II. The Organization of Things

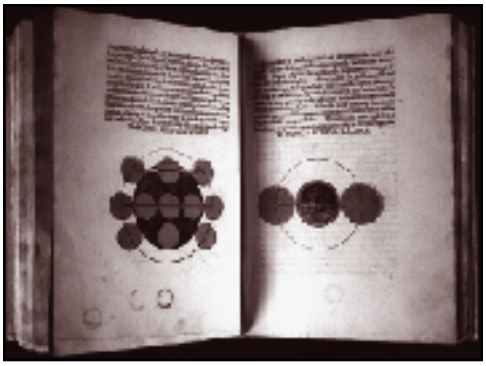
Space

That the earth was a sphere, not a plane, was well known in antiquity. In fact, Eratosthenes of Cyrene calculated the circumference of the earth with remarkable accuracy in the third-century BCE. The sphere could be divided in one of two principal ways. First, in terms of coherent spatial masses. There were three such areas, each known in varying degrees of imperfection: Europe, Africa, and Asia. Together, these areas formed one contiguous body of land surrounded on all sides by the ocean. In effect, the earth floated in a large sea. Beyond the Pillars of Hercules (Gibraltar) lay only the vast unknown, populated by varieties of monsters and exotic menaces. Or, the earth could be apprehended in terms of climatic zones. These ran from frigid to torrid, and they defined zones of habitability. The optimal climatic zone, of course, centered on the Mediterranean. The further one went from this gentle mean towards the extremes of hot and cold, the further one travelled from the zone of humanity to that of monsters and beasts.

Claudius Ptolemy produced the summa of ancient geography in the second-century CE. Indeed, Ptolemy's *Geographia* remained canonical from antiquity through the Renaissance. The cult of antiquity in the Renaissance, if anything, only reinforced attachments to Ptolemy's vision and to his map of the world. There is a certain irony here, since at exactly the same time Italian and Portuguese navigators were quietly and subtly remapping the world. Theory and praxis slowly came into conflict. The invention of the compass gave fifteenth-century pilots the ability to sail with confidence to more distant, remote places. The Portuguese in particular were keen to find sea routes to the East Indies that would allow them to compete more effectively with the Venetians. While they had discovered an eastern route—around the southern tip of Africa—it was long and frequently dangerous. A more direct western route was suspected, but until Columbus it was only an hypothesis.

The remapping of the world begun in the fifteenth century was not without controversy. Altering the shape and location of the known world was tantamount to denying that the ancients had gotten it right. Could it be that the ancients did not have a complete view of the world? Did the discovery of a New World dethrone the ancients, or at least ancient geography? In a cultural context such as that of the Renaissance, where value and knowledge were located in the past, the New World could prove quite unsettling. At the same time, it helped begin the forging of a new self-identity for Europeans, one more oriented toward progress and the future than toward the past and origins.

Johannes de Sacro Bosco (d. 1256).
De sphaera mundi.
Venice: Erhard Ratdolt, 1485.



The *Sphaera mundi* by John Halifax of Hollywood (England), commonly known as Sacro Bosco, was the most popular geography and cosmography of the Middle Ages down through the sixteenth century. Based on Ptolemy as well as his Arabic commentators, the *Sphaera* presented a comprehensive account of the earth as a sphere in the center of the universe. Its popularity was due no doubt to the fact that Sacro Bosco compressed so much into so little space. Small and compact, the *Sphaera* became the ideal schoolbook of its kind. Thus it was a staple of early printers, reissued numerous times in the fifteenth and sixteenth centuries. The present copy was brought out by one of the most famous fifteenth-century printers, Erhard Ratdolt. Ratdolt's work is known for its carefully reproduced illustrations and diagrams.

Martin Waldseemüller (1470?-1518?).
Cosmographiae introductio cum quibusdam geometriae ac astronomiae principiis ad eam rem necessariis.
St. Die: Walter Ludd, 1507.

Few books were as important and as influential in the history of Europe's conceptualization of the New World as Waldseemüller's small quarto volume. Published in a village in Lorraine, the volume comprises three related works, the longest of which is the voyages of Amerigo Vespucci. For some commentators, the importance of the volume rests in the fact that "America" appears in it for the first time as a way of designating the New World—chiefly the southern continent. However, it is also crucial for the diffusion of the first major cartographic remapping of the world. The world map that Waldseemüller drew was the first map to incorporate the discoveries of the Spanish and the Portuguese. A skilled geographer, Waldseemüller was the first to emend the Ptolemaic organization of the earth. Waldseemüller innovated in yet another way as well: he had the world map printed in sheets and sold separately as prints, so that beyond the volume, the map had a life of its own. The result was a relatively large and wide diffusion of this new view of the world. Even, after Waldseemüller's death in the early sixteenth century, there were numerous reprints and re-editions of the map. Slowly, Europe redrew the boundaries of the known world.

Martin Fernandez de Enciso (d. 1525).
Suma de geographis que trata de todas las partidas y provincias del mundo: en especial de las Indias.
Seville: Andres de Burgos, 1546.

First published in 1519, Enciso's geography manual is unusual for the attention it gives to the Spanish discoveries in the New World. It is surely one of the earliest—if not the earliest—such works in Spain to incorporate the New World into a description of the world as a whole. Enciso himself had been in the New World and had experience sailing the perimeter of the Caribbean. His manual was in part aimed at fellow navigators, to instruct them on new islands and on "tierra firma."

Hernando Cortés (1485-1547).
Praeclara Ferdinandi Cortesii de nova maris oceani Hyspania narratio . . .
Nüremberg: F. Peypus, 1524.

Cortés wrote five lengthy letters to the Emperor Charles V on his "progress" through Mexico. They are displayed here in their first Latin translation. In them, the conqueror describes his worthy opponents and their magnificent empire, and in particular the riches of the great city of Tenochtitlan, which Cortés largely destroyed in 1521. Nonetheless, a plan of the city was prepared and published along with the letters. The plan is attributed to Albrecht Dürer and is the earliest known map of an American city. It shows the city before its destruction: the principal temples of the Aztecs occupied the main square; causeways connected the island-city with the mainland; and an aqueduct supplied fresh water. Since cities were regarded as one of the hallmarks of civilization by sixteenth-century Europeans, including the plan was important for Cortés's argument that the Aztecs were a great and powerful people, and thus a worthy trophy for the Emperor. The map was one of the few images to circulate in Europe in the early sixteenth century that suggested the existence of complex societies in the New World.

Benedetto Bordone (d. 1530).
Libro di Benedetto Bordone nel qual si ragiona de tutte l'isole del mondo.
Venice: Nicolo d'Aristotile, 1528.

The subject and organization of Bordone's book reflects the nature of many of the new discoveries: the islands of the world. By training and occupation, Bordone was primarily a miniaturist and illustrator. This, the first edition of his *Isole*, was the last project Bordone undertook prior to his death in 1530. It reflects the ongoing diffusion of the Iberian discoveries and even contains a view of Mexico City ("Temistitan")—an "island" within a lake. Bordone's reputation as an artist made the "Isolario" suitable for the connoisseurs' market, and numerous editions of it appeared throughout the sixteenth-century.

Simon Grynaeus (1493-1541)
and Johnn Huttich (1490-1544).
Novis orbis regionum ac insularum veteribus incognitarum.
Basel: Johann Hervagius, 1532.

Huttich compiled and Grynaeus edited this early anthology of travel relations, which includes the letters of Columbus and of Vespucci and the decades of Peter Martyr. In his preface, Grynaeus stresses the great utility of bringing these accounts together in one volume and in Latin so that readers in any country would have a convenient way of comparing and assessing various descriptions of lands and peoples. However, the truly remarkable feature of the work is a world map, possibly drawn, at least in part, by Hans Holbein the younger. The New World, such as it was, is duly present, but of equal interest are the scenes and vignettes that surround the oval projection. There we can note representations of the exotic that emphasize the fear and terror with which Europeans could look out on worlds only dimly known, seeing cannibals, wild men, monsters, and other omens of the dangers abroad.

Jeronimo de Chaves (1523-1574).
Chronographia o repertorio de los tiempos, el mas copioso y preciso que hasta ahora ha salido a luz.
Seville: Joan Guttierrez [sic], 1566.

The Spanish were notoriously secretive about the particulars of their overseas empire. They feared giving rivals the kind of information that would allow them to compete with Spain for empire and trade. At the top of the list of contraband were maps. By the middle of the sixteenth-century, however, the world outside of Spain had many different ways of gaining access to cartographic information on the New World, so that Spain's knowledge monopoly was patently mythic. Even so, it is rare to encounter the kind of geographical detail one does in Chaves's seemingly innocuous work on universal chronology. The author was renowned in his time as a mathematician, geographer, and poet, and the present work is a rather standard presentation of the nature and passage of time. But it also contains the longitudes and latitudes of cities in the New World along with an accompanying map.