



AIN SHAMS UNIVERSITY

FACULTY OF ENGINEERING

Urban Planning

# ACCESSIBILITY AS A MAIN FACTOR FOR THE LIVABILITY OF PUBLIC SPACES. CAIRO DISTRICTS AS A CASE STUDY.

A Thesis submitted in partial fulfillment of the requirements of the degree of

Master of Science in Architectural Engineering

(Urban Planning)

by

**Merham Mohamed Hosny Anwar Keleg**

Supervised By

**Prof. Dr Mohamed A. Salheen**

**Dr. Marwa Abdel Latif**

Cairo - 2015





AIN SHAMS UNIVERSITY

FACULTY OF ENGINEERING

Urban Planning

# ACCESSIBILITY AS A MAIN FACTOR FOR THE LIVABILITY OF PUBLIC SPACES. CAIRO DISTRICTS AS A CASE STUDY.

A Thesis submitted in partial fulfillment of the requirements of the degree of

Master of Science in Architectural Engineering

(Urban Planning)

by

**Merham Mohamed Hosny Anwar Keleg**

Bachelor of Science in Architectural Engineering

(Architecture Engineering)

Faculty of Engineering, Ain Shams University, 2011

Supervised By

**Prof. Dr Mohamed A. Salheen**

**Dr. Marwa Abdel Latif**

Cairo - (2015)





AIN SHAMS UNIVERSITY

FACULTY OF ENGINEERING

Urban Planning

# ACCESSIBILITY AS A MAIN FACTOR FOR THE LIVABILITY OF PUBLIC SPACES. CAIRO DISTRICTS AS A CASE STUDY.

by

**Merham Mohamed Hosny Anwar Keleg**

Master of Science in Architectural Engineering

(Urban Planning)

Faculty of Engineering, University, 2015

## **Examiners' Committee**

### **Name and Affiliation**

Prof. Dr. Hebatalla Farouk Aboelfadl  
Architecture , Alexandria University  
Prof. Dr. Germin Farouk Elgohary  
Urban Planning, Ain Shams University  
Prof. Dr. Mohamed A. Salheen  
Urban Planning, Ain Shams University

### **Signature**

.....  
.....  
.....

Date: : / / 2015





# Statement

This thesis is submitted as a partial fulfillment of Master of Science in Architectural Engineering Engineering, Faculty of Engineering, Ain shams University.

The author carried out the work included in this thesis, and no part of it has been submitted for a degree or a qualification at any other scientific entity.

**Student name**

**Merham Mohamed Hosny Anwar Keleg**

Signature

.....

Date:    /    / 2015



## Researcher Data

Name : Merham Mohamed Hosny Anwar Keleg

Date of birth : 10.9.1988

Place of birth : Cairo

Last academic degree : BSc.

Field of specialization : Architecture Engineering

University issued the degree : Ain Shams University

Date of issued degree : 2011

Current job : Teacher Assistant at Urban Planning and Design  
Department – Faculty of Engineering. Ain Shams University



# Thesis Summary

From long ago the main underpinning goal of cities is creating a context for people to engage with each other. As the Public realm forms a vital conduit for the exchange of ideas, friendships, skills, and even material goods, in addition to that it provides a platform for everyday interaction and information flows. Public spaces are the basis and content for the public life of cities. Thus the livability of public spaces is crucial for boosting and promoting the social life of the city and improving its quality of life as well as reinforcing its global identity to withstand the global competition.

However the planning of public spaces in modern cities didn't consider the functionality of these spaces and the ways people would perceive them and react to them, in the light of the rapid urbanization and traffic engineering that prevailed the world trying to accommodate the unprecedented demographic growth in the modern era. Hence public spaces end up empty underused lots unable to achieve their social role, in most modern cities, which is a massive drain on numerous scales economically, environmentally, and socially. It is argued that the urban form is a primary determinant of the functionality of cities and neighborhoods. Thus the main argument of this study is the crucial relationship between accessibility and livability of public spaces, that it can be considered the main factor for the livability of public spaces especially in car dominated environments. Thus it is crucial to consider the location of public spaces in relation to the urban forms of the cities in order to yield the expected outcome.

Accordingly the attributes of livable and successful public spaces were investigated in order to comprehend the whole picture of livable public spaces; their significance and attributes. Accordingly accessibility as a main characteristic of public spaces was put in context to the other attributes and discussed in relation to walkability of the built environment. Afterwards the term 'accessibility' was comprehended through definitions and accordingly accessibility parameters were identified through a broad literature review. Then these parameters were assessed in the selected case studies as samples of Cairo's districts planned in gridiron pattern in the modern era. The assessment tools used were space syntax analysis, urban surveys and field observations, and questionnaires and interviews among the residents of the districts.

Finally, based on the results of case studies assessment, it was concluded that there is a relationship between accessibility and livability of public spaces in Cairo context. However it is not a causal relationship, as higher levels of accessibility to public spaces haven't necessarily caused their livability. In consequence the spaces that were livable with people were thoroughly analyzed, through comparison of different parameters of accessibility, in order to comprehend the main influential parameters of accessibility that have boosted their livability. Moreover the reasons that hindered accessibility to public spaces in the chosen case studies were investigated as well as the potentials for improving their accessibility and livability.

At the end some recommendations were proposed that would help the planners to understand the malfunctions of the modern cities' planning that hindered accessibility of the planned public spaces in modern neighborhoods which hindered them from conveying their role as centers of social interaction among residents and so as symbols of neighborhoods and cities. As well as understanding the people's perceptions and needs as an attempt to attain more livable cities.

Key words: Accessibility – Livability – Public Spaces – Perceptions of pedestrians – Socioeconomic Contexts – Urban Grid – Walkability - Urban Design – Gridiron patterns - Modern Cities plans

# Acknowledgment

First of all, I would like to praise Allah for his infinite generosity, and unlimited blessings, and to thank him for giving me the strength, health, and wellbeing necessary to complete this piece of work. May he always enlighten my path and guide me to serving Islam and humanity.

Second it is of no doubt that I wouldn't have reached that far without the embracement of my treasured family, my backbone in life, and I would like to take this opportunity to dedicate this thesis to my beloved grandmother Hekmat Arnaaot, my dear father Mohamed Hosny Keleg, my dear mother Neveen Mohamed Farag, and my beloved brother Amr Mohamed Keleg. I wish also to express my gratefulness and sincere thanks to my brother's great efforts in attaining this achievement, he has always been my emotional support, my mentor, and my companion in most of the surveys and works I have accomplished in this study. Nothing I can ever do that may pay you back your endless and tirelessly support.

My deepest appreciation goes to my dearest supervisors Prof. Dr Mohamed A. Salheen and Dr Marwa Abdellatif, who have always had confidence in my abilities which made me believe in myself to continue on going down the road. Nothing can pay you back what you both have invested in me. Words aren't enough to thank you for your great support and limitless help. May I always be at your goodwill

I am also grateful to Prof. Germin Elgohary, A. Prof. Marwa Khalifa, and Prof. Youhansen Eid. I am extremely thankful and indebted to them for sharing expertise, and sincere and valuable guidance and encouragement extended to me.

Special thanks to my dear and supportive friends, you are one of the pillars of my life. Thank you Nouran Osama, Dr Nahed Amer, Yasmine Essmat, Dr Hanaa Fathy for her great input, Neveen Nagdi, Hebatullah Ali Ghalib, Aya Mosaad, Wessam El Bardisy, Ahmed Ibrahim Amr, Mohamed Ali El Shafie, and Rasha Abo Deeb, for your continuous encouragement

Last but not least, I would like take to express my gratitude to all of the Department faculty members, especially the beloved TAs for their help and support

# Table of Contents

Statement .....	II
Researcher Data .....	IV
Thesis Summary .....	VI
Acknowledgment .....	VIII
Table of Contents .....	IX
List of Figures .....	XIV
List of Tables .....	XXXVI
<b>Introduction</b> .....	XXXIX
<b>Overview</b> .....	XLI
Research Problem .....	XLI
Research Hypothesis .....	XLI
Research Objectives .....	XLII
Research Questions .....	XLII
Selection of Case studies in the Egyptian context .....	XLIII
Research Structure .....	XLV
<b>Part 1 Theoretical Part</b> .....	1
<b>Chapter One: Livable Cities</b> .....	3
Introduction .....	3
1.1 General Background .....	4
1.2 Livability .....	9
1.3 Elements of livable cities .....	11
1.4 Vivid public realm as a pivot of livability .....	12
1.5 What is a Public Space? .....	13
1.6 Significance of public spaces .....	17
1.6.1 Significance of public spaces for cities .....	18
1.6.2 Significance of public spaces for community .....	21
1.6.3 Significance of public spaces for individuals .....	23
1.7 Summary .....	26