# **Effects of Water Element on the Interior Architectural Spaces**

A thesis submitted in partial fulfillment of the requirements of the Master degree in Architecture

#### Prepared by

#### Arch. Mohamed Said Meselhy Elsaeed

(B.S. degree in Engineering – Architecture Department– Ain Shams University)

Supervised by

## Prof. KhaledDwidar

**Professor of Architecture** 

Faculty of Engineering - Ain Shams University

## Prof. Ashraf AbdAlmohsen

Assistant Professor of architectural

Department of Engineering - Faculty of Engineering - Ain Shams University

## Dr. Sherif NasriKamel

Lecturer of Architectural

Department of Engineering - Faculty of Engineering - Ain Shams University

This research discusses the utilization of this element as a tool for designing and as an indispensable means in designing the interior architectural spaces. It also studies the effects of water element on the design of interior architectural spaces. Approaching the age of technology and industry, by time, and the importance of only the functional side of mancompanion spaces result in explicit separation among man, environment, and nature. Various types of audio and visual pollutants increased such gap which causes huge psychological loads and stifling which affected the sensual and psychological surrounding of human and reduced the efficient performance and productivity of the individual. The permanent residence of man in iron and reinforced concrete forests, which controls the architectural spaces in the last decades, assists in this separation as well.

As a result, return to nature was the typical solution. The competent architectural authorities must allocate a sufficient part of their efforts to create interior spaces in harmony with nature. Water element is indeed considered the best means expressing nature. If it is effectively used according to the type and shape of the interior space, it would be the best connector between the environment where we live all the time and nature. However, there is a clear loss and ignorance of the usage of this element inside these interior architectural spaces. This is evident through monitoring many ways of designing these spaces by water element. This confirms that many negative sides appear in most of these usages where no design bases with water in spaces were applied. Consequently, we could say that monitoring these negatives and determining the most important bases and criteria for designing the interior spaces play the major role in the research problem. The main objective for this research is the study of the possibility of the water as a design element in the processes of designing the interior architectural spaces. In order to achieve this main objective. Chapter One: Water

Chapter one is divided into three sections. Section 1-water, human, and their mutual relation-starts with defining water element and its importance to human life. Then we define the source of water regarding the natural characteristics and cycle on earth. It ends with the global distribution of water and its relation to human beings.

Section 2-water and architecture-starts with studying the concept of design processing using water. Natural designs of water element are then discussed with the mutual relation between water and architecture specially the interior spaces-the research concern.

Section 3-design considerations and fundamentals to form water element-studies the effects of motion on the formation of the water element; how to control the movement of water; the effects of reflection and transparency characteristics; the variety of water element state and its different audio effects; and, finally, the study of the pro forma base for water effects.

Chapter Two: Interior Architectural Spaces and Usage of Water Element

This chapter is divided into two sections. Section 4-interior architectural spaces: concepts and relations- defines the interior space and the principles for design it. It also explains the fourth-dimensional sequence of spaces. Then it studies the types and determinants of the interior architectural spaces. Section 5 -intellectual and functional employment of water element in the interior architectural spaces-studies the nature of using these spaces in order to achieve the design considerations when using water forms in the interior space.

Chapter Three: Analytical Study of Water Element in the Interior Architectural Spaces

This chapter is divided into two sections. In Section 6, we select a sample of different local and international estates and analyze the methods of employing water element inside them. Also we compare results to the necessary design considerations that should be taken into consideration. Finally, the degree of success of using water element in the space is stated. In Section 7 -results and recommendations: the research is concluded. We demonstrate the results that belong to architects who design these interior spaces and the methods of their employment. Finally, we mention the recommendations concerning the issue of the research in the form of awareness and guidelines on how to use water in the interior space, and the research is closed by some future recommendations in the field of study about water element.