CHAPTER 1

Introduction

1.1 OUTLINE AND GOALS

Today one can remain comfortably at home and, with a single click of the mouse, take a detailed look at a street-corner in a city on the other side of the world, examine a river delta in a remote continent, or learn the dimensions of a mountain hundreds of kilometres away. In antiquity, an age when individuals rarely left their birthplace, horizons were narrow and bounded by unknown and frightening regions, and instruments were simple. How could men discover that the earth was round? How did they estimate its size? How did traders and settlers look for new territory in unknown regions? How did generals set out with armies from Greece to Iran or India? The Greeks and Romans did all that and more, and produced achievements that in many ways still form the basis of our own ideas of geography.

Geography – literally a written or drawn description of the earth (*gê*) – always and everywhere originates in an awareness of one's own surroundings, in encounters with foreign places and peoples and, like any human realm of knowledge, in simple curiosity and the wish to define observed phenomena. These three motives – awareness, encounters and curiosity – must have existed in the early periods of Greek cultural formation, and persisted in various degrees throughout antiquity. Greek studies of landscapes and the environment, along with an interest in remote regions and ideas about the shape of the earth, prevailed long before these issues were recognized as a discipline.

Not only did the ancients lack a clear disciplinary definition of geography,[1] but there were no geographers and geographies in the sense of specialized authors and works with clear, specific characteristics and qualifications. Geographical themes appeared in almost every literary

[1] The adjective *geôgraphikos* is first attested in Eratosthenes (third century BCE). See LSJ, s.v.

genre, and works devoted exclusively and consciously to geographical issues might be written in prose or verse, discuss the world as a whole or a region within it, or deal with either concepts or calculations (1.2). No specific skills were required of authors of 'geographies': poets, historians, travellers and philosophers all dealt with geographical matters. Moreover, in the education of the Greek and Roman upper classes, children and adolescents did not study geography for its own sake – geometry and astronomy formed part of a higher stage of education – but only in its Homeric context, as a mixture of fact and fiction, or as the backdrop for historical events, mainly wars.[2]

Despite the absence of an ancient discipline of geography, the words 'geography' and 'geographical' cannot be avoided in modern discussions of classical notions of space, landscape and environment. The use must be refined or modified in contexts where there is a risk of ambiguity, and the reader must be trusted to be able to distinguish between the modern concept and the ancient one.

Like other fields of enquiry in antiquity, geographical writings were both produced and read by a limited social circle. An individual had to be literate to compose reports of travel experiences, and well educated to discuss scientific theories and observations. Advanced mathematical and astronomical skills were needed, particularly in the scientific and cartographic branches of geography. Finally, once completed, works had to be accessible both physically (copies) and cognitively (literacy) in order to spread the word or image (if maps were in question). Although it is difficult to assess the situation precisely, the extent of geographical knowledge among illiterate and common people seems to have been limited (5.2). Oral expressions, for example by merchants and soldiers, or public monuments such as inscriptions and sculptures, must have been available to a wide public. But even these probably created only amorphous ideas of remote lands and nations, rather than a coherent concept of the world. For the ordinary person, such ignorance probably did not matter much. Things were different, however, in the case of a military leader or a merchant who had no idea where he was, where he was going, how long his march or voyage was going to be, and what conditions he was likely to have to confront.

Three major historical processes influenced the development of geography in classical antiquity: (1) the Greek 'colonization' of the Archaic

[2] Marrou (1965), 265–279; Rawson (1985); Morgan (1998), esp. 33–39. History too was never studied as a discipline. For the geographical knowledge of ordinary people, see 5.2.

period (eighth–sixth centuries BCE); (2) the campaigns of Alexander the Great and the eastward expansion of the Greek world (fourth century BCE); and (3) the consolidation of the Roman Empire, particularly in the time of Augustus (first century CE), but also under the emperors Claudius and Trajan. All three processes significantly promoted territorial expansion, increasing awareness of previously unknown far-away regions of the world, as well as fostering a richer acquaintance with nearer ones. These three waves led to the documentation of new experiences, producing literary genres and enhancing trends within the development of geography. None of this means that geographical interest froze or declined in other periods. As we will see, intellectual processes of this sort were constant throughout antiquity. But the expansion of physical horizons directly and unsurprisingly influenced the extent of knowledge of the world, while creating new intellectual problems and producing novel solutions to old ones.

This book offers a brief introduction to ancient Greek and Roman geography, from its known beginnings in the Archaic era to the late Roman Empire.[3] We survey the surviving literature to present the extent of ancient geographical knowledge as reflected by changing borders and widening horizons, with an eye to the original contexts and formats of geographical records and presentation.

Because of the particular nature of ancient geographical sources, we have rejected chronological order as a primary organizing criterion. Instead, the discussion that follows is divided into three groups of records corresponding to three ancient approaches to the theme: (1) the descriptive, verbal and literary approach; (2) the scientific, mathematical, accurate method; and (3) the (carto)graphic, visual technique. Sections in one chapter occasionally overlap chronologically with those in others, presenting simultaneous transformations and developments. In addition, some texts and authors are relevant to more than one context and are cited in accordance with the needs of the discussion.

Although the verbal, descriptive species of literary geography (chapter 2) was methodologically very different from the mathematical and scientific approach (chapter 3), it was not necessarily fictional. Developing mainly in the form of geographical digressions within historiographical works, it supplied the 'true' picture of venues of attested events, and it is reasonable

[3] Earlier surveys of ancient geography, some outdated, others offering only a partial picture, include: Bunbury (1883); Tozer (1897); Warmington (1934); Thomson (1948); Van Paassen (1957); Aujac (1975); Pédech (1976); Dion (1977); Prontera (1983); Jacob (1991); Cordano (1992).

to assume that it was accessible to a wider audience than the more strictly scientific approach. Science began with the naturalistic discussions of the Presocratic philosophers, who offered theories about the structure and essence of the universe and the physical layout of the world, including its shape, size, boundaries and inhabitants. From these roots grew mathematical geography, which attempted to define the earth through precise calculation. The scientific approach produced written records, but also paved the way for initial attempts to represent portions of the world graphically (chapter 4).

Several elements were to make up the backbone of ancient geography. Appreciation of these is sharpened through comparison with parallel experiences and practices of modern geography:[4]

Necessity. Geographical interests emerged in the Greek world from daily needs. Because the Greeks lived around the Mediterranean and Black Sea and relied on maritime transportation for warfare and commerce, they needed information about sea-routes and foreign countries. Similarly, geography supplied the Romans with details necessary for military purposes and administrative functions, while the growing traffic of men and merchandise created a demand for accurate travel information. Unlike the academic and theoretical interest inherent in much modern geography, ancient geography was tied directly to everyday life, and was based not on research by highly qualified 'geographers', but on the experience of ordinary eyewitnesses.

Concepts. Any specific realm of knowledge reflects larger intellectual developments, and ancient geography is no exception. Some specific examples are the emerging theory of a round rather than a flat earth; new understandings of the relationship between dry land and the sea; and approaches to ethno-geography that emphasized the relationship between climate and character.

Human dimension. Unlike modern geographers, who are interested in all parts of the globe, the ancients investigated only inhabited lands. Uninhabited or desert regions were not surveyed or documented, so that they fell outside the framework of the known world. Continents other than Europe, Asia and Africa were not sought out, and in known lands the extent of knowledge grew only as a result of demographic growth and military conquest.[5] Some attempts were made to explore unknown areas, and natural curiosity inflamed imagination. But, generally speaking, regions at the edge of the known world were considered not only dangerous and frightening but irrelevant, as empty land without human inhabitants. Thus the Greeks after Herodotus, and later the Romans, referred to the world as an *oikoumenê* ('inhabited', modifying an implied *gê*), denoting its human aspect as a place of habitation (*oikia*) and excluding

[4] On geography in other pre-modern societies, see Raaflaub and Talbert (2010).
[5] Cary (1949).

uninhabited portions, hypothetical landmasses and the ocean deemed to surround the *oikoumenê*.

Technique. Modern geography relies on aerial photography (roughly since the First World War), satellite imagery and geographical information systems (GIS), and emphasizes precise quantitative methodology conveyed through maps and statistics.[6] The Greeks and Romans relied primarily on sensory impressions and logical argumentation, and occasionally conveyed their understandings in elaborate verbal reports. Their methods and instruments were simple,[7] but this did not prevent them from achieving impressive scientific breakthroughs. The history of ancient geography is thus, in part, a survey of scientific methodologies, showing how elaborate calculations were carried out using primitive tools.

The study of geographical concepts and practices in antiquity is important for several reasons. The simplest is the linguistic and toponymic contribution of antiquity to modern terminology: the terms 'Europe', 'Atlantic' and 'climate', for example, all have Greek origins. More important, the ancients supplied the foundations for modern science in general, and for modern geography in particular. By raising questions for the first time, and by analysing problems and supplying calculations and taxonomies, they dealt with themes that still occupy geographers today. Despite the simplicity of their tools, the Greeks and the Romans attempted to explore their world, to measure it and understand its natural and human phenomena. At the same time, it is rewarding simply to examine how geographical notions functioned in pre-modern societies, and to consider what specific interests and activities classical geography involved.

This introductory chapter introduces two general themes, independent of any specific time, place or genre, but essential to the understanding of ancient geography. The first (1.3) is how geographical discussions, the development of genres and the progress of knowledge relate to territorial expansion and conquest in different periods, or, put another way, the nature of the connection between the politics of expansion and geographical knowledge and awareness. This issue is closely related to the second theme (1.4): a comparison of Greek and Roman geography. It is generally held that in the cultural and intellectual realms, Rome followed Greece. But was this also the situation in regard to geography?

This book inevitably mentions many specific names, authors and works. It is nonetheless beyond its scope to discuss all the relevant evidence. Our goal is instead to offer, to the extent that is possible, a

[6] Cosgrove (2008). [7] Lewis (2001); Cuomo (2007).

coherent panoramic view of our topic, and to highlight major trends and directions within it.

1.2 FORMATS, CONTEXTS AND TERMINOLOGIES

That any investigation of Greek and Roman society depends on limited sources is well known. However, while some issues can be illuminated by reference to both written sources and archaeological findings, the study of classical geography, including cartography (though there are hardly any original remains of ancient maps), relies mostly on written documentation, including inscriptions. In addition, as noted above, the particular development of the field, and the fact that geography was directly connected to social and political experience, meant that there was no separated, defined geographical genre, and that geographical information appeared in different literary styles and contexts.

Throughout antiquity, a variety of designations and titles were attached to written works that dealt with geographical issues. Specific denominations generally reflected content and structure but there was no standard terminology. As we shall see, the ancients themselves sometimes confused titles and formats, but this should not prevent us from attempting to define some basic terminology attached to written geographical records. What follows is a brief outline of genres and literary formats associated with classical geography, presented in an order intended to reflect a gradation in the amount of detail: from basic, minimal lists to elaborate, lengthy descriptions.

Periploi.[8] Greek civilization began in the Aegean, and for demographic and economic reasons spread to the western coasts of Asia Minor, to Sicily and southern Italy, further west and south to southern France, south-east Spain and North Africa, and all around the Black Sea. Sea routes and seafaring were central to daily life, and were essential for commerce and for voyages of exploration. For the sake of safety and better orientation, navigation was usually restricted to routes along coastlines. This habit became the basis for a genre of written reports known as *periploi* (sing. *periplous*, 'sailing around, circumnavigation'). These records typically presented practical information about sites situated on maritime routes, usually along coasts or rivers, arranged according to the order of a journey along a coastline, including harbour names, distances between sites (often defined according to the number of sailing days), directions and basic local information. To these bare details, more information was sometimes added, for example information about local topography, history and ethnography. They

[8] Janni (1984); Dilke (1985), 130–144; Prontera (1992); Burian (2007).

included occasional references to the interior that could be more extended than merely cataloguing sailing possibilities along navigable rivers. Records of the contours of islands normally came at the end of such surveys. This practical data, spread at first through word of mouth shared by experienced navigators, was converted into written form to help future travellers, mainly colonizers and tradesmen. What sprang first from records of actual travellers' tales became the organizational principle for texts not based on such trips. Gradually *periploi* gained a descriptive dimension through the inclusion of references to man-made monuments, flora and fauna, and ethnographic detail (2.3).

Itineraria.[9] Like Greek *periploi*, the organizational style of which was derived from the linear order supplied by voyages along coastlines, the Latin *itinerarium* (from *iter* 'journey, march') supplied travellers – including troops of soldiers – with catalogued information about stations and distances along Roman routes. The massive expansion of the Roman state by the end of the Republic, and especially from the Augustan age on, required administrative adjustments allowing emissaries of the centre of power in Rome easy access to remote parts of the Empire. With this end in mind, the Romans established an elaborate and efficient road system (the *cursus publicus*), first in Italy and then in various parts of Europe, Asia and the Near East.[10] This road network became the linear basis for some Roman *itineraria* and later for Christian pilgrimage records (2.3).

Periêgêsis and ***periodos gês***. Interest in inland regions emerged particularly in the Hellenistic period, as a result of the wider scope of travel and growing curiosity about new countries and peoples. Exhaustive geographical surveys incorporating references to such regions, later defined as *periêgêseis* ('guided tours around'), consisted of far more than mere lists. Instead, they offered surveys in prose or verse of landscapes, topographies, flora and fauna, and details about local inhabitants, their appearance and their habits. A closely related term for such surveys was *periodos* ('going around'), in the sense of a description of a journey. The word most commonly appears in the expression *periodos gês*, used for a description of the entire world rather than a particular region within it.

Chôrographia. Detailed descriptions of narrower regions or specific countries emerged mostly in the Hellenistic age. The common term for such surveys was *chôrographia*, referring to a description of a *chôra* ('country, region'), as opposed to a *geôgraphia* (i.e. a description of the entire earth).[11] Works such as *Persika* (Ctesias) and *Indika* (Ctesias and Megasthenes) belong to this category. But the term *chôrographia* can also be used to refer to the description of a particular region within the wider context of a universal geography, for example as in the case of the regional surveys in individual books of Strabo's *Geography* (2.1).

[9] Brodersen (2001), esp. 12–14; Salway (2001), esp. 32–43; Brodersen (2003), 165–190.
[10] Casson (1974), 163–175; Kolb (2001).
[11] See definitions in Strabo 2.5.13 and Ptolemy, *Geog.* 1.1, which imply a difference also in scope and in detail. This might explain the definition of Pomponius Mela's work on the entire inhabited world – supposedly a *periodos gês* – as a *chôrographia*.

Topographical and ethnographical information was also offered in digressions or excursuses from the main chronological and narrative line in historical works and the like.[12] The primary focus of such works, of course, was political and military events and the individuals who participated in them. But to assess such events, and especially strategic manoeuvres, often required familiarity with the spatial and human circumstances of the scene. The need for locations, topographies, toponyms and distances thus meant that geographical discussion became fundamental to historiography and related genres. Herodotus set the standard by including in his *Histories* extended descriptions of regions under Persian domination such as Egypt, India and Scythia. Such apparent digressions became an important feature of later historical surveys, for example, those by Thucydides, Polybius, Sallust and Tacitus. Such geographical excursuses often adopted the laconic style of early *periploi* and *periodoi*, although their natures also reflected individual authors' personalities and tastes. Because geographical excursuses played a crucial role in advancing the narrative line, they were often essential and integral to the enterprise. This topic is explored in detail in 2.2.

Modern scholars have attempted to define an ancient geographical prose genre. Felix Jacoby believed that all ancient prose texts had a single literary foundation, from which sub-genres emerged in an evolutionary fashion. Jacoby defined historiography broadly as a literary style that included all forms of non-fictional prose, suggesting that the contents and organizational principles of historiographic and geographical works were very similar.[13] A traditional, narrower approach sees historiography and geography as separate entities, the one acting as a background for the other.[14] On this analysis, geographical and ethnographical sections within historiographic works were mere digressions with no integral connection to the main narrative. No significant differences in the grammatical constructions and vocabulary of historiographies, of their geographical 'digressions' and of independent works devoted to descriptive geography, are apparent. Therefore the broader context of such 'digressions', as well as the purpose of the author, must also be considered separately for each work. Does the geographical issue feature a mere stylistic variation of the main line of narrative? Could this 'geography' be deleted without affecting the main text's meaning? To what extent is an individual digression

[12] Pothou (2009), esp. 19–27, 49–71.
[13] Schepens (1997), and, most important, Clarke (1999), 1–77.
[14] For a list of works that fall somewhere between historiography and geography, see Prontera (1984), 198–199.

an integral and necessary part of the whole? Answers to such questions must be sought in each work individually. Finally, brief mention must be made of sections of classical literature that are 'geographical' neither in goals nor in central subject matter, but that still include geographical thought and information. A 'geographical reading'[15] thus calls attention, for example, to numerous scattered passages in Greek tragedy and comedy, and in Roman epic (2.1).

As will be argued below, there were many styles and contexts for the transmission of geographical issues in the writings of antiquity. No rules or consensus seem to have existed, and even if later authors occasionally criticized their predecessors, a wide choice of formats was available for transmitting knowledge and ideas. This is clear from Strabo's announcement of his intention of describing Greece:

> This subject was first treated by Homer; and then, after him, by several others, some of whom have written special treatises entitled *Harbours* or *Periploi* or *Periodoi gês* or the like; and in these is comprised also the description of Greece. Others have set forth the topography of the continents in separate parts of their general histories, for instance, Ephorus and Polybius. Still others have inserted certain things on this subject in their treatises on physics and mathematics, for instance, Posidonius and Hipparchus. (Strabo 8.1.1)

The various styles and themes related to geography may also be divided according to their channels of transmission from antiquity to the present. There is some material evidence, for example, the ethnographic personifications in the Sebasteion in Aphrodisias (modern Turkey),[16] as well as epigraphic remains, whether a five-word inscription on a milestone or a monumental list of toponyms and distances such as the *Stadiasmus Lyciae* (p. 116). There is also a relatively large body of intact texts, as well as papyri preserving fragments of others. Last but not least, many 'geographical' fragments are preserved in collections of the remains of 'lost' Greek and Roman historians and tragic and comic poets.[17] Finally, we

[15] Nicolet (1991), 8. [16] Smith (1988).

[17] The two collections specifically focused on geography are Carl Müller's *Geographi Graeci Minores* (*GGM*) (1855–1861) and Alexander Riese's *Geographi Latini Minores* (*GLM*) (1878), while Aubrey Diller (1952) offered an additional treatment of 'minor' Greek geographers. The 'minor' status of the latter refers to the number and size of preserved excerpts; in fact, some of them, such as Hipparchus and Eratosthenes, were important path-breakers and central sources for later geographers. Several new projects to collect geographical fragments are under way: *FGrHist* v, under the supervision of the Deutsches Archäologisches Institut; Budé, *Les géographes grecs*, for which see Marcotte (2002); Graham Shipley's *Selected Greek Geographers* (*SGG*), for which see Shipley (2007); and individual studies, e.g. Marcotte (1990); Brodersen (1994a); Cappelletto (2003); Korenjak (2003).

owe some knowledge to medieval transmission of texts in both prose and verse, and of images, for example, later reconstructions of Ptolemy and the Peutinger Map.

1.3 Geography and politics

Ancient affairs of state had a close relationship with geography.[18] Military campaigns were often stimulated by expanding geographical horizons, and ideally required well-established geographical information to succeed. At the same time, political achievements and military conquests enhanced geographical knowledge and expanded the borders of the known world both physically and conceptually. It is therefore no coincidence that the history of geography in antiquity is often associated with conquest. Generally speaking, geography and politics nourished one another.

The first systematic Greek description of countries and nations emerged in the fifth century BCE, from Herodotus' desire to describe the extent of the Persian Empire. This enormous kingdom amazed him and, because it included remote regions and – from a Greek point of view – unknown peoples, the project of describing it raised for the first time the need to arrange information systematically on Indians, Scythians, Egyptians, Ethiopians and their countries. The link between political expansion and geographical knowledge is apparent, for example, in Herodotus' account of Darius' project to track the course of the Indus river (4.44). By sending Scylax of Caryanda to sail down the river, the king learned about the 30-month journey by this route across the Indian Ocean into the Red Sea and up to Egypt. He then conquered India and its sea. In addition, Darius' initiative to improve the road system throughout the Persian Empire made travel easy for his officials, but also for other travellers such as Herodotus and later authors who included geographical information in their accounts (on these royal roads see 5.1).

Another significant non-Greek political power was Carthage, which controlled the sea-routes in the western Mediterranean. Carthage's contribution to classical geography is important, because the Greeks admired Carthaginian achievements and transmitted their records, which were translated into Greek at an early stage (chapter 2). According to tradition, around 500 BCE Hanno of Carthage sailed with a large expedition from Carthage (modern Tunis) through the Straits of Gibraltar and down the African coast, reaching the regions facing the Canary Islands

[18] Cary (1949).