KAPLAN AEC EDUCATION

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4.0 Architectural History

Mark Verwoerdt, Meg Kindelin & Lester Wertheimer

ARE

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INTRODUCTION

WELCOME

Thank you for choosing Kaplan AEC Education for your ARE study needs. We offer updates every January to keep abreast of code and exam changes and to address any errors discovered since the previous update was published. We wish you the best of luck in your pursuit of licensure.

THE ARE

Kaplan AEC Architecture provides the only complete, centralized source for all seven divisions of the ARE. All 50 states, five territories, and participating Canadian provinces offer the uniform NCARB Architect Registration Examination (ARE). This exam consists of seven divisions:

- Programming, Planning & Practice
- Structural Systems
- Building Systems
- Building Design & Construction Systems
- Construction Documents & Services
- Site Planning & Design
- Schematic Design

All divisions require graphic solutions to vignette graphic problems and multiple-choice questions. The exams are all administered by computer. Candidates must pass all divisions of the ARE in order to become a registered architect. Those who do not pass a division of the exam may retake it after six months. For further details on the ARE, please visit the NCARB Web site at *www.ncarb.org*.

Kaplan AEC Architecture provides a variety of study material to help you prepare for the exam: study guides, mock exams, question-and-answer handbooks, video workshops, and flash cards. All of our products can be ordered online at *www.kaplanAECarchitecture.com*, or by calling (800) 420-1429.

The ARE is not an easy exam! Although we cannot guarantee a passing grade, we can guarantee our material will better prepare you for the ARE.

Good luck on your examination, and in your professional career.

COURSE PURPOSE AND PROCEDURE

This study guide is a condensed and simplified review of Architectural History, which, although not a separate division of the ARE, is covered in the multiple-choice portions of the exams. Courses covering all the divisions of the ARE are also available, and each has been prepared by the professional staff of ALS.

We advise that you set aside a definite amount of study time each week, just as if you were taking a lecture course, and carefully read all of the material. At the end of each lesson you will find a short review quiz. The quiz questions are intended to be straightforward and objective, and the answers and explanations are included to permit self-checking.

Following the last lesson, there is a Final Examination, which has been designed to simulate the style of the actual exam. Complete answers and explanations will be found on the pages following the examination, to permit self-grading.

OVERVIEW

Architectural history is a true story—the wonderfully exciting account of people and the buildings they created. The Greeks invented not only the subject, but also the word *history*, which means an investigation or inquiry to discover the truth. By that definition, architectural history may be considered a science, although historical evidence has often been more circumstantial than factual.

The characters and adventures of history are often more fascinating than fiction. Architects such as Callicrates, Michelangelo, and Wright were real people; they lived and loved and faced human problems not unlike those we all face today. Indeed, they had problems with clients, budgets, deadlines, and the myriad concerns that continue to trouble architects today.

Architectural education, from the earliest times, has relied on historical models simply because the present has always shared an inescapable relationship with the past. Even today, we use the past to solve current problems, for example, designing a building based on historical precedent. History gives us perspective, a sense of what works and what doesn't. The old maxim that *those who fail to learn history's lessons are doomed to repeat their mistakes* applies quite literally to architecture.

Historians have always neatly categorized architectural developments by style, even though accuracy has occasionally suffered. In this course, we have followed a similar pattern for the sake of convenience. One should be aware that all historical developments bear some relationship to one another, and together they form a record of continuos evolution leading to what we are doing today. As no man is an island, neither does any structure exist apart from its society or the culture that produced it.

We are aware that exam candidates may not have been drawn to this course out of fondness for the subject. Nevertheless, we believe that developing an appreciation for architectural history will enhance one's professional practice and bring personal satisfaction as well.

This course was written by Lester Wertheimer, FAIA. Mr. Wertheimer is an architect in private practice in Los Angeles and a founding partner of ALS.

Material on the topic of sustainable design was written by Jonathan Boyer, AIA. Mr. Boyer is a principal of the firm Boyer Associates Ltd in Chicago, Illinois. He is a graduate of the University of Pennsylvania (BA) and Yale University (MArch). His firm has focused on sustainable design and environmental planning for over 30 years, with projects throughout the United States.

You are now ready to start your course in *Architectural History*. We wish you success in your examination.

LESSON ONE

1 ANCIENT ARCHITECTURE

PRIMITIVE ARCHITECTURE

Somewhere, many thousands of years ago, someone built the first structure. But who this person was or how the structure was built remains a mystery. Archeologists have never been able to determine the precise origins of construction any more than they have learned exactly how language began. The emergence of architecture followed endless centuries of primitive development.

Paleolithic Age

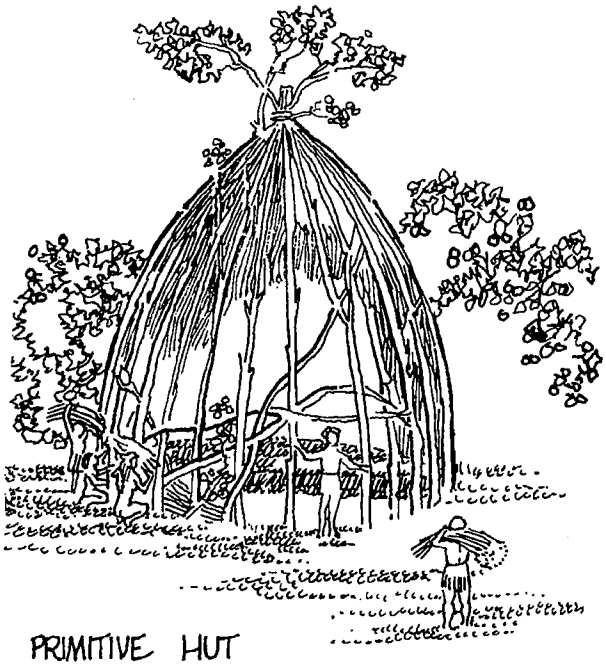
As long ago as 25,000 years, during the *Paleolithic* or *Old Stone Age*, mankind's energy was concentrated on survival—the search for food. Man was a consumer, a nomad, a homeless and solitary hunter of wild game animals and a gatherer of wild plants. He took what the land offered and then moved on, as did the herds he followed. Primitive man lived and slept outside in the open air. His only shelter might have been the bough of a tree or a natural cave, but it is clear that the earliest humans created almost nothing.

Neolithic Age

Only when man was able to free himself from this perpetual struggle for survival was civilization able to develop. During the *Neolithic* or *New Stone Age*, some 10,000 years ago, primitive men and women learned to domesticate animals and cultivate crops. This liberation was the first revolution in the story of humanity. Man now became a producer, learning to produce and store food. Thereafter, he was comparatively freed from his previous nomadic existence. With fields and herds to provide a fairly reliable source of food, and with neighbors to share the work, primitive man learned

to live in a permanent village as part of a tribe. He invented many tools that made life easier—spears, fish hooks, baskets, pots, canoes—and, once settled, primitive man invented the town.

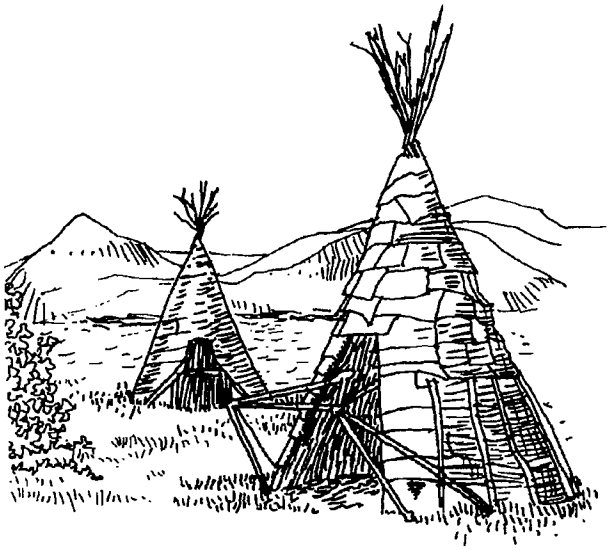
The revolutionary change from nomadic consumer to settled producer took thousands of years, as, similarly, did the development of architecture. The primitive people who plowed the soil took shelter under trees, which inspired huts that were made from branches, reeds, and mud.



PRIMITIVE HUT

Figure 1.1

Shepherds who lived with their flocks would lie down under the shelter of animal skins. These, when raised on branches, became the first tents. Huts, natural caves, and tents were the three primitive types of human dwellings that inspired all later architectural development.

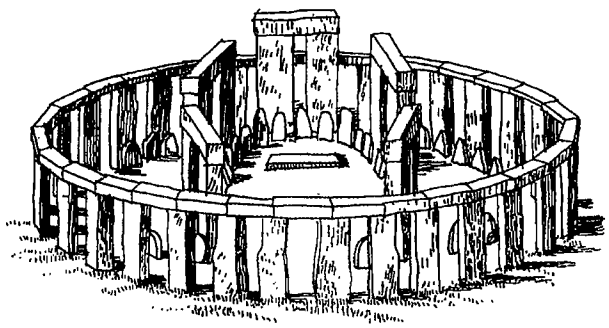


PRIMITIVE TENT

Figure 1.2

Megalithic Structures

The Neolithic Age was also the period of *megalithic* (meaning: *great* + *stone*) structures that were usually erected for religious or mystical purposes. A foremost example of these impressive structures is *Stonehenge* on the Salisbury Plains in England. Here, the open ground was ringed with a series of upright stone monoliths, topped by stone lintels. Stonehenge was a highly symbolic place that was probably used for ancient worship or other mystical rites.



STONEHENGE RESTORED

Figure 1.3

Primitive architectural developments are something of a dead end. There has yet to be found a direct connection between these earliest manifestations and subsequent activities that took place in the eastern Mediterranean area many years later. In a sense, there is an architectural missing link. Therefore, we call these first tentative developments *prehistoric.*

The history of civilization—and of architecture—did not evolve at any one specific center. Rather, it emerged simultaneously at several areas of cultural development: the river valleys of the Tigris and Euphrates in Mesopotamia, the valley of the Nile in Egypt, the Indus Valley in northwest India, and the Valley of the Yangtse in China. Each of these fertile valleys provided the means by which food could be produced easily and abundantly. Which civilization came first, nobody knows for certain. We do know, however, that wherever people gathered in groups, some sort of architecture resulted. For our purposes, we shall pick up the thread of Western architectural development in the valley of the Nile.

EGYPTIAN ARCHITECTURE

Introduction

Egypt, mysterious land of the pharaohs, was ancient even to the ancients. It was a great nation almost 1,000 years before Moses led the Israelites out of bondage, and it was viewed by the Greeks and Romans of 2,000 years ago in much the same way as we view the ruins of Greece and Rome today.

The building forms that took shape in ancient Egypt were the forerunners of what the Western world calls its architectural heritage. The mighty Egyptian monuments are still considered to be among the most impressive structures in the history of architecture. They were the product of a well-organized, dominant, and enduring civilization whose people lived in relative security and contentment.

To live in the Nile Valley was to be surrounded, from birth to death, by a geography and way of life of extraordinary simplicity. Under 30 dynasties of pharaohs, the political, social, and economic structure of Egypt developed into an impressive culture within a highly stable civilization. Through most of nearly 3,000 years, the way of life continued relatively unchanged. The basic architectural forms, as well, remained constant.

The ancient Egyptian culture may be viewed as one of the most successful adaptations to environment in the history of the world. Were this not so, the same expression of power and stability could not have endured for 30 centuries.

Influences

Few countries began with a natural geography as simple and regular as that of Egypt. On each side of the Nile River was a fertile valley bordered by desert. Toward the south, the desert was flanked by mountains on each side that clearly defined the limits of human activity. The entire area resembled a great longitudinal oasis whose character was relatively uniform throughout.

The Nile River

The axis of this composition was the Nile River. To the ancient Egyptians, the Nile was the absolute source of all life. Each summer the Nile would swell with the torrential rains and melted snows from the south, rush north, and overflow its banks on the way to the Mediterranean. As the waters receded, a layer of fertile silt, called *black land* by the Egyptians, was deposited along the adjacent desert lands. The resulting fertility of the soil produced agri-

cultural wealth, which provided security and independence.

The Nile River additionally served as an avenue of transportation and communication. The ease and freedom of water travel to all parts of the kingdom helped to maintain a closely bound country. It was, therefore, on the banks of the Nile that the Egyptians founded their cities—for both the living and the dead. On the east bank were the temples, while on the west bank were the tombs and the royal pyramids.

The cliffs flanking the Nile Valley provided the stone that became the primary building material of the Egyptians. These quarries yielded enormous stone blocks that were ferried along the river to where they were needed. The Nile also provided mud, which the Egyptians used to produce sun-dried bricks. These were used to construct houses and other utilitarian structures that did not require the permanence of tombs and temples. Timber was scarce and therefore rarely used in permanent construction. However, wood was used sparingly in dwelling construction and more commonly for boats and mummy cases.

In all this, we can see how the Nile River exerted a profound influence on Egyptian life and the character of Egyptian buildings.

Egyptian Religion

Another force that had a powerful influence on the development of Egyptian architecture was the religious belief of life after death. This concept of everlasting life pervaded all manners and customs. To achieve the immortality of the soul, it was essential to preserve in death all that had existed in life. Thus, we find bodies kept from decay through highly skillful methods of embalming and mummification.

It followed logically, once the corpse was preserved, that it also had to be protected by an impregnable tomb. This was more difficult, and therefore became one of the important principles of Egyptian architecture. The preservation of the soul involved several other common practices. Placed within the several chambers of the tomb were sculptured effigies and an entire household of familiar possessions—furniture, utensils, jewelry, etc. Carved or painted on the tomb walls were pictures of the family and servants of the deceased, while scenes of food and drink were included to nourish the soul.

In these various ways, the noble soul was kept alive for an eternity with everything necessary for a good life. The tomb, therefore, was not only a monument, but also a storehouse, a chapel, and a work of art. We have learned so much about the ancient Egyptian civilization because of the wealth of artifacts and information that has been discovered in excavated tombs. To know them in death is to know them as they once lived.

Characteristics

In their desire to demonstrate the continuation of life after death, the ancient Egyptians sought to develop an eternal order in symbolic form. Thus, Egyptian architecture showed a greater adherence to established form—that is, a greater uniformity—than did the architecture of any other area. Early in their history, the Egyptians found a symbolic expression so satisfying to them that they believed that any change could only be detrimental. Originality was suppressed, deviation was discouraged, and in the course of thousands of years, very little changed.

The head of Egypt, both in politics and religion, was the pharaoh. He was considered divine, and therefore was the figurehead of the priest class. However, he was controlled by the priesthood, which became a powerful group