



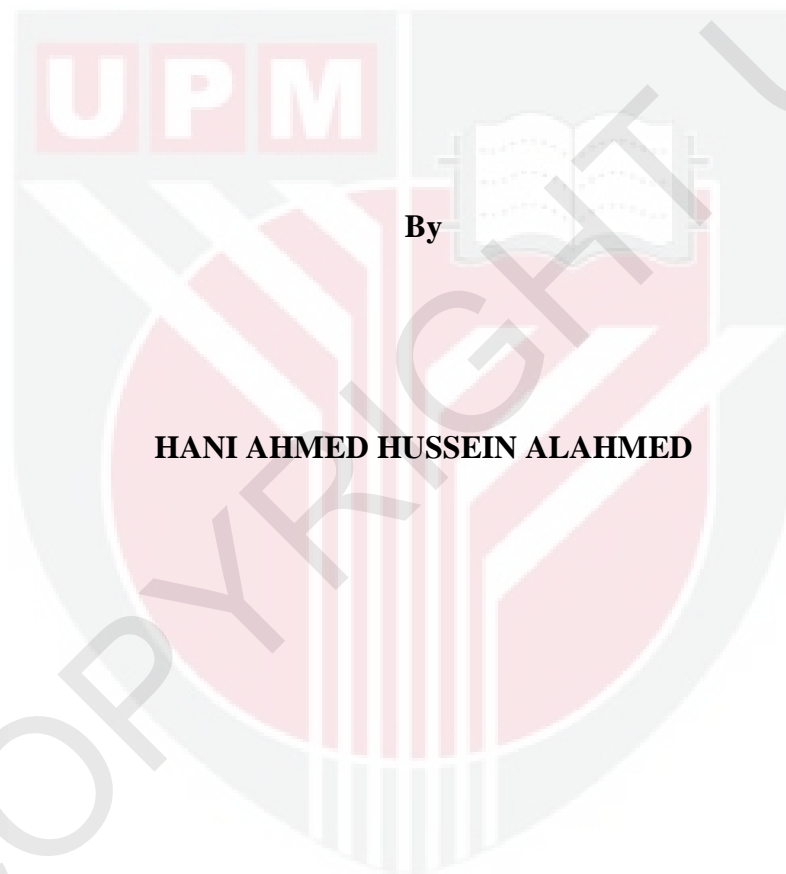
UNIVERSITI PUTRA MALAYSIA

***SPATIAL DESIGN FEATURES TO ENHANCE SOCIAL INTERACTION
AMONG RESIDENTS OF A LOW-RISE NEIGHBOURHOOD
IN BASRA, IRAQ***

HANI AHMED HUSSEIN ALAHMED

FRSB 2012 5

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By

HANI AHMED HUSSEIN ALAHMED

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirements for the Degree of Master of Science**

August 2012

Abstract of the thesis presented to the Senate of Universiti Putra Malaysia in
fulfilment of the requirement for the degree of Master of Science

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August 2012

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Faculty : Design and Architecture

The planners of the Municipal of Basra have issued a rationalization of land use and encouraged developers to use low-rise residential neighbourhood. However, solving the problem of lack of lands for housing leads to other problems. The communities who are living in the low-rise residential neighbourhood do not interact with one another. The main objective of this study is to identify the significant characteristics of spatial design configuration, which influence the residents' social interaction in order to solve the lack of residents' satisfaction in low-rise residential buildings in a neighbourhood. The contribution of this study examines the spatial characteristics of built environment (secured, collective, supportive, responsive spaces) by extending the use of multiple regression models to analyse the spatial characteristics that could affect the residents' social interaction.

The first objective, to understand the effect of built environment on the social interaction achieved by clarifying the literature review of both western communities and Arab-Muslims communities. The questionnaires used to achieve the second objective of this study that is to analyse the feedback of the low-rise residential neighbourhood residents and the level of social interaction among residents. The study used multiple linear regressions to examine the influence of spatial characteristics of built environment on social interaction.

The study concludes that the existence of specific characteristics may enhance social interaction of the residents. These characteristics are hierarchical spatial structure, physical security supports, fostering proper proximity and accessibility, supporting predisposition and motivations, supporting socio-cultural behaviour characteristics, supporting residents' needs and activities, and increasing permeability. This result came up from the questionnaires. This study significantly contributes to the field of housing. The study clarified the theories of social interaction among the residents in both the western and Arab-Muslim communities. The study identified the spatial characteristics that could reinforce social interaction among the residents.

Abstrak Tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Sarjana Sains

**CIRICIRI REKABENTUK RUANG (SPATIAL) UNTUK PENINGKATAN
INTERAKSI SOSIAL PENDUDUK DI KAWASAN KEJIRANAN
BANGUNAN BERTINGKAT RENDAH BASRA, IRAQ**

oleh

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Ogos 2012

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Perancang Perbandaran Bandaraya Basra mereka telah merasionalisasikan penggunaan tanah dan menggalakkan pemaju untuk membangunkan kawasan kejiranan jenis rumah bertingkat rendah. Namun demikian, penyelesaian masalah kekurangan tanah untuk tapak perumahan ini turut membawa kepada masalah-masalah lain. Masyarakat yang tinggal di kawasan kejiranan jenis rumah bertingkat rendah mengalami masalah ketara dalam perhubungan di antara mereka. Objektif utama kajian ini adalah untuk mengenal pasti ciri-ciri penting konfigurasi rekabentuk ruang yang mempengaruhi interaksi sosial penduduk bagi menyelesaikan masalah ketidakpuasan hati penduduk di kawasan kejiranan rumah jenis bertingkat rendah. Sumbangan daripada kajian ini dapat mengkaji ciri-ciri ruang persekitaran terbina (terjamin, kolektif, sokongan, ruang responsif) dengan melanjutkan penggunaan model regresi berganda untuk menganalisis ciri-ciri ruang yang boleh memberi kesan kepada interaksi sosial penduduk.

Objektif pertama iaitu untuk memahami kesan persekitaran terbina terhadap interaksi sosial telah dicapai dengan penjelasan kajian literatur kedua-dua masyarakat Barat dan Arab-Islam. Soal selidik telah digunakan untuk mencapai objektif kedua kajian ini iaitu untuk menganalisis maklumbalas penduduk kawasan kejiranan jenis rumah bertingkat rendah dan tahap interaksi sosial di kalangan mereka. Kajian ini menggunakan regresi linear berganda untuk mengkaji pengaruh ciri-ciri ruang persekitaran terbina terhadap interaksi sosial.

Kajian ini menyimpulkan bahawa kewujudan ciri-ciri tertentu boleh meningkatkan interaksi sosial penduduk. Ciri-ciri berkenaan adalah struktur hierarki ruang, sokongan keselamatan fizikal, pemupukan keakraban dan akses yang betul, sokongan kecenderungan dan motivasi, sokongan ciri-ciri tingkah laku sosio-budaya, sokongan keperluan dan aktiviti penduduk, dan peningkatan ketelapan. Hasil kajian ini adalah daripada soal selidik yang dijalankan. Kajian ini secara signifikannya telah menyumbang kepada bidang perumahan. Ia menjelaskan teori interaksi sosial di kalangan penduduk kedua-dua masyarakat Barat dan Arab-Islam. Kajian ini telah mengenal pasti ciri-ciri ruang yang boleh meningkatkan interaksi sosial di kalangan penduduk.

I certify that a thesis examination committee has met on 13th of August 2012 to conduct the final examination of HANI AHMED HUSSEIN ALAHMED on his thesis entitled “Spatial Design Requirements for Enhancing Residents’ Social Interaction of a Low-rise Residential Neighbourhood of Basra, Iraq” in accordance with the Universities College Act 1971 and the constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The committee recommends that the student be awarded the Master of Science. Members of the Thesis Examination Committee were as follow:



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DECLARATION

I declare that the thesis is my original work except for quotations and citations, which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.



HANI AHMED HUSSEIN ALAHMED

Date: 13 August 2012

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Masters of Science. The members of the Supervisory were as follows:

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LIST OF ABBREVIATIONS

MLR	Multiple Linear Regression
PADCO	Community Development Group and Iraqi Central Office of Statistics and Information Technology
ANOVA	Analysis of Variance
PBUH	Prophet Mohammed Peace Be Upon Him
HRBs	High-rise Residential Buildings



CHAPTER ONE

INTRODUCTION

1.1 Introduction and Background of the Study

Nowadays, consideration of lack of land and the economics of cost construction have led the developers to construct the multi-families buildings. Using various types of multi-family buildings like low-rise, middle-rise and high-rise residential buildings leads to lack of social interaction among the residents. Abbaszadeh *et al.*, (2009) found that lack of social interaction affect the residents' satisfaction. Therefore, enhancing social interaction in multi-families buildings is the residents' satisfaction demand; social interaction plays a main role in the residents' lives.

Many studies argue the relationship between designing built environment such as urban planning and design, and social life of residents in a neighbourhood. This study provides empirical and theoretical approaches to understand the relationship between the physical environment characteristics and the social aspect of the residents. In the western literature, the effect of built environment on social interaction is represented in two theories; Incivility theory and Sense of Community.

However, Islamic literature clarified two forms of traditional neighbourhood theories explaining the relationship between built environment and social interaction social solidarity, Brotherhood or One nation (*Ummah*) and “the theory of prevention the harming of public rights” (*la Darar Wala Dirar*) as the Prophet Mohammed (PBUH) mentioned in the holy Quran (details in chapter 2). All these theories attempt to

understand the effect of built environment on residents' social interaction in a neighbourhood.

A considerable amount of literature has been published on the relationship between built environment and behaviour. Studies on urban planning and design, as well as community and environmental-psychological research have attempted to explain the link between human behaviour and built environment, especially features of spatial design and their effects on human behaviour. Moreover, many studies have shown that spatial design feature of any built environment, such as hospitals, schools, workplaces, and neighbourhood could influence on the uses of spaces, as well as social relationships among people and human behaviour (Hill, 1996; Rapoport, 1982; Rapoport, 1987; Whyte, 1980).

Social interaction plays a major role in human life. There are a large volume of published studies describing the roles of social aspect with satisfaction, and the factors that have influence on neighbourhood satisfaction such as residents interact and cohesion among them (Robinson, Lawton, Taylor, & Perkins, 2003a; Talen & Shah, 2007). For example, Abbaszadeh *et al.*, (2009) explained that there is a strong relationship between social interaction of residents and built environment of a neighbourhood.

There are several theories that are used to evaluate the influence of physical built environment on human behaviour. Marans and Spreckelmeyer (1981) have explained how built environment influences human behaviour. One study mentioned that this particular model explains human behaviour based on two factors; people's

perception of objective environmental attributes and assessments of objective environmental attributes (Jin *et al.*, 2010).

This study focuses on the spatial design requirements of low-rise residential to enhance social interaction in Basra city of Iraq.

This chapter explores housing in Iraq and spatial design of multi-family buildings that are used in designing the low-rise residential buildings in the neighbourhood in Iraq, and the housing typology of Basra city.

1.2 Problem Statement

According to the Iraqi Ministry of housing and construction, there are around three millions housing unit shortages in all states of Iraq (Municipality of Basra, 2010). According to the Municipal of Basra city the housing shortage is two hundreds fifth thousands (250,000) units (Municipality of Basra, 2010). The Iraqi Ministry of housing and construction has planned to cover the housing demand in Basra and all Iraq. However, planners of the maniple of Basra have seen that there is not enough land to cover the huge number of housing shortage. Thus, they issued the rationalization of use land and encourage developers to use low-rise residential neighbourhood. Some studies clarified the built environment of multiples stories residential buildings have effect negatively on residents social interaction. Many years ago, Festinger, Schachter and Back (1950) demonstrated that housing form influences friendship patterns among residents. Moreover, many studies in over the world have detected the negative influence of multi-stories building on residents'

social interaction. Such as in, Toronto found that high-rise apartment dwellers tended to choose friends outside the building, from school or work (Michelson, 1977). In Hong Kong, a high-rise, high-density city the sense of residential community is low and that where respondents had a very strong sense of neighbourhood, their interactions were often work- or school-based, with colleagues or schoolmates living in the same area (Forrest, La Grange & Ngai-Ming, 2002). Further, German and Italian high-rise respondents reported knowing about twice as many families as those in low rises (Williamson, 1978). However, knowing more neighbours did not translate to close relations; the German (but not Italian) high-rise residents reported less visiting and borrowing among their neighbours, and that their closest friends were more likely to be colleagues at work than neighbours. Both the German and Italian respondents said that they would like to have more friends among their neighbours, and that they believed they would have more friends if they lived in a smaller building. In Iran, Abbaszadeh (2009) mentioned the high-rise residential building in Tehran have high shortage of social interaction. In similarity, The researcher clarify this problem of spatial designs of low-rise residential neighbourhood in Iraq having a negative effect on the residents' social interaction, by comparing the residents' social interaction among the residents with the single houses neighbourhood. Therefore, the main problem in this research is in the lack of social interaction in low-rise residential buildings neighbourhoods. Can architecture solve this problem? The research is going to answer this question.

1.3 Research Question

In relation to the research problem of this study, the main research question is:

Main RQ: What are the spatial design requirements to enhance social interaction in low-rise residential buildings neighbourhoods in Basra city?

Sub-RQ 1: What are the effects of neighbourhood urban design on residents' social interaction?

Sub-RQ 2: What are recommendations to architects in order to enhance social interaction in low-rise residential buildings neighbourhoods?

1.4 Research Objectives

Based on the research questions, the two objectives of this study are:

1. To understand the effect of urban neighbourhood design on social interaction of residents
2. To determine spatial design features can enhance the level of social interaction among residents in new low-rise residential buildings neighbourhood.

1.5 Research Framework

This study used the theory of Marans and Spreckelmeyer (1981) as the conceptual model to identify the effects of the neighbourhood built environment of low-rise residential buildings on residents' social interaction and to find out a proper built environment 'spatial design' that could enhance social interaction in the

neighbourhood. Marans and Spreckelmeyer's (1981) model shows that there is a direct relationship between the objective environmental attributes (spatial design) and the behavioural response (Musin Hur, 2008). Moreover, Jin, *et al.*, (2010) mentioned that the model of Marans and Spreckelmeyer, (1981) explores human behaviour based on two factors; people's perception of objective environmental attributes and assessments of objective environmental attributes.

This study uses the conceptual framework of Marans and Spreckelmeyer (1981) to create the hypotheses model of the study. However, this study would only test one part of this framework objective environmental attribute. In particular, the study tested the influence of objective environmental attribute which is represented in this study as spatial design features, on residents' social interaction.

The hypothesis of this study is; there is a significant relationship between spatial design characteristics of low-rise residential buildings neighbourhood and social interaction.

1.6 Thesis Organization

The scholar has divided this thesis into five chapters. The first chapter introduces the background of the study, Basra city and the status of housing in Iraq, housing in Iraq and spatial design features of multi-families' residential buildings. Moreover, this chapter also explains the problem statement, main research question and objectives of this study.

Next, Chapter 2 reviews the literature of the thesis; it discusses the relationship between the built environments and residents. This discussion takes two parts: the first part discusses theories of western literature, and the second part discusses eastern and Islamic theories of traditional neighbourhoods. Moreover, the factors affect the residents' social interaction are explored in this chapter.

This is followed by Chapter 3, which illustrates the conceptual framework of this study, and chooses the research variables. Moreover, it also illustrates the method used for measuring the research, sampling size and data collection strategy.

Meanwhile, Chapter 4 demonstrates the descriptive analysis of the data, and also discusses the findings of the study and the effects of independent variables (secured, collective, responsive, supportive spaces) on dependent variables residents' social interaction.

In addition, Chapter Five presents the summary and recommendations to further enhance the social interaction among residents in low-rise residential buildings neighbourhoods. Copies of the questionnaire, as well as the descriptive results, regression and correlation between variables are attached in the appendices.

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