

5 · Cartography in the Ancient World: An Introduction

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Most general histories of cartography have stressed the heritage of mapping in the ancient civilizations of the Mediterranean and the Middle East, but the preceding chapters have shown that we must seek a prehistoric origin for both celestial and terrestrial mapping. It remains true, however, that it is only in the early civilizations of the historical period that these developments can be tied to a firmer chronology. Moreover, specific roles for maps of this period can be identified with more confidence, and we can suggest how cartography responded to the demands of society.

The following chapters embrace both the early Mediterranean civilizations and the Greek and Roman periods of cartography. They cover an enormous time span of almost four millennia, from the Babylonian itineraries about 2500 B.C. to the Byzantine Greek reconstructions of Ptolemaic cartography in the thirteenth century A.D. As such, they stand chronologically—with many overlaps and gaps—between the prehistoric and the medieval traditions of mapmaking in the Western world. The links between the cartography in the many and varied civilizations included in this extensive period have by no means been fully explored. In geographical extent, these examples of mapping occupy a region stretching from western Europe to the Persian Gulf, with Italy, Greece, Asia Minor, Egypt, and Mesopotamia as the core centers.

One common thread that will emerge in the following discussion is that, despite the disappointing lack of artifacts, it can be shown that these civilizations all made, and used, a wide variety of maps. Often originating in mythology and always vague in outline (as seen in the Babylonian world map and the figure of the goddess Nut), maps of the cosmos, of the universe, and of the terrestrial world are also found in the Etruscan, Greek, and Roman mapmaking traditions. Early large-scale mapping is represented in Mesopotamia by maps of rural areas with irrigated estates; in Egypt by, above all, the Turin papyrus, unparalleled for its treatment of mines; in Greece by several allusions to large-scale maps; and in Rome by the cadastral maps that resulted from centuriation and by the *Forma Urbis Romae* as well as by engineering plans for tunnels, aqueducts, and drainage

systems. Carefully drawn plans of fortified towns or palaces, temples, and gardens are also represented to a varying extent in these cultures, as are itinerary and military maps. It would therefore be an oversimplification to characterize the Greek period of mapping as concerned solely with the larger theoretical questions of the size and shape of the earth, while assuming that Roman maps were exclusively practical.

This group of chapters is arranged in broad chronological order. Within this framework, however, each distinctive type of mapping, such as the Greek tradition of mathematical cartography, has been treated as a unit. Likewise, the discussion of the maps and plans of the Roman land surveyors has been gathered into one chapter on the grounds that surviving specimens and texts come from a single extant *Corpus Agrimensorum*, although originating in different periods. On the other hand, separation of Egyptian and Mesopotamian mapping is not intended to imply that important links are not present: these are many, even though some are masked by accidents of preservation. For example, although surviving Egyptian survey maps come from a relatively late period and are very rare, we know through Herodotus that Egypt's experience of recording those field boundaries covered each year by the Nile flood exerted a strong influence on landownership mapping in Greece.

By approximately the second century B.C., Greek and Roman traditions of cartography had merged. It is true that some types of either large-scale or small-scale mapping are found in only one or the other of the two societies. Throughout the classical period of the Greek city-states, Rome was comparatively undeveloped, and there is no mention of Roman maps in contemporary literature. But by 146 B.C. Rome had conquered all of Greece, as well as Carthage, and from that time to the fall of the western empire, Greek and Roman mapmakers were simultaneously working under Roman sovereignty and learning from each other or from writers in both Greek and Latin. Unfortunately, not all those involved in mapmaking knew both languages well, and there was something of a barrier of comprehension between the eastern half of the Roman world (where Greek

was the lingua franca) and the western half (where the dominant language was Latin).

Researchers of this period of cartography are faced with some significant handicaps. We possess, either as originals or as copies, only a very small portion of the many maps produced and known in antiquity. Great reliance has to be placed, accordingly, on secondhand (or even further removed) reports of later writers, many of whom were highly selective in their treatment of earlier mapmakers and subjective in their interpretation. Thus Strabo emphasizes Eratosthenes' map, the elder Pliny frequently quotes from Agrippa's, and Ptolemy singles out that of Marinus for criticism. We also learn of maps from Greek and Roman expeditions, whether warlike or exploratory and whether constructed specifically for an individual purpose or as general maps adapted for particular uses. Reconstructions have been attempted, particularly of the maps of Herodotus, Eratosthenes, and Agrippa, but for the most part these have been highly speculative. Where copying of manuscripts is at many removes, the faithfulness of individual copies to their originals is very variable. These tend to have been executed after the fall of the western Roman Empire, either in the Byzantine Empire or in the West, by monks who understood little of what they were copying. Some of the corruptions of place-names in manuscripts of the Ravenna cosmography, for example, offer a startling testimony to this fact. Finally, in addition to the literary sources mentioned, much can be learned from land and sea itineraries, many of which clearly had been influenced by maps or were themselves sources of later maps.

Reasons for the loss of maps from the classical period may be suggested. Wood and papyrus have usually perished. We might have hoped that papyri containing world maps dating from the Hellenistic period would have emerged from the sands of Egypt, but in fact most maps were produced in humid Alexandria, where, moreover, librarians may have thrown away those thought to be obsolete. A further factor here is that the main library suffered serious losses when Julius Caesar blockaded Alexandria. Furthermore, after the books had been

moved into cloisters surrounding the temple of Serapis, most were destroyed when Christians attacked the temple in A.D. 391.

Quite apart from maps, Alexandria has not been prolific in papyrus finds. But even the use of bronze did not guarantee survival; metals were often melted down. Stone or mosaic maps were stolen, defaced, or covered over. Very large maps, difficult to incorporate either in papyrus rolls or in the parchment codices that gradually took their place from the third century A.D., tended to become separated and lost or, simply as a result of their size, subjected to yet more damage and subsequent disposal.

Contemporary or subsequent attitudes toward artifacts can also affect their preservation for posterity. In the case of maps, these varied considerably. Many philosophers, rulers, generals, and governors valued maps highly. But there was also an attitude that anything technological was "banausic" (associated only with artisans); manual work was considered by Plato, among others, to be a lesser form of human activity than philosophy. It is also possible that maps, like pictures and poems in Plato's theory of art, were considered mere secondhand imitations of life and therefore unreal, appealing to the baser, less rational part of man's nature.

In part, at least, the apparent oscillations in the quality of knowledge reflected in maps of the ancient world may be the result of imperfections in the cartographic record. But in part, too, they reflect genuinely changing historical conditions. For example, continuity between the classical era and the medieval period was interrupted, and the intellectual and technological achievements of the earlier age were almost lost. Notwithstanding these points, as with a number of other fundamental questions in the history of cartography in the ancient world, it will become apparent in these chapters that it is—in the final analysis—a lack of maps rather than a shortage of hypotheses that is likely to continue to impoverish our answers to questions concerning the nature of classical maps, the processes of their production, and their role and effect in contemporary society.