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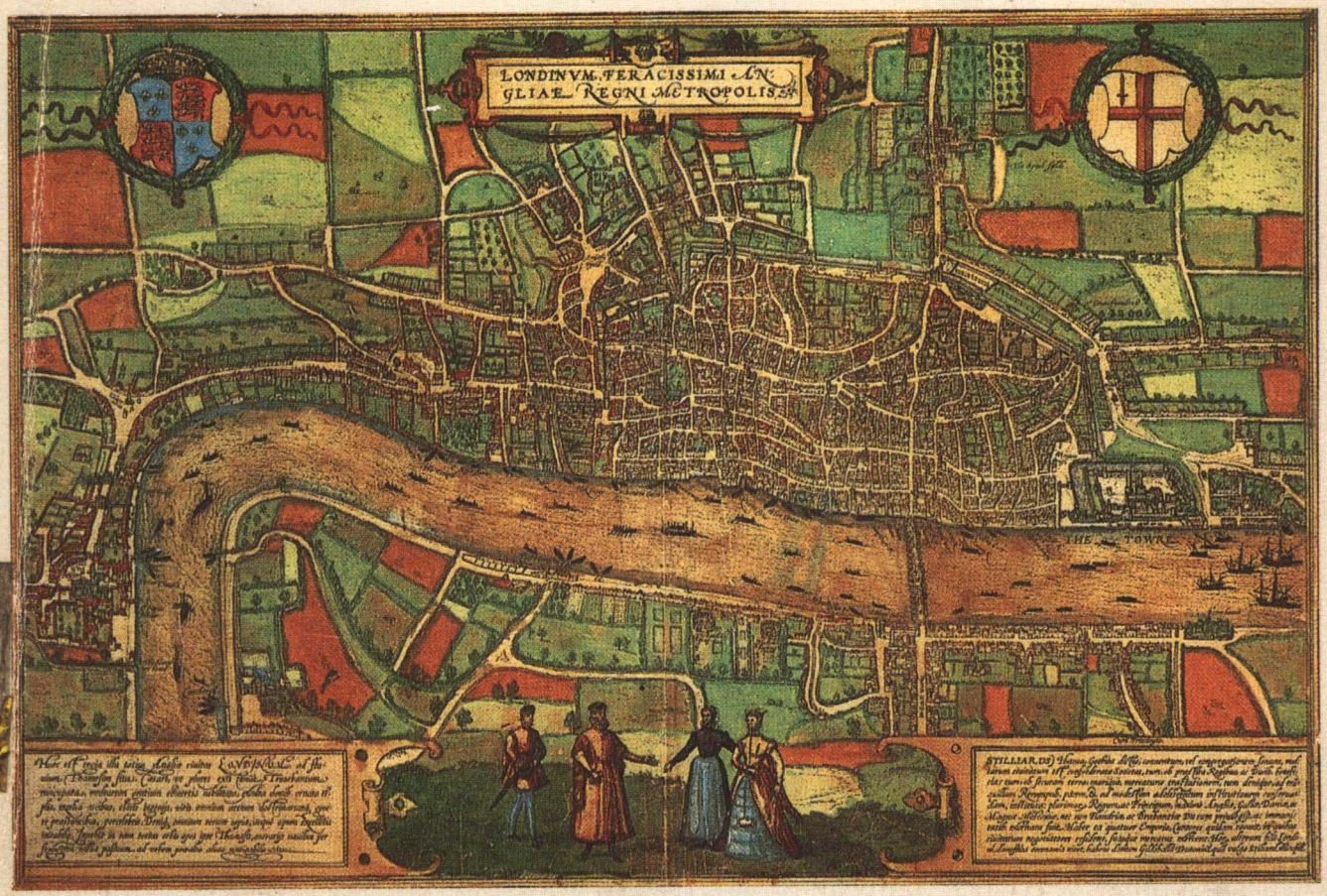
DISCOVERING The WESTERN PAST

A Look at the Evidence Volume I: To 1715



DISCOVERING the WESTERN PAST

A Look at the Evidence Volume I: To 1715

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PREFACE

The title of this book begins with a verb, a choice that reflects our basic philosophy about history. History is not simply something one learns about; it is something one does. One discovers the past, and what makes this pursuit exciting is not only the past that is discovered but the process of discovery itself. This process can be simultaneously exhilarating and frustrating, enlightening and confusing, but it is always challenging enough to convince those of us who are professional historians to spend our lives at it.

The recognition that history involves discovery as much as physics or astronomy does is often unshared by students, whose classroom experience of history frequently does not extend beyond listening to lectures and reading textbooks. The primary goal of *Discovering the Western Past: A Look at the Evidence* is to allow students enrolled in the Western Civilization course to *do* history in the same way we as historians do—to examine a group of original sources in order to answer a question about the past. We feel that contact with original sources is an excellent means of communicating the excitement of doing history, but incorporating complete works or a collection of documents into a Western Civilization course can be problematic for many instructors.

The evidence in this book thus differs from that in most source collections in its variety. We have included such visual evidence as coins, paintings, aerial photographs, cartoons, buildings, architectural plans, maps, and political posters. In choosing written evidence we again have tried to offer a broad sample—songs, plays, poems, court records, notarial contracts, statistical data, and work regulations all supplement letters, newspapers, speeches, autobiographies, and other more traditional sources.

In order for students to learn history the way we as historians do, they must not only be confronted with the evidence; they must also learn how to use that evidence to arrive at a conclusion. In other words, they must learn historical methodology. Too often methodology (or even the notion that historians *have* a methodology) is reserved for upper-level majors or graduate students; beginning students are simply presented with historical facts and interpretations without being shown how these were unearthed or formulated. They may learn that historians hold different interpretations of the

significance of an event or individual or different ideas about causation, but they are not informed of how historians come to such conclusions.

Thus, along with evidence, we have provided explicit suggestions about how one might analyze that evidence, guiding students as they reach their own conclusions. As they work through the various chapters, students will discover not only that the sources of historical information are wide-ranging, but that the methodologies appropriate to understanding and using them are equally diverse. By doing it themselves, students will learn how intellectual historians handle philosophical treatises, economic historians quantitative data, social historians court records, and political and diplomatic historians theoretical treatises and memoirs. They will also be asked to consider the limitations of their evidence, to explore what historical questions it cannot answer as well as those it can. Instead of passive observers, students become active participants.

Following an approach that we have found successful in many different classroom situations, we have divided each chapter into five parts: The Problem, Sources and Method, The Evidence, Questions to Consider, and Epilogue. The section called "The Problem" presents the general historical background and context for the evidence offered and concludes with the central question or questions explored in the chapter. The section titled "Sources and Method" provides specific information about the sources and suggests ways in which students might best study and analyze this primary evidence. It also discusses how previous historians have evaluated such sources and mentions any major disputes about methodology or interpretation. "The Evidence" forms the core of each chapter, presenting a variety of original sources for students to use in completing the central task. In "Questions to Consider," suggestions are offered about connections among the sources, and students are guided to draw deductions from the evidence. The final section, "Epilogue," traces both the immediate effects of the issue under discussion and its impact on later developments.

Within this framework, we have tried to present a series of historical issues and events of significance to the instructor as well as of interest to the student. We have also aimed to provide a balance among political, social, diplomatic, intellectual, and cultural history. In other words, we have attempted to create a kind of historical sampler that we believe will help students learn the methods and skills used by historians. Not only will these skills—analyzing arguments, developing hypotheses, comparing evidence, testing conclusions, and reevaluting material—enable students to master historical content; they will also provide the necessary foundation for a productive, meaningful life beyond college.

Discovering the Western Past is designed to accommodate any format of the Western Civilization course, from the small lecture/discussion class of a liberal arts or community college to the large lecture with discussions led by teaching assistants of a sizable university. The chapters may be used for individual

assignments, team projects, class discussions, papers, and exams. Each is self-contained, so that any combination may be assigned. The book is not intended to replace a standard textbook, and it was written to accompany any Western Civilization text the instructor chooses. The Instructor's Manual provided with the book offers further suggestions for class discussion as well as a variety of ways in which students' learning may be evaluated and annotated lists of suggestions for further reading.

In the completion of this book, the authors received assistance from a number of persons. All three authors would like to acknowledge the initial work on this project by Professors Carol L. Lansing and Michael J. McDonald of the University of Tennessee, Knoxville. The organization and concepts that they proposed for these volumes provided a foundation for the work of the present authors. Our colleagues and students at the University of Wisconsin—Milwaukee, Marquette University, and the University of Tennessee, Knoxville have been generous with their ideas and time. Merry E. Wiesner (-Hanks) wishes especially to thank Ann Healy and Carolyn Ashbaugh for their critiques and suggestions and Neil Wiesner-Hanks and Kai Wiesner-Hanks for their help in maintaining the author's perspective. Julius R. Ruff wishes to acknowledge the assistance of the Reverend John Patrick Donnelly, S.J., Joseph Mikolajczak, Michael Sibalis, Laura B. Ruff, and Julia B. Ruff. Edwin Trainer of the University of Tennessee, Knoxville has been especially supportive, as has Palmira Brummett, who offered invaluable assistance on the non-Western perspective.

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CONTENTS

CHAPTER ONE

THE NEED FOR WATER IN ANCIENT SOCIETIES

THE PROBLEM

The title of the course for which you are using this book is likely a variant of "Western Civilization." Why do we use the term "civilization"? What distinguishes human cultures that are labeled "civilizations" from those that are not? Though great differences separate them, all civilizations share some basic characteristics. The most important of these similarities is the presence of cities; indeed, the word "civilization" comes from the Latin word *civilis* (meaning "civic"), which is also the root of "citizen" and "civil." Historians and archeologists generally define a city as a place inhabited by more than 5,000 people, and they have discovered the remains of the earliest communities of this size in ancient Mesopotamia, present-day Iraq.

Why should the presence of cities be the distinguishing mark of cultural development? It is not the cities themselves but what they imply about a culture that makes them so important. Any society in which thousands of people live in close proximity to one another must have some sort of laws or rules governing human behavior. These may be either part of an oral tradition or, as in ancient Mesopotamia, written down. A city must provide its residents with a constant supply of food, which means developing ways to transport food into the city from the surrounding farmland, to store food throughout the year, and to save it for years marked by poor harvests. Not only does the presence of cities indicate that people could transport and store food effectively, it also reveals that they were producing enough surplus food to allow for specialization of labor. If all work time had been devoted to farming, it would not have been possible to build roads, produce storage bins, or enforce laws on which the city depended. This specialization of labor, then, allowed some members of society the opportunity and time to create and produce goods and artifacts not directly essential to daily survival. Urban residents in Mesopotamia began to construct large buildings and decorate

them with sculptures, paintings, and mosaics, write poetry and history, and develop religious and philosophical ideas, all of which are pursuits we consider essential to a civilization. As the cities themselves grew, greater and greater amounts of food were required to feed their inhabitants, which led to further technological development.

Mesopotamia was in many ways an odd location for the beginning of a civilization. True, the soil is so rich that the region is called the "Fertile Crescent," but it does not receive enough natural rainfall to grow crops steadily year after year. In fact, this region is not where agriculture began in the West; that happened closer to the Mediterranean, where the rainfall was more regular. Apparently, as techniques of planting and harvesting crops spread into Mesopotamia, the inhabitants realized they would be able to use these techniques effectively only through irrigation. They needed to tap the waters flowing in the Tigris and Euphrates rivers, a project requiring the cooperation of a great many people. Thus, rather than proving a block to further development, the need for irrigation in ancient Mesopotamia may have been the real spur that led to the growth of cities. We may never be able to know this with certainty, because irrigation systems were already in place when written records began and because cities and irrigation expanded at the same time. We do know that in Mesopotamia, neither could have existed without the other; cities could survive only where irrigation had created a food surplus, and irrigation only where enough people were available to create and maintain ditches and others parts of the system.

Building irrigation systems presented both technical and organizational problems. The Tigris and Euphrates were fast-flowing rivers that carried soil as well as water down from the highlands. This rich soil created new farmland where the rivers emptied into the Persian Gulf. (The ancient Persian Gulf ended more than 100 miles north of its present boundary; all that land was created as the rivers filled in the delta.) The soil also rapidly clogged up the irrigation ditches, which consequently required constant cleaning. Every year this deposit was excavated and piled on the banks until the sides of the ditches grew so tall that cleaning could no longer be easily accomplished. At this point the old ditch was abandoned and a new ditch cut, tasks that required a great deal of work and the cooperation of everyone whose land was watered by that ditch.

Mesopotamian farmers used several types of irrigation. One technique, known as *basin irrigation,* was to level large plots of land fronting the rivers and main canals and build up dikes around them. In the spring and other times during the year when the water was high, farmers knocked holes in the dikes to admit water and fresh soil. Once the sediment had settled, they let the water flow back into the channel. They also built small waterways between their

fields to provide water throughout the year, thereby developing a system of *perennial irrigation*. In the hillier country of northern Mesopotamia, farmers built *terraces* with water channels running alongside. The hillside terraces provided narrow strips of flat land to farm, and the waterways were dug to connect with brooks and streams.

Farmers could depend on gravity to bring water to their fields during spring and flood seasons, but at other times they needed water-raising machines. Numerous types of machines were devised, some of which are still in use in many parts of the world today. These solved some problems but created others, as farmers with machines could drain an irrigation ditch during times of low water, leaving their neighbors with nothing. How were rights to water to be decided? Solving this problem would be crucial to human social organization, and the first recorded laws regarding property rights are in fact not rights to land but rights to water. In Mesopotamia, land was useless unless it was irrigated.

Many of the irrigation techniques developed in Mesopotamia either spread to Egypt or were developed independently there. Because it received even less rainfall than Mesopotamia, Egypt was totally dependent on the Nile for watering crops. Fortunately, the Nile was a much better source of water than the Tigris and Euphrates because it flooded regularly, allowing easy basin irrigation. The rise and fall of the Nile was so regular, in fact, that the Egyptians based their 365-day calendar on its annual flooding. The Egyptians also constructed waterways and water-lifting machines to allow for perennial irrigation. Here, too, irrigation both caused and resulted from the growth of cities; it contributed as well to the power of the kings, whom the Egyptian people regarded as responsible for the flood of the Nile.

Irrigation was more difficult in places that did not have flood-prone rivers, including many parts of North Africa and the Near East. Here people adapted techniques to conserve water from sporadic heavy rainfalls. They dammed the temporary lakes (termed *wadis*) created by these rainfalls and built ditches to convey the water to fields, rather than allowing it simply to flow off onto the desert. Sometimes this wadi irrigation involved a whole series of small dams down the course of rivers that ran only after storms. Besides providing water, wadi irrigation also built up terraces because the rivers carried soil with them.

The earliest water systems were for crop irrigation, but people also began to demand good drinking water. In many parts of the ancient world the demand for drinking water led to the setting up of a second system, because river water that is suitable for irrigation may be brackish, unpleasant, or even unhealthful to drink. In southern Europe, where lakes were often not far from growing cities, the problem was solved by building channels made of timber, stone, or clay earthenware that carried water

from the lakes to the city. These channels might be open or closed, depending on the terrain and level of technical development of the culture that built them. Generally they relied on gravity flow and fed into underground tanks or reservoirs in the city; the oldest known water channels are in Jerusalem and date from about 1000 B.C. The construction of such systems, which demanded even more technical expertise than irrigation ditches, provoked additional legal problems about ownership of the right to this clean, cool water.

When lakes were not located close enough to make above-ground channels feasible, people had to rely on water from *aquifers*, underground water-bearing layers of gravel or porous rock. The water could be obtained from wells drilled in the ground, but wells could only supply a small amount of water at a time. Once an aquifer had been discovered, however, a horizontal channel could be dug to lead the water to an outside channel or reservoir. A horizontal channel only worked in hilly areas where the aquifer stood higher than a nearby valley, but such channels, called *qanats*, have been found in Iran, Syria, Egypt, and Turkey that are over 2,000 years old. If the amount of water was large enough, the qanat could be used for irrigation as well as drinking water.

When the Romans conquered the Middle East and North Africa in the second century B.C., they inherited irrigation systems that had already been in existence in some cases for more than 2,000 years. The Romans carried many ideas to other parts of their empire and made innovations as the terrain or distance required. Most of the European territory in the Roman Empire received adequate rainfall for farming without irrigation, but many Roman cities, especially Rome itself, experienced a chronic shortage of drinking water. The Romans solved this problem by building *aqueducts*, covered or uncovered channels that brought water into the cities from lakes and springs. The first of these in Rome was built in 312 B.C., and the system expanded continuously up to about A.D. 150. Over 300 miles of aqueducts served the city of Rome alone, with extensive systems in the outlying provinces as well. Although Roman engineers went to great lengths to avoid valleys, they were occasionally forced to construct enormous bridges to carry the aqueduct over a valley. Some of these bridges were over 150 feet high, and a few, such as the bridge-aqueduct in Segovia, Spain, still bring water to city residents. The Romans' sophisticated architectural and construction techniques—the arch and water-resistant cement, for example—enabled them to build water systems undreamed of in Mesopotamia and Egypt. Legal problems were not as easily solved, however, and disputes about water rights recur frequently throughout the long history of Rome.

Supplying cities with water was not simply a technological problem but one with economic, legal, and political implications. Through their solutions to these complex problems,

ancient societies created what we call civilization. Your task in this chapter will be to use both visual and written evidence of ancient water systems to answer the question: How did the need for a steady supply of water shape civilization?

SOURCES AND METHOD

Historians use a wide variety of sources when examining ancient irrigation and water supply systems. Many of these systems were created before the development of writing, so archeological evidence is extremely important, especially in examining technological development. This evidence may be the actual remains of ancient ditches, machines, or aqueducts, but in many areas these have completely disappeared. This does not mean they have left no trace, however, for the ancient uses of modern landscapes are often revealed through patterns of depressions and discoloration.

The easiest way to see these patterns is through aerial photography. Analyzing aerial photographs can be a difficult task, however, and it takes a great deal of training to learn how to read ancient land use patterns through the overlay of modern development. Occasionally the older patterns can be quite clear, however, and only a small amount of additional information is necessary for you to begin to decode them. The first piece of evidence, Source 1, is an aerial photograph of the site of a pre-Roman city in Italy. Examine the picture carefully. Can you see the old grid pattern of irrigation ditches, which shows up as light and dark marsh grass? The dark lines are the outlines of ancient irrigation ditches, the lighter squares are ancient fields, and the white parallel lines superimposed on the top are part of a modern drainage system. To examine the ancient system, you will mentally need to strip away the modern system. What do you think the broader black strip at the top left is? Does this system look like basin or perennial irrigation? Look at the flatness of the landscape. Would silting be a problem?

A more sophisticated type of aerial photography involves the use of satellites rather than airplanes. Satellites can take extremely detailed pictures of the earth's surface that reveal natural and artificially constructed features, both ancient and contemporary. The sharpest images are produced by high-resolution military satellites whose pictures are not available to the public. Low-power images produced by LANDSAT, the only U.S. commercial imaging satellite system, are adequate for most archeological and historical purposes, however. Source 2 is a map of the major ancient irrigation ditches between the Tigris and Euphrates rivers that were identifiable in a recent LANDSAT image. What does the size

of the system reveal about Mesopotamian technology? What does it imply about the political systems in this area—would you expect, for example, the cities in Mesopotamia to be hostile to each other? New technologies such as LANDSAT imagery not only provide answers to questions but also guide future research. How could you use this map to plan further investigations of irrigation systems?

Aerial photography provides visual evidence of entire irrigation systems but not of the specific tools and machines used to lift water to the fields. For these we must look to the remains of the tools themselves or to depictions of them in tomb paintings, mosaics, and pottery. Comparing these pictures with machines still in use today shows that many techniques for lifting water have remained virtually unchanged for thousands of years.

Sources 3 through 6 show four different machines for raising water that we know were in use in ancient times: the shaduf, saqiya, Archimedes' screw, and noria. To assess their role and importance, you must consider a number of different factors while carefully examining the four diagrams. Some of these factors are technical: How complicated is the machine to build? Does it have many moving parts that must all be in good repair? How much water can it lift? How high can it lift the water? Can it work with both flowing and stationary water? Some factors are economic: Does the machine require a person to operate it, thus taking that person away from other types of labor? Does it require a strong adult, or can it be operated by a child? Does it require an animal, which must be fed and cared for? Some factors are both economic and political: Does the machine require a variety of raw materials to build, more than one family might possess? Does it require any raw materials, like metal, that would have to be imported? (Such questions are political because someone has to decide which families get the raw materials necessary for their fields.) Some factors are legal: Does the machine raise so much water that laws about distribution would become necessary? At this point, you may want to make a chart summarizing your assessment of the advantages and disadvantages of each machine, which will help you in making your final conclusions.

We will now turn from visual to written sources. Because water is such a vital commodity, mention of water systems appears very early in recorded human history. The next five sources are written accounts of the construction or operation of water systems. Source 7 contains sections from the Code of Hammurabi, a Babylonian legal code dating from 1750 B.C., that refer to irrigation. Source 8 is a description of the Roman aqueduct system written by Vitruvius during the first century B.C., and Source 9 a description of the water system projects undertaken by Emperor Claudius during his reign (A.D. 41–54), written by the Roman historian Suetonius. The next selection is a discussion of some of the problems associated with Rome's water system, written about A.D. 100

by Frontinus, who was commissioner of the water supply. The last is a proclamation issued by Emperor Theodosius in 438 as part of his code of laws, an edict that had probably been in effect for many decades earlier as well.

As you read these sources, notice first of all the technical issues the authors are addressing. What problems in tapping, transportation, and storage of water do they discuss? What solutions do they suggest? Then look at legal problems, which you can find most clearly stated in the selection by Frontinus and the law codes of Hammurabi and Theodosius. Keep in mind when you are reading the law codes that laws are generally written to address those problems already taking place, not those the lawmakers are simply anticipating. The presence of a law, especially one that is frequently repeated, is often a good indication that the prohibited activity was probably happening, and happening often. How did people misuse or harm the water systems? What penalties were provided for those who did? Who controlled the legal use of water, and who decided how water was to be distributed?

The written sources also include information about political and economic factors in ancient water supply systems that is nearly impossible to gain from archeological evidence. Careful reading can reveal who paid for the construction of such systems and who stood to gain financially from them once they were built. What reasons, other than the simple need for water, might rulers have had for building water systems? What political and economic factors entered into decisions about the ways in which water was to be distributed?