. This process means cutting ideas from their original cultural field and pasting them into a new cultural field. Therefore, the Western models are embedded in the Arab society and the soul of heritage is rejected. The study concludes that by merging traditional values within contemporary architecture, a new version of architectural identity becomes visible.

c) Al-Naim (2008): This study attempts to analyze the event of change in contemporary architecture. It uses an analytical approach to clarify how people have accepted new forms in their home environment and how alterations to private houses have been conducted to meet social needs. The study shows identity in architecture to be a dynamic phenomenon. Architectural identity can be changed and reformed over time due to the forces of modernization. The study concludes that satisfaction of the cultural core is more important than the physical appearance of the house façades because the forces of change cannot completely succeed in shifting the core values of architectural identity.

d) Watson and Bentley (2007): This study focuses on the dynamic nature of the identity-construction process by analyzing several case studies to identify guidelines and address place-identity issues in the field of architecture. The study discusses the importance of identity-construction strategy that comes from an influential version. It obtains “roots” by using “deep” building types in local

traditions. The study concludes that the size of the blocks and the pattern of the plot subdivisions are critical factors in determining the continuity of architectural identity.

1.4.3 Descriptive Approach

The studies in this section describe the role of modernity and its influence on architectural identity. These studies use a descriptive approach to explain the phenomenon of identity in architecture. The relevant descriptive studies are as follows:

a) Bornberg *et al.* (2006): “Traditional versus a global, international style” is the title of Bornberg’s research. The Study investigates the effects of globalization on the local traditions in Erbil city. It sheds light on the urban pattern arrangements and clarifies the influence of the imported contemporary projects on the existing urban fabric, which leads in most cases to a loss of identity. This study concludes that the process of urbanization should be adapted to the climate and physical environmental needs of local areas.

b) Rasdi (2005): The study attempts to classify the various approaches to address the problem of a national architectural identity. It classified identity into three different types: natural identity, forced identity, and manufactured identity. Likewise, it attempts to elucidate the philosophical concerns of identity in architecture. The study explains the three ‘traditions’ of modernism. The first is the pure machine approach. The second presents an intellectual beauty of platonic forms, whereas the third is an organic architecture steeped in the

regional climatic and cultural responses, complete with a serious system of ornamentation. In conclusion, this study takes a descriptive approach in clarifying the relationship between modernity and identity.

c) Moreira (2006): This study examines the role of modern architecture in constructing national identities. It clarifies that the involvement of modern architecture within local traditions leads to the integration of modern identity. The study shows that the spread of modern architecture throughout the world is a complex phenomenon that cannot be reduced to a single continuous path. It permitted national culture to be framed in new ways. This study concludes that tradition cannot be found in specific architectural forms and elements, but rather it is found in old patterns of living and architectural experiences. Likewise, the concept of identity can be adapted to different forces and changes without losing its essential characteristics. Thus, the old and the new could be reunited in dialectic continuity through time.

d) Abdel-Kader (2002): This study investigates the role of the political economy on the issues of identity. It focuses on the effects of globalization on shaping urban forms, space as representative of social experiences and the concept of identity through forms of representation. The study concludes that the changing political economy reinforces social identity through architectural forms of the residential built environment.

1.4.4 Empirical Approach

This section discusses architectural studies that adopted the empirical approach in determining the appropriate measuring scales. The research methodologies of these studies varied in terms of the specific methods and tools used for data collections. These studies can be listed as follows:

a) Malhis (2003): This study presents a systematic understanding of how architecture is influenced by different socio-cultural aspects. Through a combined analytical and empirical methodology, the syntax and the semiotics of façades are investigated. House forms are analyzed at three levels: façade complexity, layout configuration, and semiological perceptions. A system of recording stylistic diversity is formulated by combining the formal basis with stylistic features. Constructing a relationship between the structures of syntax and semiotics is the study's main contribution. The findings indicate that socio-cultural factors have a direct impact on the elemental arrangements within house façades.

b) Mahgoub (2007): This study investigates how cultural identity is being expressed in contemporary architecture. The study focuses on design strategies in expressing cultural identity. They developed a three-dimensional matrix as a measuring tool to understand the contradictory relationship between globalization and identity. The study concludes that the climate and the environment have a major influence on architectural identity. Likewise, the impact of religion on culture is very important and fundamental for realizing the needs of the individual for privacy, family interaction, and space configuration and orientation.

c) Tucker and Ostwald (2007): This study summarizes the use of algorithms in studying the visual properties of the built environment. It relies on a software program to compare the visual characteristics of building façades. The process of visual analysis aims to identify the characteristic features of house façades to compare the shared patterns. This study investigates the relationship of elements with each other and to the building as a whole, the use of ornaments and visible textures, and the scale of elements within the composition. The study concludes that analyzing the visual properties of building façades can show the degree of the building's homogeneity within its surroundings as well as evaluate its visual influence in sustaining the heritage value of a streetscape within a conservation area.

d) Sari *et al.* (2011): The aim of this study was to determine the impact of socio-cultural and socio-economic factors on the formation of traditional and modern house outlines. The methodology adapted in this study is based on the morphologic analysis of house layouts and façades. Several parameters have been investigated to determine the influence of culture accumulation on house shapes. The study concludes that the traditional house met all the requirements of daily life in terms of functional efficiency and visual attractions. It achieved a successful result through its link to a very deep cultural accumulation. In contrast, radical transformations occurred in modern houses due to the changes in family structure and the lifestyle. Therefore, modern houses cannot reflect the success of the houses of the past because these houses are alienated from their own culture.

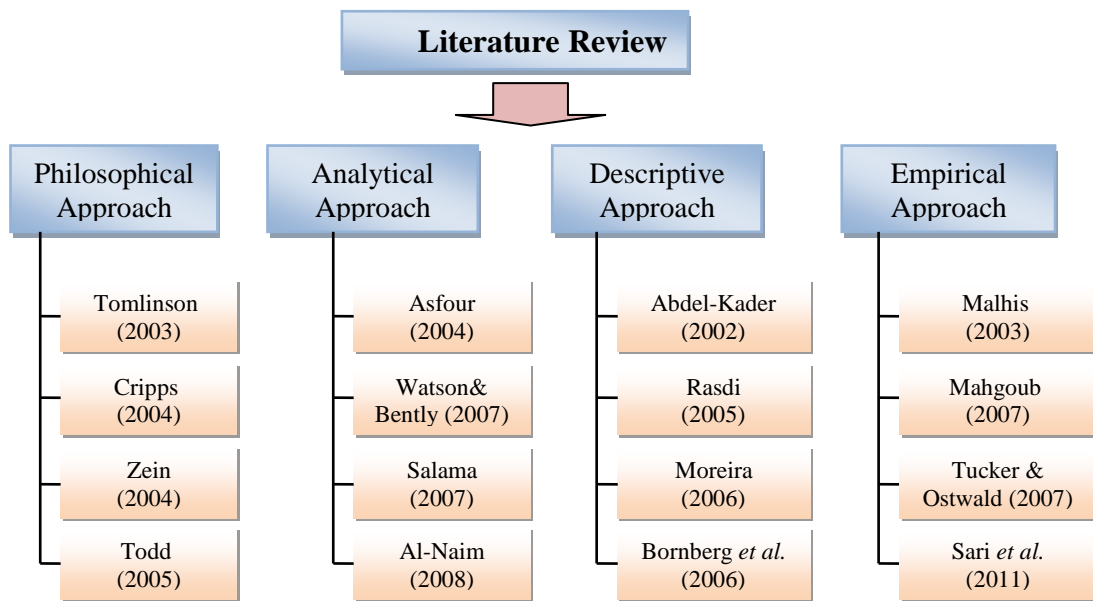


Figure 1.1 Summary of the Literature Review of Previous Related Studies

1.5 Problem Statement

Based on the previous studies, architectural identity is a dynamic phenomenon. It can change and reform over time to create a link between the past, present and future. These previous studies illustrate that the issue of architectural identity has two conflicting vectors: the first is the vector of similarity and continuity, and the second is the vector of difference and dissimilarity. Through discussions of previous pertinent studies on the concept of modernity and its influence on architectural identity, the following two directions of conflict have been detected:

1. Modernity is a destructive force that destroys the existing architectural identity
2. Modernity is an evolutionary force to construct and renew the existing architectural identity

These two conflicting directions act as an indicator to show the existence of a close relationship between modernity and architectural identity. However, the direction of this relationship is not clear. Despite the multiplicity and variety of trends regarding the relationship between modernity and identity, several questions remain unanswered: How do we measure the influence of modernity on identity in architecture? How and why did such a phenomenon occur? What are the pillars of architectural identity? How and why did these pillars change?

Based on the problem statement, the main assumption of this study is formulated to be the role of modernity and its influences in shifting architectural identity in terms of house façades in Erbil City. The study will focus on the process of continuity and change to clarify the dialectic relationship between modernity and identity in architecture.

1.6 Research Questions

This study attempts to answer the following research questions.

- 1- What is the influence of house façade transformations on the continuity of architectural identity?
- 2- Do the stylistic features of house façades change over time?
- 3- What are the main pillars of architectural identity for house façades?
- 4- Are perceptions toward the continuity of architectural identity and the modernization factors of house façades constant?
- 5- Does the theoretical model comprise the inclusive factors affecting the continuity of architectural identity?

- 6- Do the modernity factors of house façade positively correlate with the continuity of architectural identity?
- 7- What are the most influential factors in interpreting the continuity of architectural identity?

1.7 Research Objectives

The objectives of this research were chosen to emphasize the holistic phenomenon of identity and its conflict with modernity. The objectives attempt to measure the influence of house façade modernity factors on the continuity of architectural identity in Erbil city. The objectives of this research are as follows:

- 1- To evaluate the factors' degree of change in terms of house façade transformations in determining the continuity of architectural Identity.
- 2- To identify house façade checklist factors and develop a model for visual analysis.
- 3- To examine the perception of respondents toward the continuity of architectural identity and house façade modernization factors and check factors dimensionality in the theoretical model.
- 4- To examine the strength and the direction of relationships between the house façade modernity factors and the continuity of architectural identity.

1.8 Scope of the Study

The scope of this study is the visual morphology analysis of house façades in terms of architectural identity. It aims to examine the process of continuity and change as the main conflicting forces between modernity and identity in developing countries influenced by globalization. Erbil city is the longest continually inhabited place in

the world (UNESCO, 2008) with strong recent economic developments. Thus, its selection as the area for the study is appropriate. It is interesting to note that a new feature is reshaping the built environments in Erbil city, and this feature is related to modernization forces. These developments have resulted in new systems of user requirements, and to satisfy these developments, new materials, building techniques and architectural details have been applied. These changes have ultimately transformed the appearance of building façades in the city. Hence, the research is limited to evaluating the visual analysis of housing façades in the different periods of Erbil city evolution.

1.9 Research Framework

The research framework (Figure 1.2) has four phases as follows:

- a) First Phase: In this phase a theoretical study on modernity and architectural identity will be investigated. From the literature review the study explore a conceptual model for modernity and formulate a comprehensive framework including the most effective properties of architectural identity. The expected outcomes from this phase will summarize a theoretical framework for the concept of modernity and illustrate the main properties of architectural identity.
- b) Second Phase: This phase intends to formulate house façade checklist factors that affects the design of house façades. These factors are derived from previous related studies and rearranged in a new format to formulate a model of visual analysis. Moreover, this phase examines and evaluates the pervious proposed architectural models in measuring and analyzing building visual elements. Finally, through composing the theoretical propositions in the current models with the guidelines from literature review, the study formulates a

comprehensive framework including the most effective parameters and assigning each parameter by a range of relevant values.

- c) Third Phase: data collection is the third phase of this study. The research data will be collected through a mixed method techniques including qualitative and quantitative surveys. The qualitative case study survey includes the observational study for building elements in Erbil City. It covers site visits, observation, checking, comparing and documenting of four different periods starting from traditional period before 1930, modern period (1930-1980), transitional period (1980-2003) and advanced modern period after 2003. The purpose of observational study is to explore, explain, and describe the physical elements of local traditions in different periods. The quantitative part will be a questionnaire survey. This survey attempts to measure the degree of continuity in house façade physical elements. It needs to be distributed among respondents to get comparable data in which the influence of modernity versus continuity of architectural identity on house façade in Erbil City can be tested statistically.
- d) Final Phase: Finally, the data will be analyzed in two aspects. The first will focus on qualitative analysis for visual building elements using comparative tables while the second analysis will rely on quantitative analysis (descriptive, factor analysis, correlation analysis and multi regression analysis). Then the outcome data will be statistically analyzed by SPSS program. The research results (contribution of the analysis) will illustrate final conclusions and recommendations.

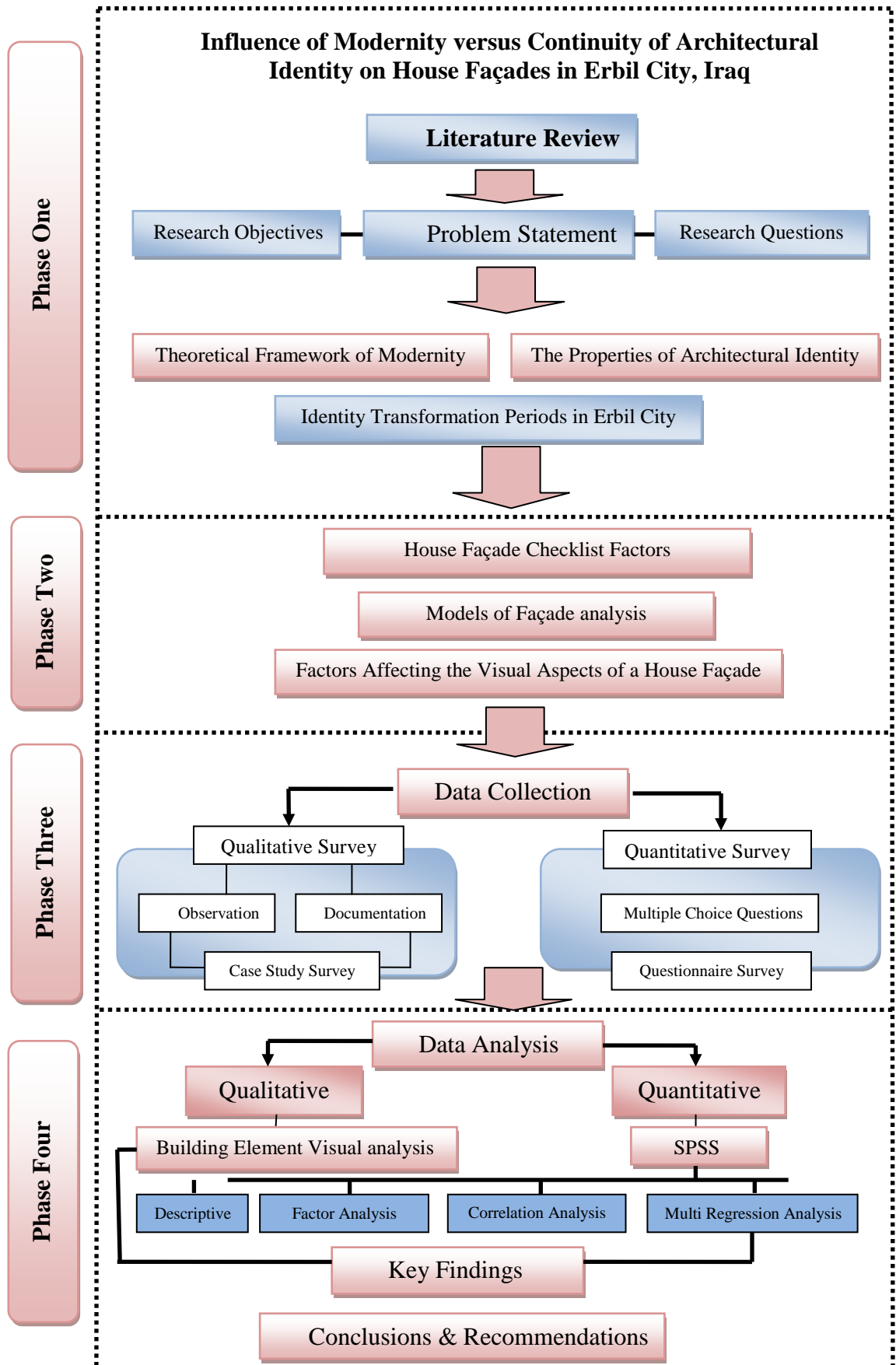


Figure 1.2: Research Framework

1.10 Structure of the Thesis

This study is organized into seven chapters as follows:

Chapter one is an introductory chapter presenting general information about the study background and discussing previous related studies grouped into four approaches namely: philosophical, descriptive, analytical, and empirical approaches. It outlines the research questions, the research objectives, the scope of the study, research framework, and the organization of the study.

In chapter two, through a literature review, the concept of modernity and its indicators will be defined, analyzed and investigated from different point of views. The chapter also presents periods of modernity, discusses the modernization theory and summarizes a theoretical framework for the concept of modernity in architecture.

Chapter three discusses the idea of identity as a phenomenon in architecture. It illustrates the operational definition for architectural identity and clarifies its main properties. The chapter crystallizes the characteristic features' transformations in different periods of Erbil city evolution and discusses the traditional elements of cultural identity.

Chapter four intends to formulate house façade checklist factors. It presents a review of house façades and discusses factors affecting the design of house façades. In addition, it examines and evaluates the proposed architectural models in measuring and analyzing building visual elements. Finally, the study develops a comprehensive framework of the most effective parameters for visual analysis.

Chapter five presents the research methodology and describes the pattern of methodology that will be used in each part of the study. It provides information on sampling methods, data collection strategies and, finally, gives an acceptable explanation for methods of analyses that will be used in the next chapter.

Chapter six presents the overview of data collection and demonstrates the analysis of the results. The findings of the research will lead to the conclusions and recommendations.

Chapter seven presents the research conclusions and key findings. It attempts to validate the main assumption of the study and discusses the manner in which the study has answered the research questions. Also, it indicates the research contribution to measure the level of modern influence that has damaged the traditional building identity in Erbil city. Finally, it discusses the study limitations and proposes recommendations for future research.

CHAPTER TWO

A THEORETICAL STUDY ON MODERNITY IN ARCHITECTURE

2.1 Introduction

This chapter discusses one of the main keywords in this study “Modernity”. There are two parts of the study in this chapter; the first part reviews the definitions of modernity, the periods of modernity in architecture and the sources of its motivation, whereas the second part clarifies modernity features through a bidirectional strategy:

- a) Concept of modernity will be investigated from the architectural point of view, according to multiple attitudes and definitions to discover the key variables upon which the study depends.
- b) Habermas' theory of modernization will be explained to introduce the important account of modernity. The aim is to identify the main features of modernity from the philosophical point of view.

Finally, this chapter covers the degree of change and summarizes possible values for the mechanisms of modernity achievement.

2.2 What is Modernity?

Modernity has multiple sources of origin and indications in history. Its fragmental nature, on one hand, and its constant search for progress and new forms, on the other, would give the impression of precluding any summarizing definition. According to Whyte (2004) modernity has several meanings, it means current and actual, as opposed to past or new in contrast to old. For Simon (2005), modernity is the period of the new. It expresses historical transformation across the range of disciplines, periods and locations by connecting the events, people and ideas of the past to

construct an account of the meaning in the present. Hence, modernity is a period of constant transformation that affects all aspects of experience from science and philosophy to urbanization and state bureaucracy (Colquhaun, 1985; Handa, 1999; Simon, 2005).

Scholars proposed that modern literature began with Boethius in the fifth century, modern astronomy with Copernicus, modern philosophy with Descartes, and modern physics with Newton theory. For other scholars, modernity is fundamentally a condition of the twentieth-century (Hvattum & Hermansen, 2004). The American cultural critic Marshall Berman (1994) argues that:

" To be modern is to find ourselves in an environment that promises us adventure, power, joy, growth, transformation of ourselves and the world – and, at the same time, that threatens to destroy everything we have, everything we know, everything we are....."

The central claim of Berman's argument is that to be modern is to be confronted with disruption and change (Berman, 1990, Yoon, 2003; Whyte, 2004, Simon, 2005). On the other hand, Berman's notion of modernity also defines it as a period of continual transformation, clarifying that the "concept of modernity expresses the belief that the future has already begun; it is the epoch that lives for the future, that opens itself up to the novelty of the future" (Berman, 1994).

Zein (2004) explains modernity in terms of challenging forces, by consolidating Marcel Gauche's argument that modernity characterized as the historical challenge of moving from a received order to a produced one. The study emphasizes that modernity is a quest for which there are no ready-made formulas. Modernity is not a translation of pseudo-truths excerpted from other realities that is the source of all

disruption, but rather is a changing force to accept and make use of for its occasional benefits. Finally, Heynen (1999) classifies the concept of modernity within three attitudes: the first attitude refers to the present as the opposite of the past; the second attitude refers to the notion of new in contrast to the old; and the final attitude is transient. Hence, the current, the new, and the transient: all three of these attitudes describe the concept of modernity.

2.3 Periods of Modernity in Architecture

Architecture has passed through different epochs. Each period has its distinctive features due to its philosophical background and historical evolution. To discover the influence of modernity on each period, the study will seek and find the seeds of modernity in each phase. For the purpose of this study, these periods are classified in three categories according to most theorists' classifications of architectural history and theory (Nesbitt, 1996; Jencks & Kropf, 1997; Rowe, 1998; Vidler, 1998).

2.3.1 Modern Movement Period

The modern movement of architecture was a revolution that destroyed the existing classical architecture and replaced it with a new order (Peter, 1994; Khanuddin, 1998). The starting point of the modern movement returns to the democratic movement and industrial revolution (Scully, 1975; Peter, 1994). It was a new style that came into view in many Western countries with its fundamental concepts of "rational" use of modern materials, the principles of functionalist planning, and the rejection of the historical model. Figure 2.1(a & b) shows the international and local samples of modern movement in architecture.

In general Bauhaus influence on modern architecture was prominent. The Bauhaus, as the chamber of the avant-garde, gave the modern movement a philosophical as well as practical ground in the early twentieth century. Accordingly, concept of modernity is developed in the work of five masters of modern architecture namely Walter Gropius, Le Corbusier, Mies van der Rohe, Alvar Aalto, and Utzon.

Molnar (2005) defines modern architecture as the architecture of functionalism to fashion a new sense of space supported by new technologies and modern materials. The modernist motto of "form follows function" prescribed that the form and appearance of buildings should grow out of their applied materials and structural engineering, and called for the desertion of ornamentation. It requires harmony between function, technology, and artistic expression. For Vidler (2000), modern architecture is that which represents space and form abstractly and avoids the decorative and constructional codes of historical architectures.

Moreira (2006) argues that the spread of modern architecture all over the world was a complex phenomenon that cannot be reduced to a single and continuous path. Modern architecture also legalized national culture to be framed and originated in new ways since the time that its abstraction and universality broke with the main historicizing styles (Khanuddin, 1998; Morris, 1994). Finally, modernity in the period of modern movement can be crystallized into three principal themes: Memory, Expression, and Morality (Gibson, 1984).



(a) Villa Savoy (International)



(b) A House in Azady Sector-Erbil city.

Figure 2.1 (a & b): Samples of Modern Movement in Architecture
Source: (a) www.GraetBuildings.com (b) The Author

As a conclusion, modernity in the period of the modern movement in architecture is a passion for the new. It is a project of rejecting tradition to create new forms. It is an exploration of possibilities and a continuous search for uniqueness and individuality.

2.3.2 Postmodern Architecture Period

The great expectations of modernist architecture, industrialization of construction, prefabrication and functionalism interpreted into a macabre truth and indicated the failure of modern architecture (Jencks, 1991). Postmodern architecture was born out of a reaction to these failures (Venturi, 1992; Hutcheon, 2004). In the 1970s, a new generation of architects led by Venturi fought against the featureless nature of modern architecture. They planned to mix technological aspects of modernity and classical forms from history (Figure 2.2 -a & b). Postmodern architecture has also been described as "neo-eclectic" by returning the reference and ornamentation to the façade and substituting the forcefully unornamented modern styles (Jencks, 1990; Nesbitt, 1996; Venturi, 1996).