


1994

Reading the World: Interdisciplinary Perspectives on Pieter van den Keere's Map, *Nova totius terrarum orbis geographica ac hydrographica tabula* (Amsterdam, 1608/36).

Matthew Edney
University of Southern Maine

Irwin Novak
University of Southern Maine

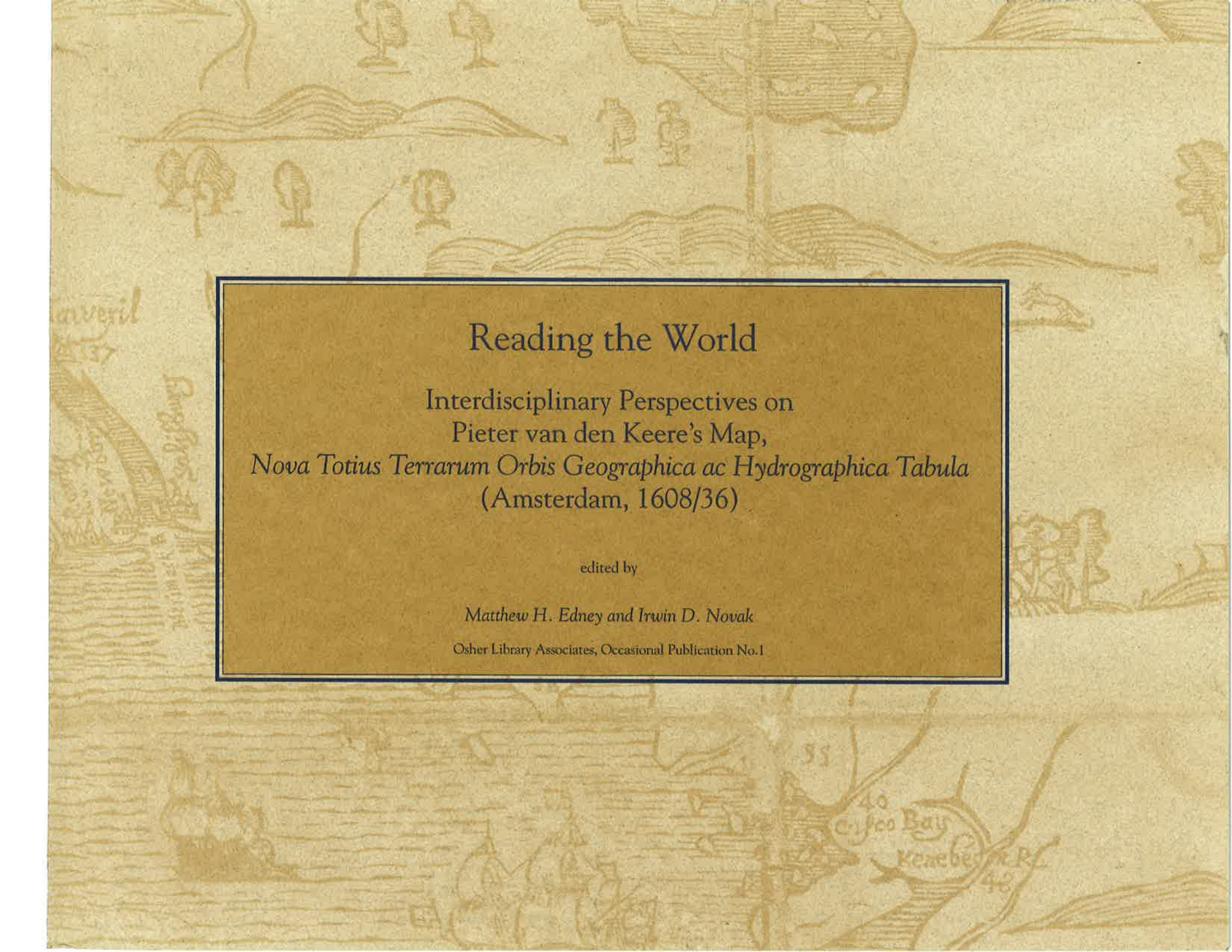
Follow this and additional works at: <https://digitalcommons.usm.maine.edu/oml-friends-publication-op>

 Part of the [History Commons](#), [Human Geography Commons](#), [Other Geography Commons](#), and the [Physical and Environmental Geography Commons](#)

Recommended Citation

Edney, Matthew and Novak, Irwin, "Reading the World: Interdisciplinary Perspectives on Pieter van den Keere's Map, *Nova totius terrarum orbis geographica ac hydrographica tabula* (Amsterdam, 1608/36)." (1994). *Friends of OML, Occasional Publications*. 1.
<https://digitalcommons.usm.maine.edu/oml-friends-publication-op/1>

This Book is brought to you for free and open access by the Osher Map Library and Smith Center for Cartographic Education at USM Digital Commons. It has been accepted for inclusion in Friends of OML, Occasional Publications by an authorized administrator of USM Digital Commons. For more information, please contact jessica.c.hovey@maine.edu.



Reading the World

Interdisciplinary Perspectives on
Pieter van den Keere's Map,
Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula
(Amsterdam, 1608/36)

edited by

Matthew H. Edney and Irwin D. Novak

Osher Library Associates, Occasional Publication No.1

The Osher Library Associates

The Associates of the Osher Map Library of the University of Southern Maine is an organization of interested persons formed to support the Osher Map Library and Smith Center for Cartographic Education and its activities. Incorporated as a not-for-profit 501(c)3 corporation, it is legally separate from both the map library and the University. Its mission is to support and promote the interests and continuity of the map library in every way possible.

The Osher Library Associates, formed in 1990, have grown from a small group of interested people to a diverse, international collection of scholars, map collectors, and people from all walks of life. The organization's membership continues to expand and diversify as visitors to the Osher Map Library's facilities and its Web site discover the library's treasures and elect to participate in and support its activities.

Initially, the Osher Library Associates were closely involved with planning,

fundraising for, and constructing the Osher Map Library. During this early period, the Osher Library Associates sponsored cooperative exhibitions and lectures at the Portland Museum of Art. Since the Osher Map Library opened in 1994, the Osher Library Associates have undertaken a wide array of activities in support of the library, including funding lectures and exhibitions, staffing and funding educational outreach programs, assisting in the production of catalogs and posters, funding acquisitions and conservation, and acquiring and distributing grant funds for library development. They have also supported and sponsored a number of activities for the benefit of members and the general public, including local, regional, and international cartographic conferences, public lectures on cartographic themes, and field trips and tours of cartographic and geographic interest in New England.

The purpose of this occasional publication series is to stimulate public interest in and awareness of maps and cartography. It seeks to provide meaningful contributions to the cartographic literature that can be appreciated by both the layperson and scholar.

Osher Library Associates, c/o Osher Map Library, University of Southern Maine, Portland, ME 04104-9301

www.usm.maine.edu/maps

Reading the World Map

Interdisciplinary Perspectives on
Pieter van den Keere's Map,
Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula
(Amsterdam, 1608/36)

edited by

Matthew H. Edney and Irwin D. Novak

Osher Library Associates, Occasional Publication No.1

©2001, Associates of the Osher Map Library
of the University of Southern Maine

Published by the Osher Map Library and Smith Center for Cartographic Education,
University of Southern Maine, Portland, ME 04104-9301,
on behalf of the Osher Library Associates.

ISBN 0-939561-31-X

In memory of

Gloria Shaw Duclos

a valued friend of the Osher Map Library and
Smith Center for Cartographic Education since its beginnings

Table of Contents

vii	List of Illustrations
ix	Editors' preface
1	Introduction. <i>Barbara B. McCorkle</i>
4	The "Classic Ground" of Van den Keere's Map. <i>Gloria Shaw Duclos</i> (Appendix: Transliteration and Translation of Van den Keere's Discursive Notes.)
9	Innocence and Empire: Dutch Imperialism in the Age of Pieter van den Keere. <i>Alfred Padula</i>
17	The Meaning of Maps to Geologists: An Example from Lesvos, Greece. <i>Irwin D. Novak</i>
20	"Until Something More Certain Emerges": Van den Keere's Asia. <i>Craig Dietrich</i>
26	Art History and Cartography: Picture Making and Map Making in the Seventeenth-Century Netherlands. <i>Donna M. Cassidy</i>
31	Places Real and Imagined: Indigenous North America on the Van den Keere World Map of 1608. <i>Dave D. Davis</i> (Appendix: Variants of North American Toponyms.)
39	Bibliography

Illustrations

- | | | | |
|-----------|---|-----------|---|
| Enclosure | Pieter van den Keere, <i>Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula</i> (Amsterdam, 1608/36).
40cm x 53cm. Osher Collection, Osher Map Library. | | |
| Figure 1 | Van den Keere, <i>Nova Tabula</i> (1608/36). | Figure 11 | Teixera, <i>Iaponiae Insulae Descriptio</i> (1595). |
| Figure 2 | Van den Keere, <i>Nova Tabula</i> (1608/36): northwest quadrant. | Figure 12 | Traditional Korean world maps: <i>Kangnido</i> and <i>Ch'ŏnhado</i> |
| Figure 3 | Van den Keere, <i>Nova Tabula</i> (1608/36): northeast quadrant. | Figure 13 | Japanese world map (ca. 1850). |
| Figure 4 | Van den Keere, <i>Nova Tabula</i> (1608/36): southwest quadrant. | Figure 14 | Dürer, <i>The Fall of Man</i> (1504). |
| Figure 5 | Van den Keere, <i>Nova Tabula</i> (1608/36): southeast quadrant. | Figure 15 | De Bry, "Regulorum aut Principum in Virginia typus" (1590). |
| Figure 6 | Münster, <i>Typus Cosmographicus Vniversalis</i> (1532/55). | Figure 16 | Braun and Hogenberg, <i>Amstelredamum</i> (1572). |
| Figure 7 | Two medieval schematic conceptions of the world: (a) Isidore of Seville; (b) Macrobius. | Figure 17 | Vermeer, <i>View of Delft</i> (1660). |
| Figure 8 | Arias, <i>Sacrae Geographiae Tabulam . . .</i> 1571 (1572). | Figure 18 | Vermeer, <i>The Art of Painting</i> . |
| Figure 9 | Generalized eustatic sea-level rise curve. | Figure 19 | Van Ruisdael, <i>View of Haarlem</i> . |
| Figure 10 | Lesvos in four early atlases: (a) Bordone, <i>Isolario</i> (1537);
(b) Honter, <i>Rudimentorum Cosmographicorum</i> (1549);
(c) Ortelius, <i>Theatrum Orbis Terrarum</i> (1575); (d) Hondius,
<i>Historia Mundi or Mercators Atlas</i> (1635). | Figure 20 | Forlani, <i>Il Disegno del scoperto della noua Franza</i> (1565). |
| | | Figure 21 | Wytfliet, <i>Granata Nova et California</i> (1597). |

Editors' Preface

To mark the formal opening on October 16, 1994 of the University of Southern Maine's Osher Map Library and Smith Center for Cartographic Education, the university held a weekend-long public celebration. The key word here is "public." The fundamental purpose of the Osher Map Library is to serve not only scholars interested in maps but to educate the general public—whether schoolchildren, college students, or lifelong learners—in the wonders of these documents which are so incredibly rich in social and cultural significance. The first day of the celebration therefore featured a panel discussion to introduce the joys of map collecting to the public audience, with only a very few caveats about forgeries and conservation. The second day featured two sets of public lectures on the nature of maps, map making, and map use. The first of these sessions featured general lectures by noted map scholars David Woodward, Denis Wood, and Anne Godlewska. The second session took a highly innovative approach, so as to demonstrate one of the Osher Map Library's goals, as conceived by its founders. That is, it exploited the extraordinary power of maps to portray and illuminate the civilizations that produced them. Entitled "Reading the World: Historical and Contemporary Perspectives on Maps," it featured seven members of the university faculty who were asked to examine one map—Pieter van den Keere's world map of 1608, in its fourth state of 1636—and to interpret it in the light of their respective academic disciplines. How might this map be read by an art historian? What is its significance to an archaeologist? And so on.

This volume, the first in a projected series of occasional publications by the Osher Library Associates, is comprised of six of these seven presentations. The contributors are: Gloria Shaw Duclos, professor emerita of classics, who died in February 1998; Alfred Padula, professor emeritus of history; Irwin D. Novak, associate professor of geology; Craig Dietrich, professor emeritus of history; Donna M. Cassidy, associate professor of art and of American and New England studies; and, Dave D. Davis, professor of geography-anthropol-

ogy. The introduction to Van den Keere and his map, both at the original conference and in this volume, was provided by Barbara McCorkle, curator emerita of Yale University's map collection.

The format of this session, of several presenters each discussing the one map, was an innovative one. Historians of cartography have often studied individual maps in great detail, but they have done so only from cartographic or geographic perspectives. As part of the current reconfiguration of the field, however, historians increasingly realize that maps are not simply compendia of geographical facts about the world, but that all maps reflect the societies and cultures that create and use them. That is, one map can be read from many perspectives, whether by its contemporaries or by present-day scholars. This realization is amply demonstrated in the essays collected here. Indeed, the format of this session was adopted by the organizers of the Eighteenth International Conference on the History of Cartography, held in Athens in July 1999, in which one specially organized session used the multidisciplinary analysis model (one map, many speakers) in reading Abraham Ortelius's world map of 1570. We can expect this format to be repeated in future conferences as a useful strategy for exploring the depth of information encoded in even the simplest-looking map.

We would like to thank the Osher Library Associates, especially William H. Browder Esq., president, and Neil Rolde, chair of the publications committee, for seeing this volume through publication. We are also grateful to the contributors and to several individuals for their help in preparing these essays, especially Dr. Peter van der Krogt and Dr. Wim Klooster. Technical support was provided by Yolanda Theunissen, curator of the Osher Map Library, and her staff; the office of the Dean of Arts and Sciences, University of Southern Maine; USM's Department of Publications and Marketing; and, Affordable Photography, Portland.

Matthew H. Edney and Irwin D. Novak

Introduction

Barbara B. McCorkle

"Old maps" are not just pleasing-to-look-at, antiquarian items, quaint, with monsters and ships and cherubs, like the 1532 world map by Sebastian Münster, with illustrative work attributed to Hans Holbein the Younger (Figure 6).¹ These maps are also mirrors, reflecting the concerns, ideas, and styles of their time. This brief background essay will try to put into a proper framework Pieter van den Keere and his world map of 1608, which the following papers will discuss from the vantage point of several disciplines.

Pieter van den Keere, engraver of the handsome map under discussion, was born in Ghent in 1571. Those were tempestuous times in Europe. The Netherlands were under the rule of Catholic Spain, and many protestant Dutch took refuge in England from the threat of the Inquisition. Van den Keere went to London as a boy of thirteen in 1584, where he remained until he was twenty. He undoubtedly served an apprenticeship there, probably under Jodocus Hondius, the noted Dutch engraver and cartographer who also lived in London at this time.² In fact, Van den Keere's sister, Colette, married Hondius in London in 1587. When the geographical writer Petrus Montanus (Pieter van den Berg) married Hondius's sister, another link was forged. Van den Keere's own wife was probably the youngest child of the prominent map publisher Johannes Janssonius (Jan Janssen), which made him brother-in-law to the geographer Petrus Bertius, and his cousin was the engraver Abraham Goos. This kind of close connection among families of engravers in Holland was quite common. Van den Keere learned his trade well. In 1591 he confidently signed the first of many engraved map plates, a map of Ireland.³

After the political climate improved Hondius and Van den Keere returned to Amsterdam and by 1593 they were already active in the period known as the Golden Age of Dutch cartography, which would culminate in the seventeenth century with the famous house of Blaeu. Van den Keere,

who in the fashion of the times used the Latinized form of his name, Petrus Kaerius, had a thriving business for many years if we can judge from the large inventory of his copper plates, taken in 1623.⁴ His career faltered after that date as many younger engravers competed for work and the older engravers were shunted aside. We know of only about 20 atlas maps made by him in the period 1623-45. No record of his death has been found but it must have occurred some time after 1645, when he noted on one map that he had engraved it in his seventy-fourth year.⁵

The *Nova Tabula* was engraved on a single sheet of copper and measures 40cm (15³/₄") high by 53cm (21") wide, including its decorative borders. Van den Keere originally published the map in 1608 as a separate, meaning that it was not part of an atlas; he subsequently modified some of the map's geographical content, but he did not change the engraved date. In about 1620, Van den Keere sold the printing plate to the map publisher Johannes Janssonius; Janssonius then amended the map, adding his name and the date "1621," and began to include it in his multi-volume *Novus Atlas*. Some years later, in about 1636, Janssonius removed the date from the map. This fourth state of the map is the one discussed in the following essays. In fact, using the text printed on the back of the map, we can date this particular impression to one of the Dutch-language editions of the *Novus Atlas* printed between 1638 and 1658.⁶

Van den Keere's world map is notable in several respects. It is, first, a product of that astonishing flowering in the Low Countries of cartographic and engraving skills which included the work of such towering figures as Abraham Ortelius, Gerard Mercator, Jodocus Hondius, Willem Blaeu, and Joan Blaeu. Another point, curious to twentieth-century minds, is that Van den Keere's world map is a direct copy of one made by Willem Blaeu in 1606.





(Van den Keere did add a number of annotations, discussed in chapter 2.) We would today call this undisguised copy a piracy, and there would be cries of “plagiarism!” Not so at this time. It was not considered reprehensible to copy (unless, perhaps, one made a bad copy) and our map is skillfully, beautifully done. Van den Keere was an accomplished engraver. His work has been compared with that of the finest of his era, as our 1608 world map bears witness. While the map may look strange to us at the dawn of the twenty-first century, it presents a view of the world that was up-to-date for the start of the seventeenth.

The making of world maps, of course, is very ancient. The British Museum holds a Babylonian clay tablet dating to circa 600BC, which represents a very early world view.⁷ The list of manuscript world maps and charts made before the invention of printing is a long one. Medieval world maps, often referred to as *mappaemundi*, took various forms, ranging from small schematic diagrams to very large and highly detailed maps that served as alter pieces in cathedrals. These manuscript maps frequently combined several themes: they taught Biblical concepts to the illiterate, for only a small percentage of the population in those days could read or write; they were sources of information for the learned; and they presented a strongly theocratic view of the world, melding geographic information with the cosmographical beliefs of medieval Christianity. The basic form of *mappamundi* was the T-O map, so called because a T, formed with the Mediterranean as the stem and the Don and Nile rivers forming the crossbar, is contained within the round frame of the ocean, which was believed to circle the lands of the world. T-O maps appeared in many manuscripts, in both simplified and elaborated form. The larger maps reflected information from explorers and navigators. The Fra Mauro map of 1459 was the last of the great circular *mappaemundi* and incorporated information from Marco Polo; the map of Henricus Martellus Germanus (1492) included information from the voyage of Bartolomeo Dias, and so shows a much more realistic shape of Africa. The first printed world map, a schematic T-O map, was published in 1472, shortly after the invention of printing, in an edition of Isidore of Seville's *Etymologiae* (Figure 7a).⁸

By the time Van den Keere's map first appeared, in 1608, it had been preceded by more than 250 printed world maps in various formats and projections. There were two basic forms for world maps at this time. The first form, which spread the continents and oceans in an unbroken sweep across the page, were very popular throughout the sixteenth century (see Figure 6). The second form, which divided the world into its two hemispheres, each depicted within a circular frame, had begun to appear in the later 1500s and by 1650 was the dominant form of world map (Figure 8). Van den Keere made both types during his long career. The map under consideration today is clearly of the former type. More particularly, the map features the projection originally designed by Gerard Mercator and first used in 1569; contrary to popular belief, this famous projection was used only occasionally for world maps before the nineteenth century.⁹

The urge to ornament also began early. Windheads decorated a world map of 1482; a burning city and a steepled town enlivened a woodcut map drawn at about the same time. The famous Ptolemaic world view in the Nuremberg Chronicle of 1493, for example, shared its page with seven monstrous human-like beings.¹⁰ Images of potentates and cosmographers, animals both real and mythical, ships, mermaids, and so on, all edged their way onto maps and onto the seas and lands (see Figure 6). Small inset city plans appeared. It became a convention to have representations of the four seasons or four elements or four continents fill the four corners of world maps, sometimes accompanied by circular insets of the polar regions or the constellations. Beginning early in the seventeenth century we see a new use of decorative elements, the *carte-à-figure*, in which border decorations frame top, bottom, and sometimes the sides of maps. Willem Blaeu, on his 1606 world map, used this form brilliantly, and Van den Keere copied it expertly in his 1608 world map. Here you see the four elements and the four seasons framing the sides of the map while the pre-Copernican seven planets—which included the Sun and Moon—across the top are balanced by the Seven Wonders of the ancient world across the bottom.

Because Van den Keere's map was first published as a separate, and not in an atlas, we do not know how many were printed, nor do we know the number surviving today. Only six copies are listed in the major work on printed world maps,¹¹ but this number does not include those in unrecorded library or individual collections, such as the copy in the Osher Collection. It is, at any rate, rare. The map is a tour de force cartographically and iconographically.

Notes

¹ Rodney W. Shirley, *The Mapping of the World: Early Printed World Maps, 1472-1700*, 3d edition (London: Holland Press, 1993), no. 67.

² Cornelis Koeman, comp., *Atlantes Neerlandici: Bibliography of Terrestrial, Maritime and Celestial Atlases and Pilot Books, Published in the Netherlands, up to 1880*, 5 vols. (Amsterdam: Theatrum Orbis Terrarum, 1967-71), 2: 216. Günter Schilder and James Welu, *The World Map of 1611 by Pieter van den Keere* (Amsterdam: Nico Israel, 1980), 4.

³ Schilder and Welu, *The World Map of 1611*, 4.

⁴ Schilder and Welu, *The World Map of 1611*, 31.

⁵ Koeman, *Atlantes Neerlandici*, 2: 217.

⁶ Shirley, *Mapping of the World*, no. 264; Peter van der Krogt, *The Folio Atlases Published by Gerard Mercator, Jodocus Hondius, Henricus Hondius, Johannes Janssonius, and Their Successors*, volume 1 of Koeman's *Atlantes Neerlandici* ('t Goy-Houten: HES Publishers, 1997), atlas 1:431 and map 0001:1B.1-3.

⁷ A. R. Millard, "Cartography in the Ancient Near East," in *Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean*, edited by J. B. Harley and David Woodward, volume 1 of *The History of Cartography* (Chicago: University of Chicago Press, 1987), 107-16, esp. 114.

⁸ David Woodward, "Medieval Mappaemundi," in *Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean*, edited by J. B. Harley and David Woodward, vol. 1 of *The History of Cartography* (Chicago: University of Chicago Press, 1987), 286-370, esp. 359-367.

⁹ Most recently, see John P. Snyder, *Flattening the Earth: Two Thousand Years of Map Projections* (Chicago: University of Chicago Press, 1993), 1-54.

¹⁰ Shirley, *Mapping of the World*, no. 19.

¹¹ Shirley, *Mapping of the World*, no. 264.





Chapter One

The “Classic Ground” of Van den Keere’s Map

Gloria Shaw Duclos

4

When Joseph Addison visited Rome at the very beginning of the eighteenth century, he recorded his impressions thus:

For whereso’er I turn my ravish’d eyes,
Gay gilded scenes and shining prospects rise,
Poetic fields encompass me around,
And still I seem to tread on classic ground.¹

Similarly, even though Van den Keere titles his map “new” (*nova*)—*Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula*—it still rests firmly on “classic ground.” It reflects the discoveries and explorations of the century following the departure of Columbus on his momentous voyage; its world is no longer centered in the Mediterranean, the site of Greco-Roman civilization, but has moved to the Atlantic Ocean. At the same time, however, the map is still firmly grounded in the ancient world, specifically in its language and in the decorative panels, especially those in the top and bottom registers.

First, the language. Latin in the seventeenth century was still the *lingua franca*, the language of civilized and learned discourse. And so on this map, Latin is used to make it universally accessible and intelligible. This is good Latin with lots of participles, passive voices, and subjunctives. Interesting also are the abbreviations, typical of manuscripts, and at least one example of an engraver’s error.² Petrus Kaerius (to give him his Latin name) uses this common language for several purposes. He speculates that “the Anian strait and the strait of John Davis . . . are probably one and the same; indeed, many people contend, with many arguments, that the seacoast of America extends to the north and east until it . . . is joined with the land of Labrador or Greenland” [item 3 in the appendix to this chapter]. He names his source for

delineating the unknown *terra australis*, or southern land: “these regions revealed themselves to a certain Spaniard when he was wandering in this southern ocean after being shipwrecked” [12]. He explains his configuration of northern Asia: “This district of northern Asia is very uncertain; we, however, imitating others, have drawn it lest those less knowledgeable might think something was missing here, until something more certain emerges” [10]. He gives climatological and oceanographic details about the southern Indian Ocean: “Between Madagascar and the Crozet Islands the flowing and reflowing of the sea is very violent between its rise and fall” [18]. He provides historical information: “This Davis strait takes its name from the English discoverer who in 1585, 1586, and 1587 surveyed its shores in seeking a passage to China that way” [6]. He provides ethnographic information: “The native inhabitants of these regions [North America] live in tents, in groups, like the Tartars, since they have no cities” [4] and “A ship made of skins which those living near the Strait of Magellan use” [15]. And, finally, he offers a personal note: “Farewell and enjoy (*vale et frueri*)” [13].

A classicist, however reluctantly, must also note that the ‘vulgar’ languages are asserting their presence here. Consider particularly the double nomenclature of the oceans: *Mar del Nort* is glossed in slightly smaller letters by *Mare Atlanticum* and *Mar del Zur* is explained by *Pacificum*. Perhaps the most interesting example of this Battle of the Languages, if I may put it this way, is to be found in the Latin explanation of the distance between the promontory of *terra australis* from the *Caput Bonae Spei* (Cape of Good Hope), [16] yet the place name itself at the southern tip of Africa is given as *Capo de Bona Esperanza*. And so elsewhere on the map, Dutch, Portuguese and Spanish place names coexist with Latin names and comments.

A word about the strange and mysterious sea creatures so artfully cavorting in the southern oceans. These are direct descendants of those described by ancient mariners, as recounted by the Roman naturalist, Pliny the Elder, whose writings were well known in the Renaissance.³ Pliny had placed these six-foot lobsters, three-acre whales, and 150-foot sharks in the Indian Ocean, but as this area became more well known, the creatures seem to have been squeezed out into the huge and relatively unknown southern seas.

The other inheritance from the world of classical antiquity is found on the upper and lower borders of this map: the seven planets personified by the gods of the Greco-Roman pantheon, and the Seven Wonders of the ancient world. The artistic representation of the planetary gods is influenced chiefly by the works of Virgil and Ovid, both extensively known by Van den Keere's predecessors and contemporaries. Beginning from the left, Luna, the moon, is depicted as the goddess Diana, since in antiquity the virgin huntress was identified with the moon. As Diana, she carries a bow, as do her attendants pulling her chariot. Her identifying horns symbolize the phases of the moon. Next comes Mercurius, Mercury, carrying his winged wand encircled by two snakes, with which he was said to convey souls to the Underworld. He wears winged sandals and helmet, signifying his traditional role as the messenger of the gods. His chariot is pulled by falcons, whose swiftness parallels that of their master.⁴ In contrast, Venus reclines in a carriage pulled by swans, the beautiful birds associated by Ovid with the goddess of love.⁵ Accompanying her is her son, Cupid, his bow at the ready to inflame some poor mortal with love. Sol, the sun, occupies the central position in the upper register, as befits his status as the most dominant planet in the eyes of mankind; but notice that he is still included among the other planets, for Van den Keere lives in a Ptolemaic, geocentric world. Four horses convey his chariot across the expanse of the sky.⁶ Next comes Mars, the god of war, in full battle gear, his chariot piled high with the accouterments of war: sword, spear, lance, standard, and drum. The Dogs of War struggle to pull his laden chariot.⁷ Jupiter, the Father of Gods and Men, is shown poised for action, a thunderbolt in

each hand, ready to be hurled at malefactors. His chariot is pulled by two eagles, those fierce birds of prey symbolic of Jupiter's supremacy and ever-watchful eye. Last comes Saturn, the planet farthest from the Earth, the progenitor of the Olympian deities, the ruler of the universe during the Golden Age. In his role as the god of an earlier age, Saturn became increasingly identified as Father Time (his Greek name, Chronos, means time), hence the scythe with which he cuts down each age, and the young child symbolic of the coming new age.⁸ Saturn's chariot is drawn by two wondrous creatures, perhaps griffins, entirely suitable to such a long ago age.

The bottom register contains the Seven Wonders of the World.⁹ Here reality and imagination confront each other in a way not seen in the other decorative panels, and imagination wins the day handily. Part of the problem is that, with one exception, the *mirabilia mundi* had all vanished by Van den Keere's time, preserved only in various lists and scanty descriptions. The one exception is, of course, the Pyramids, the third oval from the left. But look what the anonymous artist has done with them: a cross between an obelisk and a ziggurat. At least he got the Nile River right, although Pharaoh looks surprisingly like Charlemagne or Edward the Second. This fanciful depiction is indicative of how little Europeans knew of the Middle East in the sixteenth and seventeenth centuries; it was only in the eighteenth and later centuries that Egypt and the surrounding areas, site of the Seven Wonders, were rediscovered by Europeans. The first and oldest of the Seven Wonders is the Hanging Garden and Walls of Babylon, constructed by the legendary Queen Semiramis. So old were they that they had long disappeared even by the time of the Greeks, living on only in fertile imaginations. The Colossus of Rhodes was a towering bronze statue of the sun god Helios and was erected sometime between 292 BC and 280 BC. It was not destined to stand long, however, for an earthquake brought it down after 67 years. Furthermore, we know from ancient accounts that it never bestrode the harbor of Rhodes, in the rather dangerous manner shown here. The Mausoleum was built to entomb the remains of Mausollus, king of Halicarnassus. Begun in 353 BC by his widow,



Artemisia, the massive tomb was subject to numerous earthquakes in the following centuries; the *coup de grace* was given in 1522 by the Knights Hospitaller who used the last remaining marble blocks to fortify a nearby castle against the attacking Turks. Archaeological discoveries in the nineteenth and twentieth centuries reveal a very different building from that depicted here. The Temple of Diana (or Artemis, as the Greeks called her) at Ephesus was indeed huge, but it was a Greek temple, with Ionic columns all around, not at all like the building shown here. The statue of Jupiter (Zeus, in Greek) at Olympia was justly famous in antiquity, a chryselephantine masterpiece of the greatest artist of the fifth century BC, Pheidias. Unfortunately, there are

no extant copies of this statue, but we know from ancient descriptions that the god was seated on a decorated throne, with a statue of Victory in his hand. The statue was not, however, displayed in an open hemicycle, as here; rather, it was placed within a typical Greek temple, its head almost scraping the roof. Finally, the Pharos, or lighthouse, of Alexandria was built in the same century as the Colossus and the Mausoleum, but it too, like them, succumbed to earthquakes and was no longer standing by the thirteenth century.

So Van den Keere's map may indeed be *nova*; at the same time it is deeply indebted to the language and images from the world of classical antiquity and stands firmly on "classic ground."

Appendix: Transliteration and Translation of Van den Keere's Discursive Notes

The notes are organized as they occur on the map, from top to bottom and from left to right.

Running Across the Top of the Map

1 NOVA TOTIUS TERRARUM
ORBIS GEOGRAPHICA AC
HYDROGRAPHICA TABULA. à Pet:
Kærio.

A New Geographic and Hydrographic Map of
the Whole World by Pieter van den Keere

Notes across northern regions of North America

2 Uterius Septentrionem versus
America omninò est incognita sitne
aqua vel terra hoc loco incertum est.
plurimùm tam ex rerum circumstantijs,
conjectant Americam ab hac parte
Septentrionali mari succinctam.

America further towards the north is totally
unknown and whether there is water or land
in this place is uncertain; and so most people
from these circumstances conjecture that in
this part America is girdled by the northern
sea.

3 Anian Fretum et Fretum Joannis
Davis latitudine 60 grad. è region(e)
insularum Orcadum, fortè unu(m) et
idem est; plurimi enim multis argumentis
contendu(nt) oram litoralem Americæ
Boream versus eousque protendi donec,
in modum insulæ cum terra Laboratorjs
aut Groenlandiæ coniungatur. Quod an
verum sit sæpius, sed frustra, quæsitum
est, propter ventorum asperos et
impetuosos turbines et maris fremitus
terrificos, montes glacie concretos
planeque horendos.

The Anian strait and the strait of John Davis
which is 60 degrees in latitude from the
Orkney Isles are probably one and the same;
indeed, many people contend, with many
arguments, that the seacoast of America
extends to the north and east until it, like an
island, is joined with the land of Labrador or
Greenland. Whether this is true has been
investigated very often but in vain, on
account of the harsh and violent gusts of
winds, the frightening howling of the sea, and
the very frightful mountains of hard ice.

4 Harum Regionum Indiginæ more
Tartarorum catervatim in tentorijs
habitant, civitates nullas habentes.

The native inhabitants of these regions live in
tents, in groups, like the Tartars, since they
have no cities.

5 [in cartouche] AMERICA Anno
Domini 1492 a Christophoro Columbo
nomine Regis Castellæ primum detecta,
et ab Americo Vesputio nomen sortita
1499.

America was first discovered in 1492 A.D. by
Christopher Columbus in the name of the King
of Castile and acquired its name from Amerigo
Vespucci in 1499.

6 Fretum hoc Davis, ab inventore
Anglo nomen habet qui an. 1585. 86. et
87. hujus littora perlegit transitum illac
in Chinam scrutando.

This Davis strait takes its name from the
English discoverer who in 1585, 1586, and
1587 surveyed its shores in seeking a passage to
China.

Notes across the Arctic Ocean north of Asia, from west to east

7 Terram hanc è regione Finmarchiæ
12 grad. positam detexit Hugo
Willoughbeus Eques Anglus anno 1553.

The English knight Sir Hugh Willoughby in
1553 discovered this land, situated 12 degrees
from Finland.

8 Terra hæc ab inventore Anglo
nomen sortita est

This land acquired its name from its English
discoverer.

- 9 Nova Zemla lustrari cœpit
fœliciter an. 1594. et 95. nomine
Illustriss(imorum) Ordinum
fœderatarum Inferi(æ) Germaniæ
Regionum quo aditus ad Chinam
Reg(iam) quærebat: sed eventus
nondum ex animi sententia votis
successit.

Novaya Zemlya began propitiously to be
traversed in 1594 and 1595, in the name of
the most illustrious orders of the federated
regions of Lower Germany, by which a route
to the court of China was sought; but, in
their opinion, the result has not yet matched
their desires.

- 10 Incertus admodum est hic
Septentrionalis Asi tractus: nos
tamen alios imitantes posuim(us)
ne imperitiores hic aliquid deesse
putarent: donec certius quoddam
exeat.

This district of northern Asia is very
uncertain; we, however, imitating others,
have drawn it lest those less knowledgeable
might think something was missing here,
until something more certain emerges.

Notes across Terra Australis, from west to east

- 11 Hanc continentem Australem
no(n)nulli Magellanicam
regionem ab eius inventore
nuncupant.
- 12 Hæ regiones cuidam Hispano
apparuerunt, cum disiectus a classe
in hoc Australi vagaretur Oceano.

This southern continent some call the
Magellanica region from the name of its
discoverer.

These regions revealed themselves to a
certain Spaniard when he was wandering in
this southern ocean after he was thrown from
his ship.

- 13 [*in cartouche*] Cum ob terrestrem
sphæram hoc modo in planum
redactam situm prope polos
animadvertere non possimus,
Borealiorem et Australiorem
partem a quinquagesimo parallelo
duobus circulis hic delineatis:
conclusimus vale et frueri.

Since we cannot know the region near the
poles on account of the terrestrial sphere
being projected onto the plane in this
manner, we have enclosed the more
northerly and the more southerly part from
the 50th parallel within the two circles
drawn here. Farewell and enjoy.

- 14 Psittacorum regio sic a Lusitanis
appellato ob incredibilem earum
avium ibidem magnitudinem.

Land of the Parrots, so called by the
Portuguese on account of the incredible size
of these birds there.

- 15 Navigium ex corijs quo accolæ Freti
Magellanici utuntur.

A ship made of skins which those living near
the Strait of Magellan use.

- 16 Promontorium Terræ Australis
distan 450 Lucas à Capite Bon spei
et 600 à promotorio S. Augustini.

The promontory of Terra Australis is 450
leagues(?) from the Cape of Good Hope and
600 from the promontory of St. Augustine.

- 17 [*in cartouche*] AMSTELODAMI
Excudebat Ioannes Ianssonius.

Jan Janssen engraved this at Amsterdam.

- 18 Inter S. Laurenty et Los Romero
insulas vehemens admodum est
versus ortum et occasum fluxus et
refluxus maris.

Between Madagascar and the Crozet
Islands(?) the flowing and reflowing of the
sea is very violent between its rise and fall.





Notes

¹ Joseph Addison, *A Letter from Italy, to the Right Honourable Charles Lord Halifax in the Year 1701* (London: H. Hills, 1709).

² For instance, the omission of final -m or final -nt is indicated by a wavy line placed above the last letter of the word. The engraver neglected to write the final -e of the word *regione*. See Edward Maunde Thompson, *Handbook of Greek and Latin Paleography* (New York: D. Appleton, 1893; reprinted, Chicago: Ares, 1966), 96-104.

³ See especially Pliny, *Natural History*, 9.2 and 9.12.

⁴ Ovid, *Metamorphoses*, 2.714-21, likens Mercury to a falcon in its swift and gliding motions.

⁵ Ovid, *Metamorphoses*, 10.708-9: "She (Venus) flies through the air in a chariot yoked with swans." For Cupid's dangerous antics, see Virgil, *Aeneid*, book 4, the story of Dido's love for Aeneas.

⁶ Ovid, *Metamorphoses*, 2.153-54, even tells us the names of these horses: Pyrois, Eous, Aethon, and Phlegon, all variants of fire/light.

⁷ The dogs also look a little like wolves, reminding the educated viewer of the wolf which suckled the twins, Romulus and Remus; the former founded the city of Rome, of which the tutelary deity was Mars. See Virgil, *Aeneid*, 8.630-34.

⁸ The child will also remind the same educated viewer of Virgil's influential *Eclogue*, book 4, in which the birth of a child presages the coming of a new Golden Age.

⁹ For an exhaustive discussion of the Seven Wonders, see John Romer and Elizabeth Romer, *The Seven Wonders of the World: A History of the Modern Imagination* (New York: Henry Holt, 1995).

Chapter Two

Innocence and Empire: Dutch Imperialism in the Age of Pieter van den Keere

Alfred Padula

Wherever profit leads us, to
every sea and shore
for love of gain
the world's wide harbors
we explore.

Joost van den Vondel (1639), leading Dutch poet.¹

We cannot carry on trade without war, or war without trade.

Jan Pieterszoon Coen, governor general of the Netherlands
Indies, 1619-23 and 1627-29.²

Jesus Christ is good but trade is better.

Proverb of Dutch traders.³

Pieter van den Keere's map, *Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula* of 1608, presents an Edenic world, a world at peace, a comfortable neighborhood ripe with commercial promise. The map is suffused with innocence and hope. His map is thus a perfect decorative item for the homes of the rising Dutch bourgeoisie. And, of course, it is a lie.

A few puffs of gun smoke between passing ships in Van den Keere's map hint at what is really happening (see Figures 4 and 5). We are at the dawn of a wrenching drama of fire and blood. The world capitalist system is being born. It is an era of conflict, not peace. Force, not virtue or reason, is the dominant principle. Improved technologies of gunpowder, compass and sail are being harnessed to innovations in commerce and finance to produce gigantic enterprises with global reach. It is the moment of the commodification of humanity. For the winners it will mean the aggregation of enormous wealth

which will propel the world toward the industrial age and "modernity." For the losers, and there were many, it will mean the systematic destruction of "native" civilizations and habitats, and the enslavement and forced migration of millions. The Dutch will be major participants in this process. Their global seaborne empire will make them the greatest power in seventeenth-century Europe.

Dutch map makers played a decisive role in this process, producing maps to entertain and enlighten the rising bourgeoisie and to win public support for the Netherlands imperial strategy, and charts for Dutch seafarers. The life of one of those early seventeenth-century map makers, Pieter van den Keere (1571-1646), spanned the most brilliant years of the Dutch Empire (1570-1670). Van den Keere was a skilled engraver who happened to be the brother-in-law of Jodocus Hondius, a Dutch map maker who in turn had bought out the firm of Gerard Mercator, the father of the contemporary atlas. Mercator was a close friend of Abraham Ortelius, another great map maker. Van den Keere used maps done by others, enhancing them with attractive decoration. Together, from 1570 to 1670, this small community of Dutch map makers revolutionized map making, moving its center of gravity from Italy to Amsterdam by publishing atlases which popularized the map making art. Perhaps more importantly these map makers pioneered new map making techniques which facilitated the growth of the Dutch empire. Indeed many were employed directly by the imperial machine.⁴

By 1608 the world had already passed through what the historian William McNeill calls the first century of the "gunpowder empires," in which the rising nations of Western Europe, particularly Spain and Portugal, had begun





to impose their vision of civilization on the rest of the world.⁵ This new world is Atlantic centered. In Van den Keere's map the Mediterranean has shrunk. It is no longer the center of world commerce. The great trading cities of Venice and Genoa, and their Muslim partners Alexandria and Tyre, are in decline. While the Mediterranean is reduced, the Americas spread luxuriously—and quite exaggeratedly—across Van den Keere's map. Broader than Europe and Asia combined, America is clearly the future.

The diminished Mediterranean signals not only the end of the millennium in which Jerusalem was the center of the world but also the decline of the Muslims who had dominated the Mediterranean basin for seven centuries. Silver from the Americas, wrenched from Spanish mines in Mexico and Peru by Indian slaves, will finance Europe's power to resist the Muslims. The new trade routes around Cape Horn and the Cape of Good Hope simply bypass the great merchant cities of the Levant. It is a historic defeat which still rankles in Islam.

The Dutch played a powerful role in this process of global transformation. The seven states which constitute the modern Netherlands—Holland, Zeeland, Utrecht, Gelderland, Overijssel, Friesland, and Groningen—lay at the confluence of a series of rivers—Rhine, Maas/Meuse, Scheldt, Issel—which gave them excellent internal communications as well as privileged access to the burgeoning trade of northern Europe. The Dutch became masters of the herring trade in the North Sea and the Baltic, feeding protein to Europe. They led the way in the commercialization and distribution of new commodities from the Americas, such as tobacco, corn, and the potato.

The Dutch were remarkable innovators. Masters of hydraulics, they raised a nation out of the sea with a series of dikes, canals, and windmills. They developed a range of cargo ships—"fly-boats"—that had smaller crews, were cheaper to build, and had a greater capacity than their competitors. And by paying their crews less, and keeping them on short rations, the ever frugal Dutch could undercut the competition.⁶ Cheap ships plus the lowest interest rates in Europe enabled the Dutch to dominate Europe's carrying trade, carry-

ing the grains, textiles and fishes which were the backbone of the region's economy. By the seventeenth century there were as many as 6,000 Dutch ships plying the seas.⁷

These ships were turned into a tremendous asset in the Netherlands' struggle for independence. In the sixteenth century the Netherlands, as part of the Holy Roman Empire, were ruled by Spain. In 1556 the Holy Roman Emperor, Charles V, turned the lowlands over to his son, Philip II. An unbending authoritarian, Phillip II raised taxes and attempted to impose bureaucratic discipline. This grated against the lowlanders' traditions of local rule and economic independence. A struggle for independence began in 1568 which would last till 1648. This eighty year long conflict had a powerful religious dimension as the lowlands had become a hotbed of Protestant—and particularly Calvinist—protest against Catholic excesses. Phillip II, as leader of the Catholic Counter-Reformation, set out to crush these impudent "Protestants." It would prove to be a long cruel struggle, marked by sieges and slaughters.

In their man made "Waterworld," the Netherlands fought off Spanish invaders by opening dikes and flooding fields. Dutch privateers, the notorious "Sea Beggars," attacked Spanish commerce. The Dutch determined that the best defense was not only destroying Spanish commerce but aggressively building their own. Holland's seaborne empire was thus born of a convergence of religious war and commercial enterprise. Its strategy was to develop a global network of trading stations and trading arrangements backed by naval power. For the most part it did not seek, like its Iberian predecessors, to create extensive colonies nor to propagate Protestant belief. Trade was the thing.

While the southern provinces of the Netherlands eventually made peace with Spain, the seven northern provinces declared their full independence in 1581. The northern provinces, led by Holland and its capital city, Amsterdam, became a magnet for immigrants from all over Europe. Laborers came because there was work; Protestants and Sephardic Jews came because there

was religious tolerance; businessmen came because the seven provinces welcomed entrepreneurs and capital.

Holland's emerging empire was linked to a philosophical belief in the freedom of the seas. In 1609, one year after Van den Keere first published his world map, the Dutch jurist, Hugo Grotius, the father of international law, wrote his "Mare Liberum" which challenged the papal donation of the oceans to the Iberians. But the Dutch notion of freedom of the seas was a qualified one: when it was convenient, the Dutch, like the rest of Europe, sought to achieve the exclusivity of monopoly. Thus, the Netherlands sought freedom to fish in British waters, while excluding the British from their own burgeoning empire in the East Indies.⁸

The global ambitions of the Dutch were facilitated by new forms of finance. By 1608 Dutchmen were employing the first "checks." In 1609 the Bank of Amsterdam, chief financier of the dramatic expansion of Dutch trade, was founded. In 1610 the first "shares" of enterprises were floated. In 1611 Amsterdam finished building its bourse, the world's first stock exchange.⁹ By the early seventeenth century Holland had become Spain's leader financier, undercutting the Genoese.¹⁰ Paradoxically, the Dutch helped to finance their principal enemy, and indeed, they continued to trade vigorously with Seville even as they were fighting it tooth and nail in their war for independence.

Holland's global empire was owed to two private entities, the East and West India companies, mercantile giants that foreshadow the multinational companies of the twentieth century. These companies were among the world's first shareholder-held enterprises.

The East India Company

The formation of the Dutch East India Company (1602) can be attributed in part to Europe's love affair with spices. Spices were items of prestige consumption among the rising European bourgeoisie: they had the cachet of the mysterious Orient and they demonstrated the prosperity and good taste of the host. The intensity of Europe's growing addiction can be seen in the

household account books of a late medieval European castle. For a dinner party for forty the following spices were required: "one pound of columbine powder . . . half a pound of ground cinnamon . . . two pounds of sugar . . . one pound of saffron . . . a quarter pound of cloves and guinea pepper . . . an eighth of a pound of nutmeg," and so on.¹¹ Many of these spices came from the legendary "Spice Isles" of the South Pacific. It was to undercut the Muslims' control of this market that European explorers pressed ever further into the South Atlantic to find their own routes to the Spice Isles. Thus the Dutch, like the Portuguese a century before them, were attempting to outflank the Muslim and Italian middlemen in Europe's commerce with Asia.

The first Dutch ventures to the Far East were made in the late 1500s, a century after the Portuguese had pioneered these routes. In 1598 Jacob van Neck rounded the Cape of Good Hope and plunged east to the Spice Islands, where he picked up a cargo, returning with four vessels to Amsterdam. "Such richly laden ships had never been seen," one observer noted.¹²

When Portugal was incorporated into the Spanish empire in 1580, where it would remain until 1640, Portuguese territories became a "legitimate" target for Dutch raiders. In 1601, deep in the heart of the South West Pacific, five Dutch ships defeated a much larger Portuguese fleet near Bantam in the Sunda Straits. Ambitions were stimulated. The following year (1602) the East India Company was founded to bring Dutch interests in Asia into concert and to compete with the English East India Company founded two years earlier. The Dutch East India Company, and its companion West India Company, had extraordinary freedom of action to wage war or make peace, to establish bases and garrisons, and above all to create profitable trading relationships.¹³

In 1606 the Dutch explorer Willem Janszoon stumbled across Australia, which in subsequent years was designated New Holland. But the Dutch found it "inhabited by wild, cruel, black savages" and did not attempt to colonize it.¹⁴ Australia does not appear on Van den Keere's 1608 map, suggesting the time lag for new discoveries to enter the cartographic world. Some years later



Abel Tasman and Frans Visscher came across new territories east of Australia which they baptized as New Zeeland after the Dutch province of that name.

The Dutch employed the classic imperialist strategy of intimidating islanders in the East Indies by menace and cannonade. Local chiefs were persuaded to provide spices for Dutch merchants. In 1620 the Dutch attacked the Banda islands, exterminating most of its population and deporting the remainder to other islands. During this era the East India company founded its headquarters in Batavia (Jakarta) and began their gradual takeover of the entire region of Indonesia in order to assure a Dutch monopoly on the spice trade. In 1651 native resistance in Western Ceram led the Dutch to force 12,000 natives from their villages.¹⁵ Such forced migrations would become a hallmark of the imperial process. Meanwhile, in Amsterdam, the East Indies Company was building a sprawling headquarters and warehouse. It was the largest building in Holland.

The West India Company

In Van den Keere's map the Americas that appear plump and inviting as roasting fowls are bordered with coastal rivers with indigenous names. Many of these names would be erased because of Europe's need for salt. The Dutch needed salt to preserve the herring which they caught in great quantities in the North Sea and the Baltic. And salt was also required to resolve an agricultural dilemma. Seventeenth-century Europe had yet to develop an adequate program of winter storage for animal fodder. Thus animals had to be slaughtered in the fall and their meat somehow preserved. Salt, in the centuries before the icebox and the refrigerator, was the preservative of choice.

The Dutch had for years procured their salt at Setubal on the Portuguese coast, but when this source was cut off by Holland's war with Spain, they were obliged to pursue distant sources. One was on the north coast of Venezuela. In 1603 as many as one hundred Dutch ships visited the salt flats of Venezuela's Punta de Araya. The Spanish, outraged by this impudent inter-

vention in "their" Caribbean, attacked the Dutch outpost at Punta de Araya in 1605. Those Dutchmen who were not killed outright were made galley slaves in Spanish ships. The Dutch returned in 1621 and built a fort. The Spanish again drove them out. Two years later a Dutch fleet of 104 ships sailed into the region. Spanish garrisons were destroyed; eleven hundred Spaniards including women and children were slaughtered.¹⁶

In subsequent years the Dutch acquired the nearby "ABC" islands: Aruba, Bonaire, and Curacao. These islands—along with Saba, St. Eustatius ("Statia"), and St. Martin—would form the Netherlands Antilles. Thereafter the Dutch made their first inroads into Essequibo (Dutch Guiana) on the north coast of South America.

By the 1640s, the "ABC" islands of the Caribbean would be under the command of Peter Stuyvestant, who would in turn later become governor of New Amsterdam (New York). St. Eustatius, mimicking Amsterdam, became a powerful entrepot in the Caribbean and in the eighteenth-century a major source of arms for the American revolution, while Curaçao became an important slave market.

Sugar was another driving force in Holland's interest in the Americas. Well before the West India Company was founded in 1621, Dutch ships had been serving the burgeoning sugar plantations of Portuguese Brazil, carrying sugar from Recife to Lisbon. But the Dutch had sugar refineries of their own and aspired to have direct control over the sugar producing regions.³⁷ To do so they launched a program to seize Portugal's American possessions.

In 1604 a Dutch fleet attacked the coastal city of Bahia in Brazil but was driven off. Then in 1624, following the expiration of the Netherlands' twelve-year truce with Spain (1609-1621), a West Indies Company fleet of 36 ships and 6,500 men seized Bahia, capital of Brazil. The Dutch were again defeated, but returned with fleet of 77 ships in 1630, captured the region, and renamed it New Holland. This time the Dutch stayed for a quarter of a century. For a time the West India Company's Brazilian possessions enabled it to pay dividends of 25 percent per year.¹⁸ Two and a half decades later the Dutch were

forced out of Brazil by internal insurgents backed by a large fleet from Portugal.

While in Brazil, the Dutch became deeply engaged in “la trata,” the infamous trade of slaves from Africa. Sugar required more workers than the indigenous populations could provide. Dutch participation in slaving had begun in the late sixteenth century when in 1596 a Dutch skipper had brought 130 African slaves, captured from the Portuguese on the high seas, to Zeeland to sell them. The city fathers would not hear of it. No slave market would be permitted. The slaves were freed.¹⁹ But these views changed after the capture of the sugar regions of Brazil.

Dutch theologians accepted the notion of slavery as part of the biblical legacy of the “curse of Ham,” in which Ham, son of Noah and father of blacks, was condemned—with all his descendants—to eternal servitude for dishonoring his father.²⁰

In Brazil, New Holland came to be headed by Count Johan Maurits, who was related to the House of Orange, the principal dynastic family of the Netherlands. More than 30,000 slaves were brought to New Holland by the Dutch during the twenty-five years (1630-1654) in which they controlled the region. Some of the slaves were captured from English or French slave ships on the high seas. Most however were brought directly from Africa thanks to Holland’s seizure of trading stations along that continent’s coast including São Jorge da Mina in 1637 and Angola in 1641.²¹

When the Dutch attacked Brazil in 1624, they so distracted Spain’s navy that the British and French were able to sneak unnoticed into the Spanish Caribbean and establish colonies on the Windward Islands. Three decades later, when the Dutch were forced out of Brazil, they moved their capital and sugar making technology to the Caribbean islands.

This shift precipitated a veritable sugar revolution in Barbados. European small holders who had made tobacco the principal product of Barbados left for Virginia. Their farms were grouped into large sugar plantations worked by black slaves. The slave trade surged. Thus Holland’s sweet tooth was in-

strumental in the ethnic reshaping of the Caribbean.

In the 1620s the West Indies Company launched a program to sweep the Spanish from the Caribbean. Dutch “Sea Beggars” attacked Spanish shipping at will and in 1625 attempted to invade Puerto Rico. When the Dutch raider Boudewijn Hendricksz. attacked San Juan he warned its inhabitants that “we will not spare one person on your island; old nor young, women nor children,” if the garrison at the fortress of El Morro did not surrender. When they refused, he burned down much of the city.²² The Dutch were also intensely interested in the annual Spanish treasure fleets which were a major support of the Spanish crown. In 1628 a West Indies Company fleet of thirty-one vessels commanded by Admiral Piet Heyn intercepted and captured the Spanish treasure fleet near Havana. The rewards were stunning: almost 100 tons of silver, hundreds of pounds of gold and jewels, 2,270 chests of indigo, 37,000 hides, spices, pearls, and sugar.²³ This bonanza enabled the Dutch West India Company to declare a fifty-percent stock dividend. Heyn was named a city father of Amsterdam. The king of Spain, on hearing of this loss, fainted dead away. Spain, dependent on its American treasure house, was plunged into bankruptcy. For Heyn, who had been a Spanish galley slave for four years, revenge was sweet.²⁴

Further to the North, in 1610, Henry Hudson, under contract to the West Indies company, investigated the broad river that bears his name. A decade later Dutch settlers founded New Amsterdam near the confluence of the Hudson with the Harlem and East Rivers. They bought it from the Algonquin Indians for 60 guilders worth of trinkets. Thereafter the Dutch built a fort to secure their new possession. By mid-century they were busily constructing Wall Street, the future seat of world capitalism.²⁵

Innocence and Empire; Virtue and Wealth

In his brilliant survey of Dutch culture, *The Embarrassment of Riches*, the historian Simon Schama argues that the central dilemma for seventeenth-century Holland was the tension between virtue and wealth.²⁶ The Dutch

saw themselves as hard working, practical, godly people who shunned ostentation and conspicuous consumption in both public and private life and whose credo was peace, commerce, and prosperity. The philosopher Desiderius Erasmus commented on the “gentleness, kindness, moderation, [and] generally diffused erudition” of his countrymen.²⁷ If the Dutch were called cheese worms, sozzlers, or “slippery fellows” by their rivals in England or France, it was nothing more than jealousy.²⁸

But militating against this democratic bourgeois spirit was the lure of aristocracy, of a higher strata of effortless life for a select few. The classical allusions on the borders of Van den Keere’s map signal the Dutch bourgeoisie’s paradoxical aspirations for aristocratic status, of their desire to pass from being mere merchants to being a higher class of lords and landowners and thus to enter a timeless universe in which leisure and not work is what is valued and in which the pursuit of culture and the creation of style and art are of the highest concern. This is the sort of class that is scarcely aware of the sources of its wealth, and would be offended by the gross details. War and slavery would be required to create this superior class. As Jan Pieterszoon Coen, a leading figure in the Dutch East Indies Company had noted, “we cannot carry on trade without war, or war without trade.”²⁹ These are precisely the details than Van den Keere’s map fails to provide. The map then is a “feel good” emblem of a society in denial.

Dutch painting of the golden age confirms this tension between virtue and wealth. The Calvinist anxiety over the destructive power of wealth and success is evidenced in the school of maritime paintings where a stormy nature (God) not infrequently smashes Dutch merchantmen—symbols of the Dutch nation—onto the rocks. This is a warning of God’s anger at man’s hubris.³⁰

But if Dutch painters portrayed the merchant ships crashing on European coasts they rarely present images of the dirty work required for the creation of an overseas empire. The Dutch East India company might hire cartographers, but it did not hire painters to portray the slaughter of innocents

in the far Pacific. This was simply the cost of empire and thus was nobody’s business. Seventeenth-century Holland had no Joseph Conrad to bring home the moral dimensions of its tropical empire.

Conclusion: Empire and Liberty in a Map

In a more accurate rendering of the real world the borders of Van den Keere’s map might well have portrayed the costs of empire rather than the fairytale world of mincing gods and goddesses. Where in Van den Keere’s map—and those of other Dutch map makers—is Schama’s Calvinist angst? The Dutch were participating in a brutal transformation of the globe and the Netherlands’ map makers were playing a decisive part in this process. As Schama has observed, seventeenth-century maps were in fact “essays” about Holland: “There was no such thing as value free geography in the Netherlands.”³¹

It was with no little hubris that Dutch strategists and map makers would, during the seventeenth-century, rename a good part of the world after themselves. Thus we have New Holland (Pernambuco, Brazil), New Amsterdam (Manhattan, in New York City), Haarlem (in New York City), Fort Orange (Hudson Valley), New Netherlands (New York), New Zealand (New Zealand), Zeelandia (Formosa), Batavia (Djakarta, Indonesia), the Netherlands Indies (Indonesia), the Netherlands Antilles, and so on.

It is arguable whether the greatest tragedy of Dutch imperialism was the suffocation of native peoples in the South Pacific or the Dutch role in the sugar trade which helped precipitate the vast movement of slaves to the Caribbean and to Brazil, an effort which would eventually encompass eight million persons, and the ethnic transformation of the Americas.

The great irony in this process is that Holland used its own struggle for freedom against Spanish imperialism in Europe as a pretext to truncate the freedom of native people—those people whom the historian Eric Wolf celebrates as “people without history”—in Africa, the Americas, and the South Pacific. The Dutch constantly complained of the misuse of power and force

by the European powers against them, while being quite unconscious of the impact of their imperial ventures on others.³² Although the Dutch made much of their resistance to Catholicism, they accepted the very Catholic and Aristotelean belief that slavery was a part of the natural order. Indeed, the great Catholic bishop, Las Casas, defender of the Indians, would recommend that the new world's Indians be freed and replaced with black slaves from Africa.

In part the Dutch simply didn't want to hear about the nastier side of empire. The best men often did not choose to participate in the overseas ventures of the Dutch East India Company, and indeed it was necessary to recruit many foreign mercenaries to carry out the imperial venture.³³

The Dutch paid a price for their drift towards aristocracy and indifference. The Golden age of Holland would end in the 1670s not only because of naval defeats by the English but also because, as the Dutch bourgeoisie attempted to become more aristocratic, it diminished its investments in domestic mercantile activities and increasingly favored investments in country estates or in foreign—particularly British—markets. The Dutch became substantial investors in Britain's East India Company! The Dutch had developed such a taste for luxury that various sumptuary laws were passed in the 1660s

to limit conspicuous consumption. The new rentier class preferred French painters; "the Dutch school of painting" barely survived the death of Rembrandt (1669).³⁴ Thus towards the end of the century Holland would not make the next step in its economic development, moving from merchant republic to industrial producer. In due course it was swept aside by its European rivals.

In the twentieth century, Europe would pay a heavy price for its colonial enterprise, with half a century of anti-colonial revolutions that flowed powerfully from the colonialism attendant to the rise of the West, the process saluted in genial maps by Dutch map makers like Van den Keere. But then seventeenth-century Dutchmen did not want to be nagged about such matters. When Calvinist ministers complained about excesses in the colonial enterprise, they were told to shut up. The game for Dutch empire in the seventeenth century was to forge ahead, as reflected in a popular saying of the era:

The good old rule, the simple plan
That they should take who have the power
and they should keep who can . . .³⁵





Notes

- ¹ C. R. Boxer, *The Dutch Seaborne Empire* (New York: Alfred A. Knopf, 1965), 28.
- ² Boxer, *Dutch Seaborne Empire*, 96.
- ³ Jenifer Marx, *Pirates and Privateers of the Caribbean* (Malabar, FL: Krieger Publishing, 1992), 100.
- ⁴ R. V. Tooley, *Maps and Map-Makers* (London: B. T. Batsford, 1949; reprinted, New York: Dorset Press, 1990), 29. Also, George S. Keyes, *Mirror of Empire: Dutch Marine Art of the Seventeenth Century* (Minneapolis, MN: Minneapolis Institute of Arts, 1990), 73.
- ⁵ William H. McNeill, *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000* (Chicago: University of Chicago Press, 1982), 95-99.
- ⁶ There is some dispute about the rations. Simon Schama, *The Embarrassment of Riches: An Interpretation of Dutch Culture in the Golden Age* (New York: Alfred A. Knopf, 1987), 175, says Dutch crews were well fed.
- ⁷ Fernand Braudel, *The Perspective of the World*, volume 3 of *Civilization and Capitalism, 15th-18th Century* (New York: Harper & Row, 1984), 190.
- ⁸ Boxer, *Dutch Seaborne Empire*, 102.
- ⁹ Bernard Grun, *The Timetables of History: A Horizontal Linkage of People and Events* (New York: Simon & Schuster, 1975), 273.
- ¹⁰ Eric R. Wolf, *Europe and the People Without History* (Berkeley: University of California Press, 1982), 117.
- ¹¹ Wolfgang Schivelbusch, *Tastes of Paradise: A Social History of Spices, Stimulants and Intoxicants* (New York: Pantheon, 1992), 5.
- ¹² Charles Wilson, *The Dutch Republic and the Civilisation of the Seventeenth Century* (New York: McGraw-Hill, 1968).
- ¹³ Peter Whitfield, *The Charting of the Oceans: Ten Centuries of Maritime Maps* (New York: Pomegranate Books, 1996), 63.
- ¹⁴ Wilson, *Dutch Republic*, 215.
- ¹⁵ Boxer, *Dutch Seaborne Empire*, 99.
- ¹⁶ Marx, *Pirates and Privateers*, 104.
- ¹⁷ Amsterdam was said to have 50 refineries in the 1640s. See Schama, *Embarrassment of Riches*, 165.
- ¹⁸ Hubert Herring, *A History of Latin America, From the Beginnings to the Present* (New York: Alfred A. Knopf, 1973), 219.
- ¹⁹ Johannes Menne Postma, *The Dutch in the Atlantic Slave Trade, 1660-1815* (Cambridge: Cambridge University Press, 1990), 10.
- ²⁰ Postma, *Dutch in the Atlantic Slave Trade*, 11.
- ²¹ Postma, *Dutch in the Atlantic Slave Trade*, 21.
- ²² Marx, *Pirates and Privateers*, 110.
- ²³ Marx, *Pirates and Privateers*, 101.
- ²⁴ Helen Miller Bailey and Abraham P. Nasatir, *Latin America: The Development of its Civilization* (Englewood Cliffs, NJ: Prentice Hall, 1973), 241. Piet Heyn's father had also been a galley slave.
- ²⁵ Esther Singleton, *Dutch New York* (New York: Benjamin Blom, 1968), 47.
- ²⁶ Schama, *Embarrassment of Riches*, 124.
- ²⁷ Wilson, *Dutch Republic*, 18.
- ²⁸ Schama, *Embarrassment of Riches*, 265.
- ²⁹ Boxer, *Dutch Seaborne Empire*, 96.
- ³⁰ Keyes, *Mirror of Empire*, 134.
- ³¹ Schama, *Embarrassment of Riches*, 218.
- ³² Schama, *Embarrassment of Riches*, 254.
- ³³ Boxer, *Dutch Seaborne Empire*, 80.
- ³⁴ Braudel, *Perspective of the World*, 197.
- ³⁵ Boxer, *Dutch Seaborne Empire*, 102.

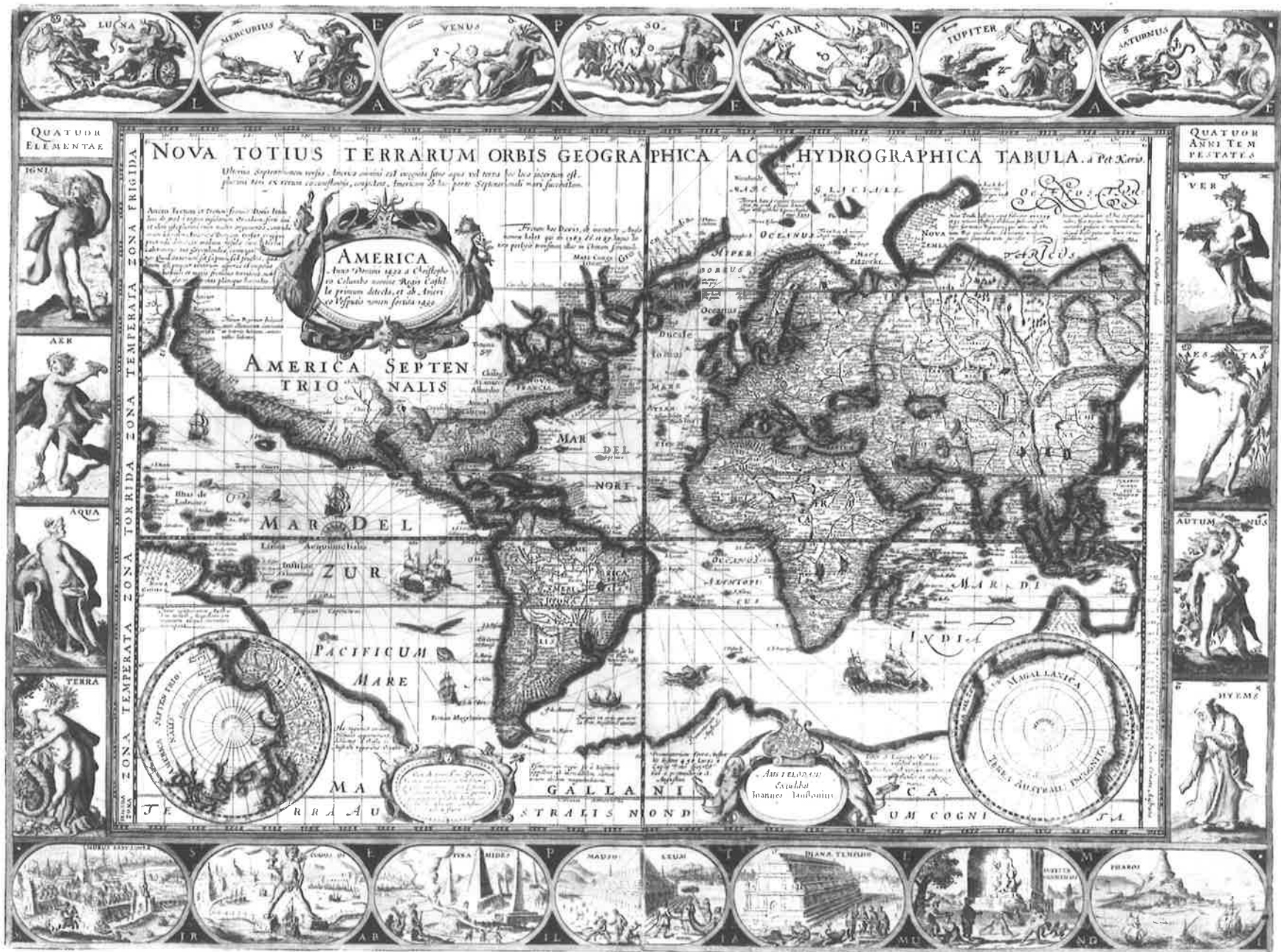


Figure 1

Pieter van den Keere, *Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula* (Amsterdam, 1608/36). 40cm x 53cm. Osher Collection, Osher Map Library.



Figure 2

Northwest quadrant of Pieter van den Keere, *Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula* (Amsterdam, 1608/36). Osher Collection, Osher Map Library.

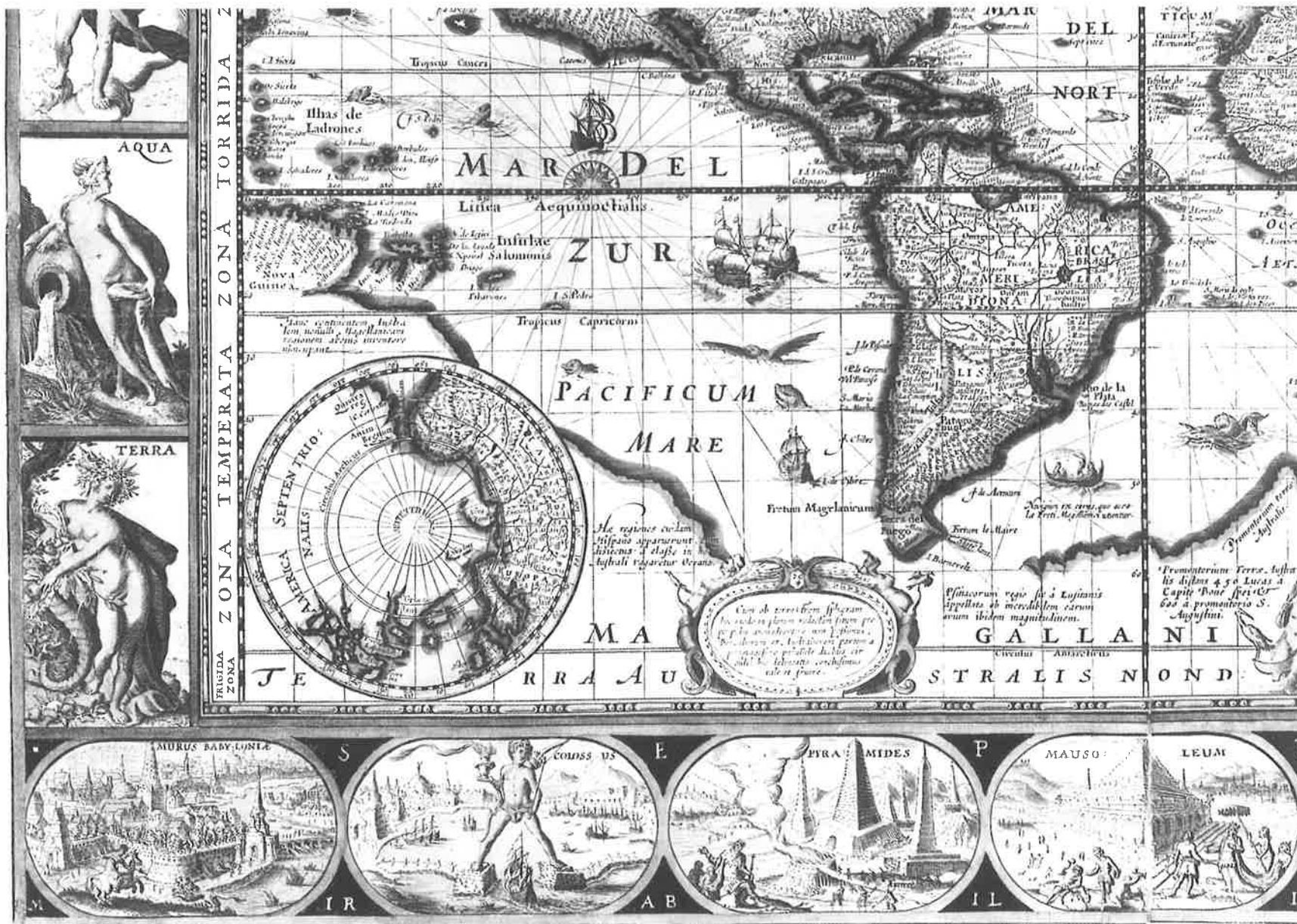


Figure 4

Southwest quadrant of Pieter van den Keere, *Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula* (Amsterdam, 1608/36). Osher Collection, Osher Map Library.

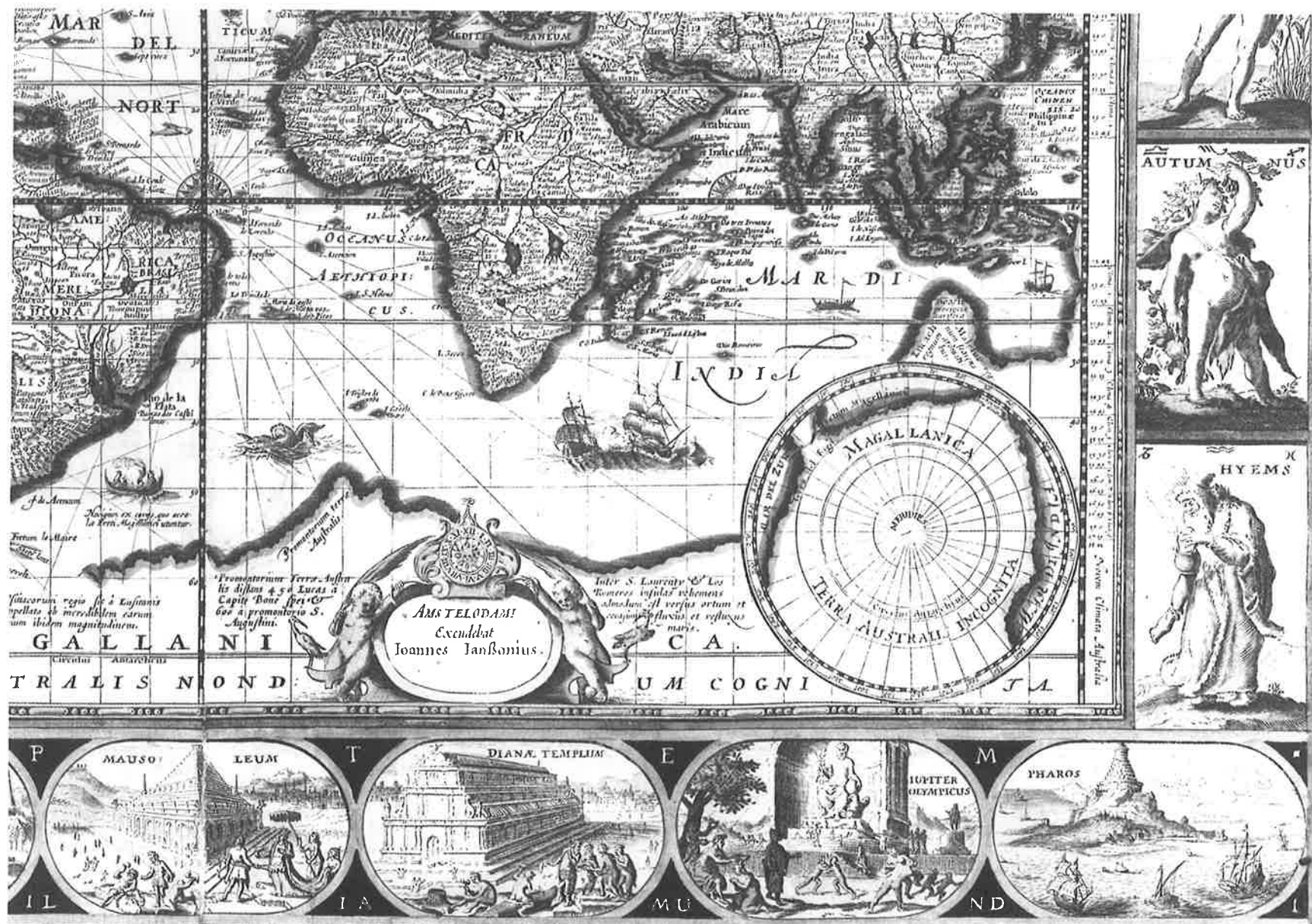


Figure 5

Southeast quadrant of Pieter van den Keere, *Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula* (Amsterdam, 1608/36). Osher Collection, Osher Map Library.

TYPVS COSMOGRAPHICVS VNIVERSALIS.

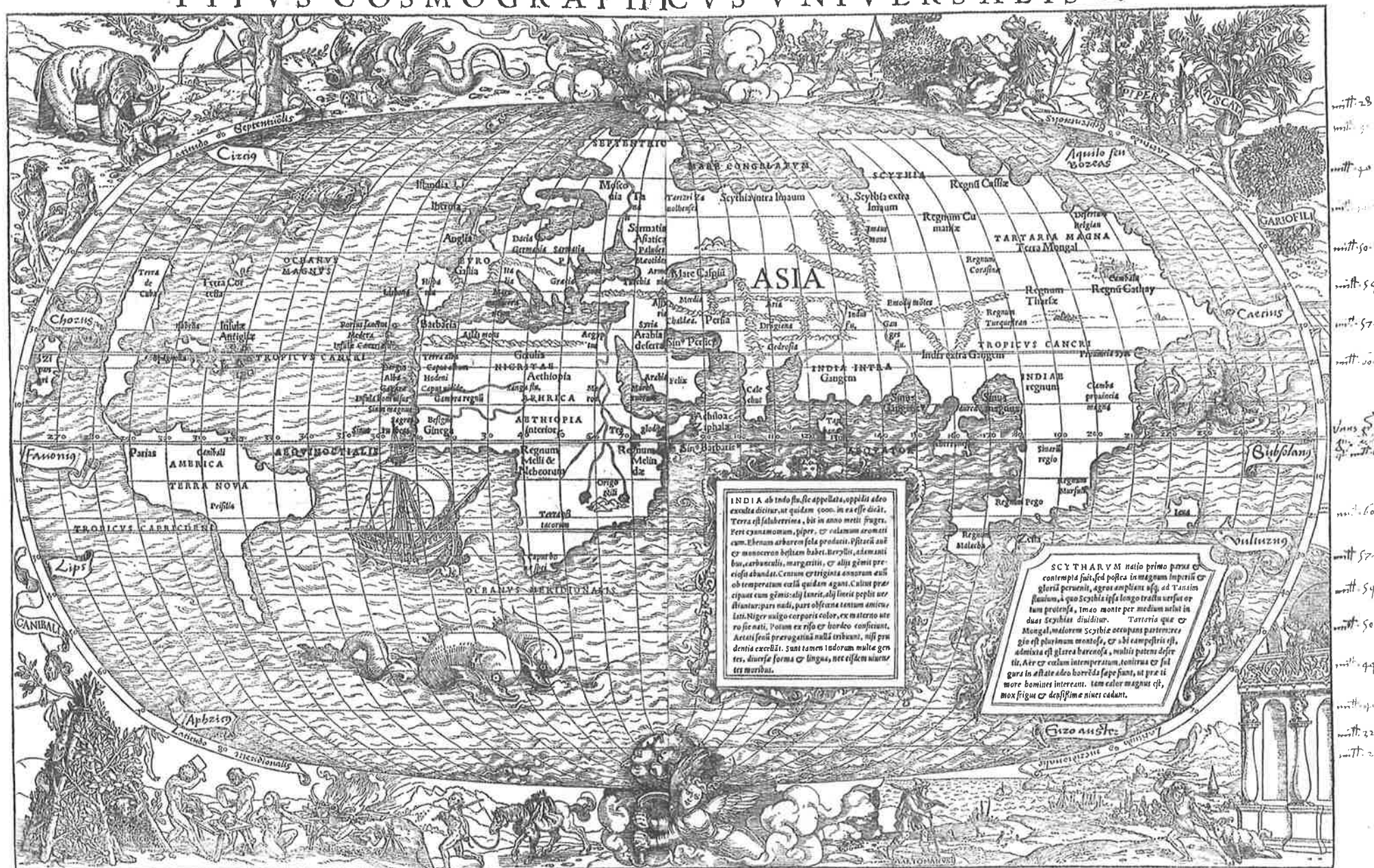


Figure 6
Sebastian Münster, *Typus Cosmographicus Universalis*, from Johann Huttich and Simon Grynaeus, *Novus Orbis Regionum* (Basle, 1532, reprinted 1555). 35.5cm x 54.5cm. The illustrations have been attributed to Hans Holbein the Younger. Oval map projections very similar to this one were commonly used for world maps throughout the sixteenth century. Osher Collection, Osher Map Library.



7a.



7b.

Figure 7

Two medieval schematic conceptions of the world: (a) Isidore of Seville, *Etymologiarum sive originum libri XX* (Augsburg: Günther Zainer, 1472), 6.5cm diameter; (b) Macrobius, *In somnium Scipionis expositio* (Lyons, 1550), 8.0cm x 8.0cm. The tripartite, or "T-O," map (a) was constructed by Isidore in the early seventh century from popular Roman writings. Macrobius, in the early fifth century, based his zonal mappamundi (b) on the ancient Greek division of the earth into torrid, temperate, and frigid zones (klimata). (a) By permission of The Newberry Library, Chicago. (b) Osher Collection, Osher Map Library.

Generalized eustatic sea-level rise curve. After T. J. van Andel and N. Lianos, "High-Resolution Seismic Reflection Profiles for the Reconstruction of Postglacial Transgressive Shorelines: An Example from Greece," *Quaternary Research* 22 (1984): 31-44, esp. 41.



A detailed map of the island of Sicily, showing various towns and regions. The map is oriented with North at the top. Key locations labeled include S. Maria, Landim, P. Morcan, S. Andania, Stin, Lala, G, Troia Vec, Marte laza, P. Keelin, Esnello, Marnio, and Petra. The map also shows the surrounding sea and some smaller islands.

10a.

tails of the island of Lesbos (also known as Mytilene, Metelin, or Mitilene) from maps in four early atlases: (a) [Metalin], in Benedetto Bordone, *Isolario* (Venice, 1537), fol. 58v; (b) [Asia Minor], in Jan Honter, *dimentorum Cosmographicorum* (Zurich, 1549); (c) Jacopo Gastaldi, *Græciae universae secundum hodiernum situm neoterica descriptio*, in Abraham Ortelius, *Theatrum Orbis Terrarum* (Antwerp, 1575); (d) Græcia, in Willem Blaeuw, *Historia Mundi* or *Mercators Atlas* (London: T. Cotes, 1635), 795. All details are reproduced at their original size and in their original orientation. Smith Collection, Osher Map Library.

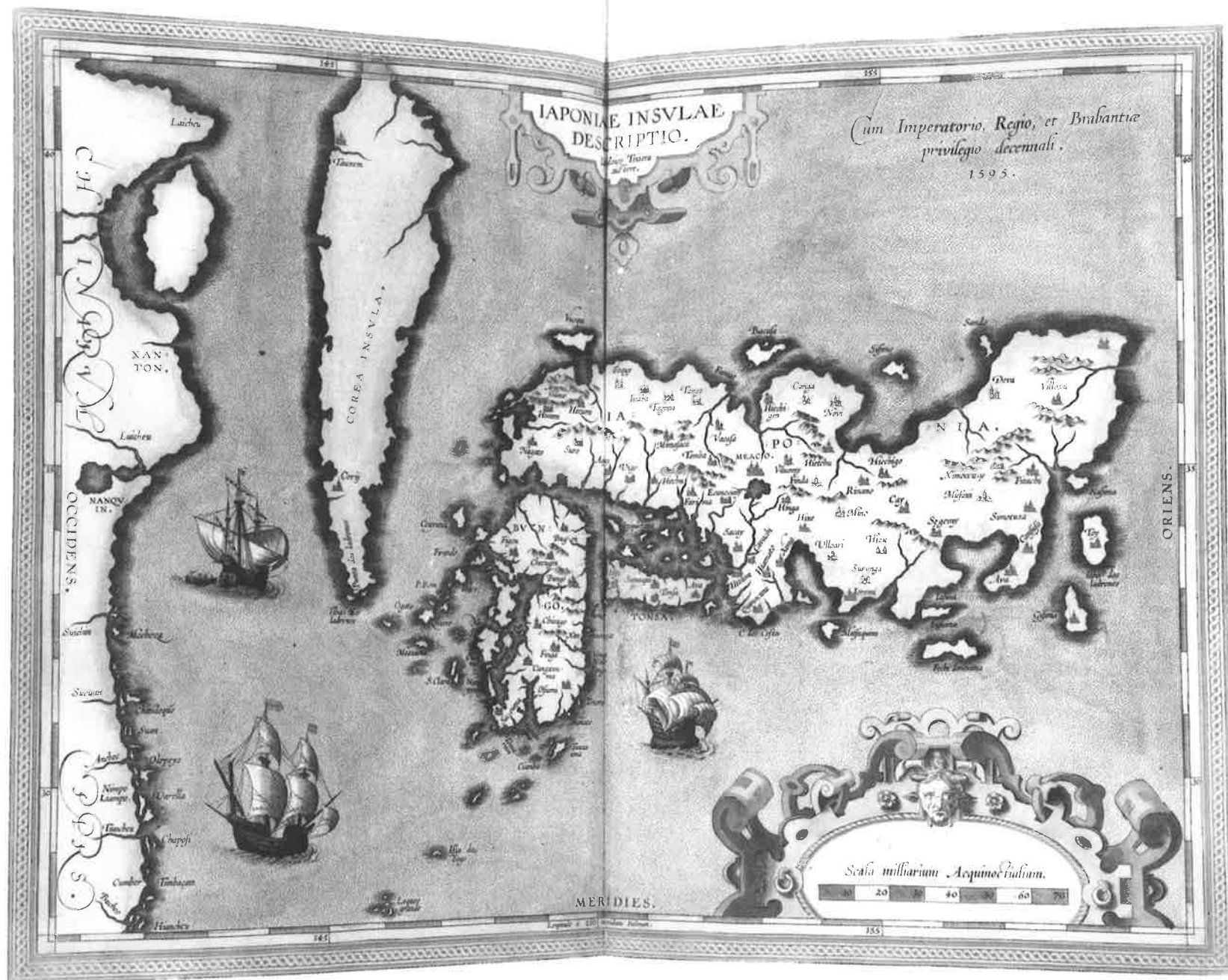
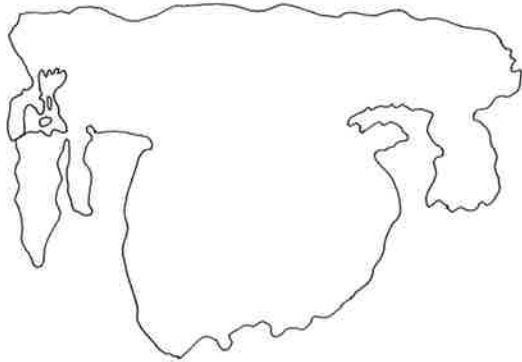


Figure 11

Luis Teixeira, *Iaponiae Insulae Descriptio*. Ludoico Teisra auctore, in Abraham Ortelius, *Theatrum Orbis Terrarum* (Antwerp, 1595). 35.5cm x 48cm. Osher Collection, Osher Map Library.



12a.



12b.



Figure 12

Traditional Korean world maps: (a) outline of the Kangnido maps, from the early fifteenth century; (b) outline of the maps, derived from the Kangnido maps melded with Korean-Japanese Buddhist traditions; (c) a late example of a *Ch'ŏnhado* from an anonymous Korean atlas of the world, ca. 1880, 28.5cm diameter. Note that a graticule of lines of latitude and longitude has been superimposed on (c) to make the established configuration of the world look more "modern" and "scientific." (a) and (b) redrawn from Gari Ledyard, "Cartography in Korea," in *Cartography in the Traditional East and Southeast Asian Societies*, edited by J. B. Harley and David Woodward, volume 2.2 of *The History of Cartography* (Chicago: University of Chicago Press, 1994), 235-345, esp. 265; (c) Osher Collection, Osher Map Library.

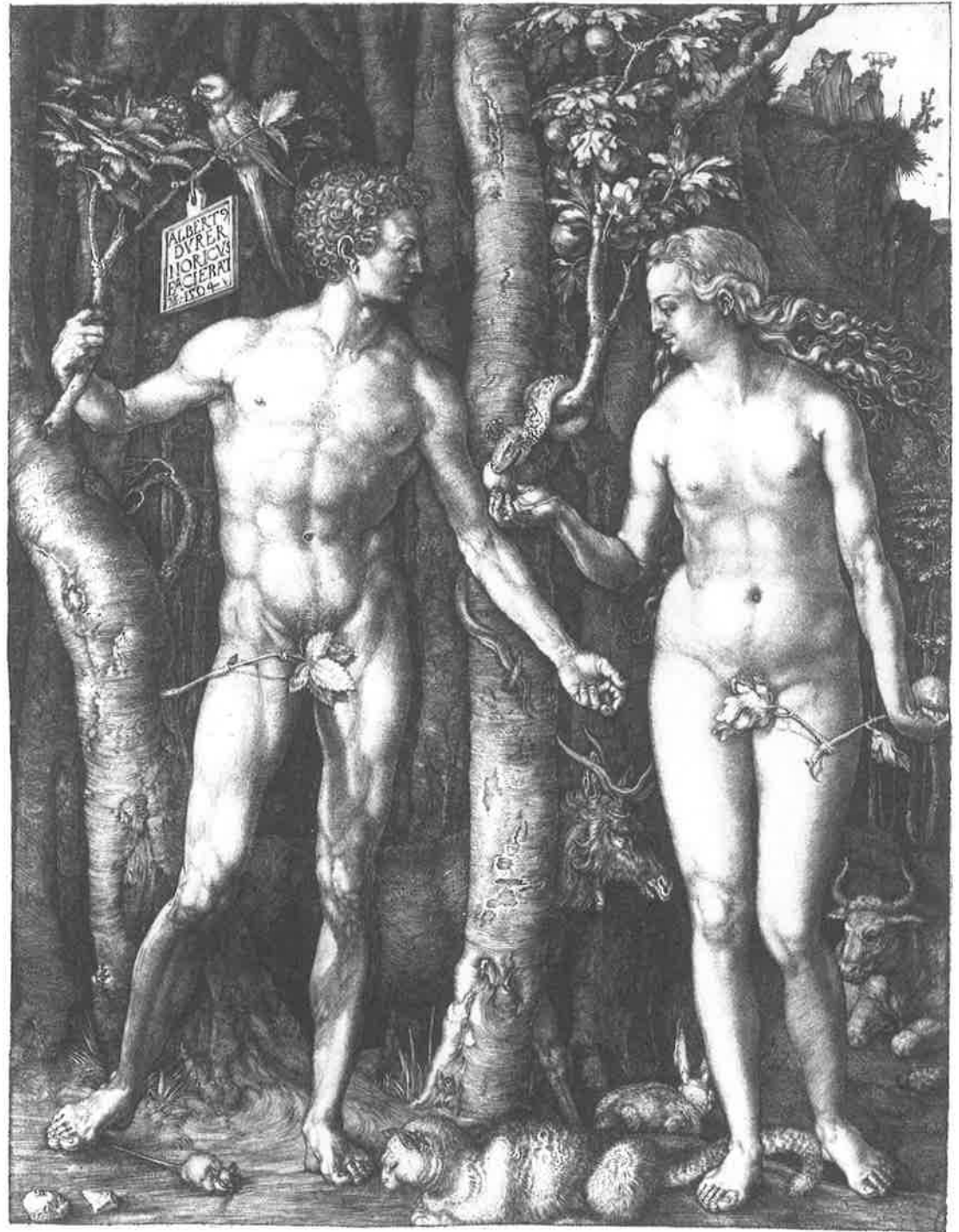


Figure 14

Albrecht Dürer, *The Fall of Man* (1504). 25cm x 19cm. Courtesy, Museum of Fine Arts, Boston. Centennial Gift of Landon T. Clay.



Figure 15

Theodor de Bry (after John White), "Regulorum aut Principum in Virginia typus," in Theodor de Bry, *Admiranda Narratio fida Tamen . . . Virginiae . . . Americae* (Frankfurt-am-Main, 1590), part 1, no. 3. 15cm x 21.5cm. Smith Collection, Osher Map Library.

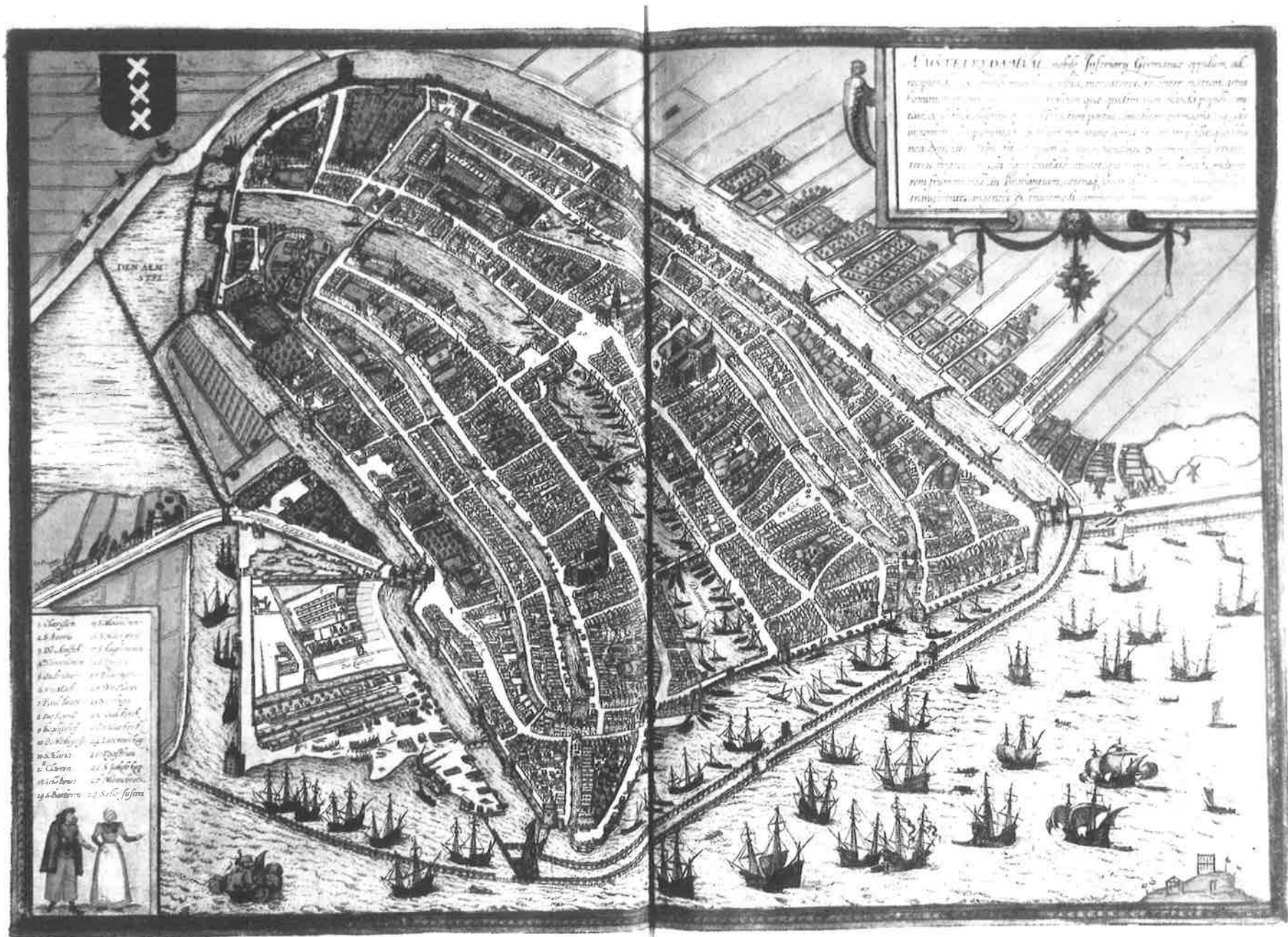


Figure 16

Amstelredamm, nobile Inferioris Germaniae oppidum, after Cornelis Anthonisz., from Georg Braun and Frans Hogenberg, *Civitates Orbis Terrarum*, vol. 1 (Cologne: Theodor Graminaeus, 1572), no. 20. 34cm x 48.5cm. By permission of The Newberry Library, Chicago.



Figure 17

Johannes Vermeer, *View of Delft* (1660). By permission of the Mauritshuis, The Hague.



Figure 18

Johannes Vermeer, *The Art of Painting*. By permission of the Kunsthistorisches Museum, Vienna.

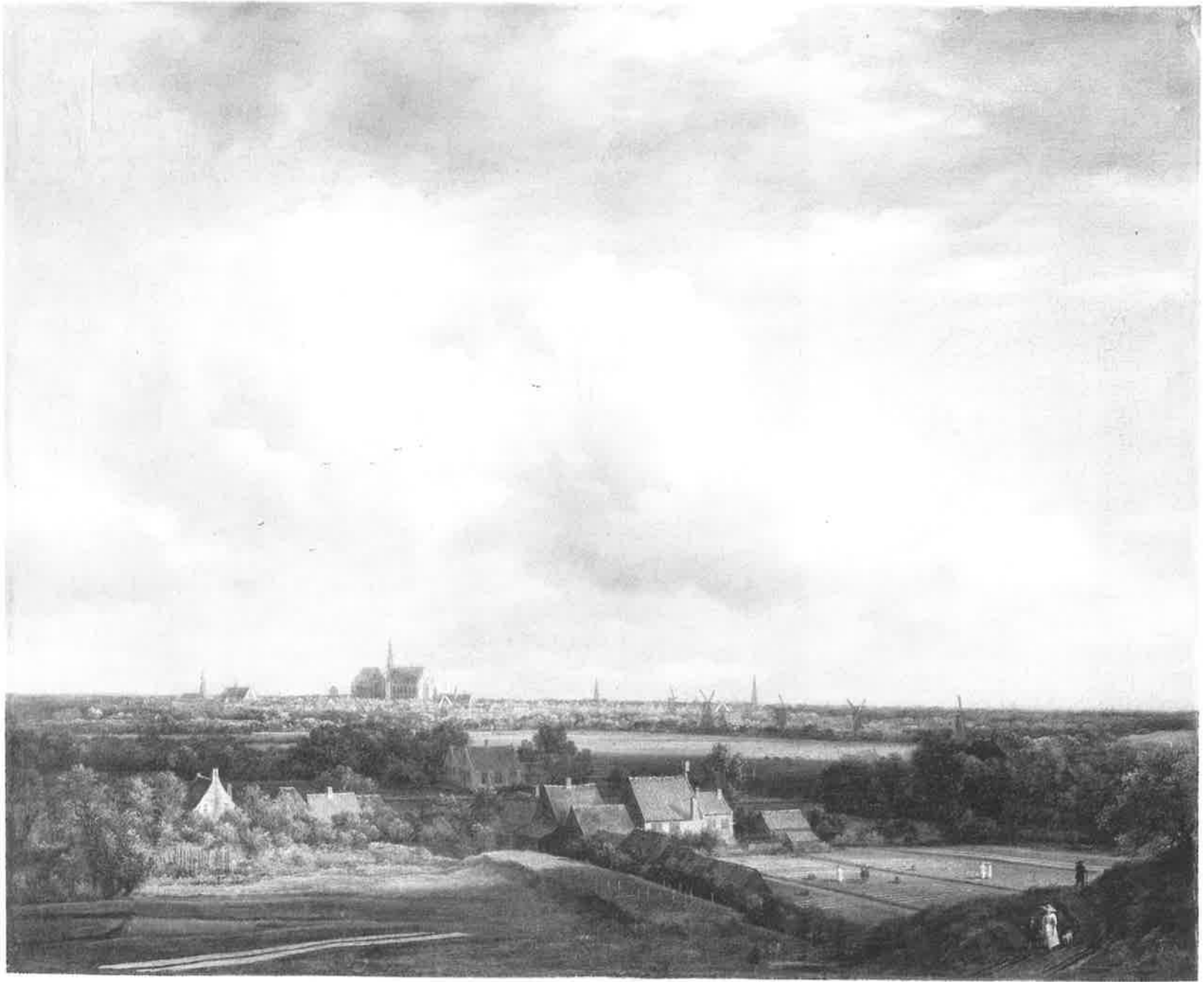


Figure 19

Jacob van Ruisdael, *View of Haarlem*. By permission of the Gemäldegalerie, Staatliche Museen Preussischer Kulturbesitz, Berlin.

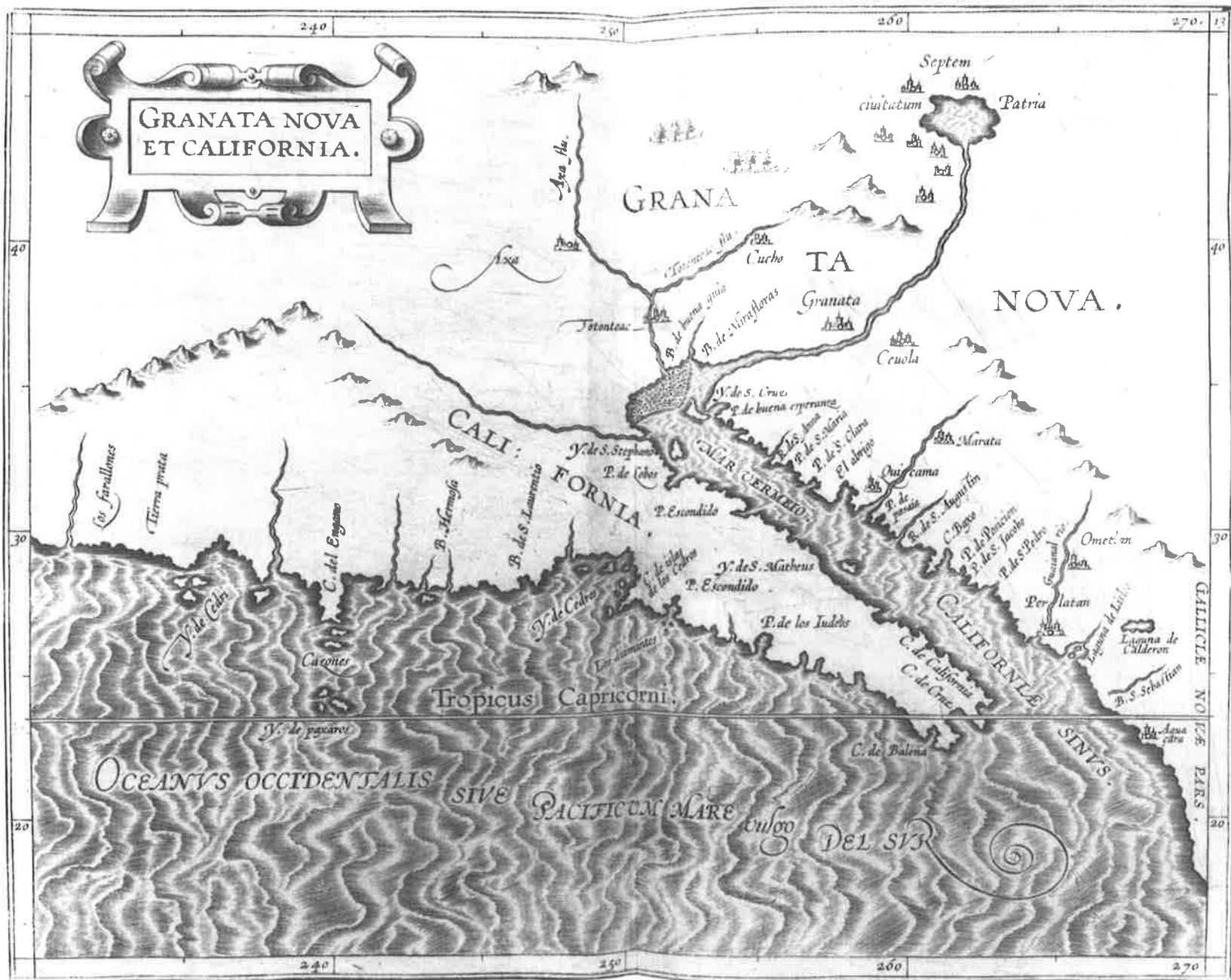


Figure 21

Granata Nova et California, in Cornelis van Wytfliet, *Descriptionis Ptolemaicae Augmentum* (Louvain, 1597). 23cm x 29cm. This image is of a later reprint, in *Histoire universelle des Indes Occidentales et Orientales* (Douai, 1611). Osher Collection, Osher Map Library.

Chapter Three

The Meaning of Maps to Geologists: An Example from Lesvos, Greece

Irwin D. Novak



17

A map is one of the three main items in the geologist's bag of tools. Along with the compass and the rock hammer, a map is both a means for locating oneself in the field and the possible end-product of a field investigation.

For many geologists, maps such as Pieter van den Keere's *Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula* provide inspiration for further exploration and investigation. Geologists often search through libraries, ancient texts, and map collections in order to determine whether or not someone has already been in their field area. We want to know what, if anything, did they find there, and how did they depict it? Very often early explorers prepared a topographic map or an outline (planimetric) map showing natural and cultural features. Very often someone has, indeed, been there before us.

For me this journey and fascination with maps began seriously as graduate student when I viewed one of the few extant copies of the William Smith's 1815 geological map, entitled *Delineation of the Strata of England and Wales*, in Cornell University's rare map collection.¹ The very frequent use of United States Geological Survey and other national survey topographic, bathymetric and geologic maps extended that journey and it continues to this day.

From a purely aesthetic viewpoint, these miniature stylized representations of the real world have had, and continue to have, a very powerful effect on me. From a practical perspective, maps provide a basic element in geologic studies, and have proven to be for me, as a geologist, both a motivating force for adventure and a tool in support of research.

These days, when I look at a map of the world (any map of the world), I

examine it to see if it includes the island of Lesvos in Greece, the ancient home of the poets Sappho and Alkaios in the sixth century BC, and Greece's third largest island (see Figure 10). This is exactly what I did when presented with the opportunity to respond to some aspect of the Van den Keere world map of 1608. For me the response was an emotional as well as an academic one.

What Do Maps Show?

Planimetric maps are two-dimensional depictions that aim to portray a scaled relationship amongst elements of the land, rivers, promontories and bays, and of the general relationship between land and sea. Sometimes methods such as contour lines or hachures are added in order to depict elevation. Today relief is normally portrayed on topographic maps. The topographic map shows, by the conventional use of contour lines (lines connecting points of equal elevation), the height of the land above a chosen datum, usually mean sea level or mean high water. Through time, the boundary between land and sea can change.

What Changes the Configuration of the Coast?

Geomorphologists, specialists in landform and coastal landform development, want to know what particular processes have contributed to shaping the landscape. In search of the answer to that question, they chase after depictions of their study region. Such is the case with the geologic history of the coastal configuration of Lesvos.

Tectonic and Eustatic Changes of Sea Level

Geologists want to know if the image of the landform as depicted on a map has changed because of cartographic advances or by virtue of some major geologic event. The specific pattern of our shores is primarily a consequence of tectonic influences, movement of the land, or eustatic factors, changes of sea level attributable to additions or subtractions of water (or even to the expansion or contraction of seawater resulting from heating and cooling).

Both tectonic and eustatic changes can take place at the same time, vertically in the same direction at the same rate, or at different rates, or vertically in the opposite direction, also at variable rates. At work is a complex set of factors that may be difficult to attribute to any one causative element. The end result is that at various times in the past the coastal sea may appear to have been stable, rising, or falling when, in fact, a great deal of earth or sea movement was taking place.

Long term climate change can influence the level of the sea with attendant transgression or regression of the margin of the ocean. Warming conditions may be associated with melting ice caps and sea-level rise, while cooling world climates may cause glaciers to expand and sea levels to lower. For the last 20,000 years, sea level appears to be on the rise in most places as a consequence of melting glacial ice (Figure 9). Sea-level change is a recurring theme throughout Earth's history.²

For example, land movements associated with earthquakes are capable of lifting up, or causing to subside, substantial portions of the Earth's crust. This activity can result in additions or losses to the overall area of a region depending upon whether the sea advances or retreats as a consequence of the upward or downward vertical movements. A very well documented example comprises the changes brought about in the configuration of the coast Alaska as a result of the Good Friday earthquake of March 1964.

Volcanic activity is capable of adding new land to existing terrain as lava flows cool at the edge of the sea. Eruptions of Kilauea volcano have added

considerable new land to the big island of Hawai'i. Volcanic activity has also produced new land where none ever existed before. This is the case with the geologically new island of Surtsey, south of Iceland. Map revisions are required as a consequence of these and other geologic phenomena.

Sediment Accumulation as a Cause of Coastal Change

In addition to changes brought about by changing levels of either land or sea, the configuration of the coast can change as a consequence of sediments deposited at the shore by rivers, erosion of cliffs, and modification by waves. Since, as Figure 9 shows, the rate of sea-level rise decreased in the past 7,500 years, major coastal changes in this period of time are more likely to be attributable to sedimentary processes, as well as lava flows and localized vertical tectonic movement.

Research on regional vertical movements in the Aegean suggest that the rate of subsidence in the southern Aegean is currently between 1m (39") and 2m (79") per 1,000 years; the west coast of Greece is sinking at 1m (39") per 1,000 years; and the Adriatic coast is subsiding at 1.3m (51") per 1,000 years.³ Lesvos does not appear to have changed recently as a result of lava flows, but earthquake-induced vertical movement has occurred in historical time. Estimates for sea-level change based on archeological considerations on Lesvos amount to about a 1m-2m (39"-79") rise for the past 1,500 to 2,000 years.⁴ For this period of time, sedimentary processes and earthquake-induced movement, accompanied by post-glacial sea-level rise, have all modified the shape of the coast.

The magnitude of mappable change is influenced by the slope of the land as it descends into the sea. For the same vertical change of sea level, a small lateral change would occur for very steep land gradients and a larger change would result on very gentle gradients. A vertical change of as little as one meter could have significant impact particularly when combined with the modifying effects of storms-waves and currents raised to new levels. On Lesvos this type of modification is especially significant where rivers deposit

their sediments into the sea and in the two prominent gulfs which have very shallow entrances. Specific changes have occurred in Mytilene harbor (the northern Old Port) where the Venetian-built breakwater is now completely underwater.

Lesvos as it Appears on the Van den Keere and Other Maps

As you can see—perhaps barely—Lesvos does appear on Van den Keere's map (see Figure 3). But it *does* appear. And, as a few selections from the Osher Map Library's Smith Collection show, Lesvos has been depicted differently in different times on other early maps and on maps contemporary with Van den Keere's (Figure 10). When viewing Figure 10, remember that maps were often oriented with north on the right, not at the top as is currently the convention. This in itself may render the island configuration comparisons "different."

Geologists view historical maps with a natural skepticism born out of the longer time frame by which they view the world around them. For the historian a map may reflect the politics or cartographic styles at the time a map is drawn. In addition to the historical and cartographic perspective, geologic processes may contribute true changes to each redrawing of a mapped area. Geologists try to discern which factor has had a dominant influence.

Notes

¹ William Smith, *A Delineation of the Strata of England and Wales, with Part of Scotland; Exhibiting the Collieries and Mines, the Marshes and Fenlands Originally Overflowed by the Sea, and the Varieties of Soil According to the Variations in the Substrata* (London: John Cary, 1815).

² Tjeerd H. van Andel and Curtis Neil Runnels, *Beyond the Acropolis: A Rural Greek Past* (Stanford, CA: Stanford University Press, 1987).

³ T. J. van Andel and J. C. Shackleton, "Late Paleolithic and Mesolithic Coastlines of Greece and the Aegean," *Journal of Field Archeology* 9 (1982): 445-454, esp. 447.

⁴ Hector Williams and Lillian Acheilara, personal communications.





Chapter Four

“Until Something More Certain Emerges”: Van den Keere’s Asia

Craig Dietrich

I

In its presentation of Asia, Pieter van den Keere’s *Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula* presents something of a cartographic irony. Asia, or “the Indies,” had long beckoned because of its vast extent, its wealth, its unsaved souls, its mystery. An enduring cliché of history holds that Christopher Columbus embodied the European impulse to find shorter routes to the East. The discovery of Catayo (Cathay) and Cipangu (Japan) constituted at least a part of the great discoverer’s complex motivation. He carried letters from Ferdinand and Isabella to the Great Khan.¹ By Van den Keere’s time the irony is that, while the map of Asia was becoming better (albeit still imperfectly) informed, Asia’s dimensions and its allure were downgraded relative to the whole globe. This diminution was associated with the dramatic emergence of the New World.

Of course, to speak of Van den Keere is only to use him as a representative of early seventeenth-century Dutch cartography. He borrowed his information, design, and even decoration wholesale from Willem Blaeu’s world map of 1606.² We should also keep in mind that, with its small scale and decorative enhancements, this map was not intended as a working tool for mariners. It is rather a display piece, suitable for hanging.³ It presents a broad, but reasonably detailed, expression of what was in the world and of how the world was configured.

II

Prior to the age of discovery, when the cartographic image of the world was based on Ptolemy, Asia was one of three “continents,” or connected land masses, and stretched an immense distance to the east. Its features included

much speculation. Two centuries of European discovery had provided much better information,⁴ but much misinformation persisted regarding regions not yet penetrated. The result for Van den Keere is a map that on the surface gives an impression of homogeneous data, but which actually embodies great differences in sources and accuracy.

The Southern Littoral

Southern coastal and maritime Asia was the region best known to Europeans. Goa, Calicut, Malacca, Macao, Manila, and other European outposts were well established by the time Van den Keere’s map and its predecessors were made. Consequently Van den Keere’s Indian coastline eastward around continental southeast Asia and up the coast of China as far as Canton is fairly good (see Figure 5). Insular Southeast Asia is dependably represented: Sumatra, Java, and the islands to the east, including Timor, Borneo, and Celebes, are present in roughly correct relationships. A prominent error persists in the form of “Nova Guinea” being attached to “Magellanica,” the supposed southern continent. Further north, the Philippines and Taiwan occupy their proper places.

The data for this section of the map were a product of this European presence. Many maps and charts of the southern littoral circulated in Europe. Mercator based this portion of his world map of 1569, for example, on a Portuguese manuscript map. Ortelius, friend and protégé of Mercator, is known to have learned about the geography of Asia from correspondents in Lisbon.⁵

Important points in this region, such as the city of Canton, are placed at correct latitudes. European cartographers had relatively accurate observations taken by seafarers with astrolabes. But longitude was another matter. Until

the eighteenth-century invention of accurate chronometers, longitudinal measurement remained elusive. (Just at this time, Galileo had discovered the planetary “clock” inherent in the revolutions of Jupiter’s moons, but the need to use telescopes to view the moons presented difficulties, especially aboard ship.)⁶ Reflecting this technological weakness, Van den Keere’s map displaces the entire southern and southeastern Asian littoral more than 10° too far to the east. Calicut, for example, is given as approximately 89° east of London (modern Kozhikode lies at 75°45' east longitude); Canton appears about 131° east of London (actually about 113°20').

The Northern Littoral

The China coast, Korea, and other parts of maritime northeast Asia, except for Japan, had been much less visited by Europeans. The Portuguese first set foot on Japanese soil in 1542,⁷ and by the early seventeenth century Japan had been the site of Western evangelism, trade, and even political consulting, the Englishman Will Adams having served as an advisor to the first Tokugawa Shogun. Four Japanese nobles had visited parts of Europe under Jesuit sponsorship.⁸

Van den Keere’s presentation of the northeastern Asian littoral reflects this uneven knowledge (see Figure 3). As regards Japan, European cartography had by this time advanced from Marco Polo’s claim that Cipangu was a single island to show geographical features derived from both Japanese and Portuguese sources. The “Ortelius/Teixeira” map, which was first printed in 1595 and which was the dominant model for maps of Japan for half a century, depicted three islands (Honshu, Kyushu, and Shikoku), omitting Hokkaido (Figure 11).⁹ Their relative sizes and positions are basically right, and specific cities are correctly identified. Korea also appears in the Ortelius/Teixeira type, but as a long, thin island. It is just this Ortelius/Teixeira configuration that Van den Keere incorporated into his map.

As for the rest of the region, the central and northern coasts of China and the coasts, peninsulas, and islands north of Korea are either inaccurate or

missing entirely. The China coast lacks such prominent features as the Shandong and Liaodong peninsulas. Sakhalin Island and the Kamchatka peninsula are completely missing, as are Hokkaido and the Kurils.

At the most northeasterly point lay the “Strait of Anian,” a conjectural passage between Asia and America that had first appeared in an Italian map of 1565, corresponding by chance with the Bering Strait (see Figure 20).¹⁰ While, as noted previously, Van den Keere placed the southern coasts and islands of Asia too far to the east, his northeastern Asia does not extend far enough in that direction. The Bering Strait lies a good 20° east of Van den Keere’s Anian Strait. The Alaskan region of North America would have to recede correspondingly. Interestingly, a Japanese map of about 1575 does a much better job in capturing the general shape of northeastern Asia.¹¹

China Proper

Not unlike the northeast, China proper appears on Van den Keere’s map as a mixture of correct information and speculation (see Figure 3). The hydrography is utterly muddled. China, we know, is drained by three great east-west river systems, but they are not well defined by Van den Keere. He draws an improbable hydraulic pattern whereby a great central lake drains to the ocean through four rivers. It also connects to another large lake to the west through two rivers, and to a third lake in the north through a single river. On the other hand, many names reflect actual administrative units and are appropriately situated: “Cantam” province and city (Canton); “Honao” province (Henan); “Nanqun” province (Nanjing); “Quicheu” province (Guizhou); and, “Quanci” province (Guangxi). “Quinzay” is Marco Polo’s Kinsai, or modern Hangzhou, but Van den Keere misplaces it badly.

Where did all this information come from? It seems that Portuguese map makers played a part here as well. Lois Jorge de Barbuda was the maker of “the first separate map of China to appear in Europe,” which was first published in the 1584 edition of Abraham Ortelius’s *Theatrum Orbis Terrarum*.¹² A careful comparison of this map with Van den Keere’s makes it clear that the latter incorporated the Barbuda type wholesale.





Beyond the Great Wall

North of China Proper lies a region separated by the Great Wall. The wall was an important defensive structure in Ming times (1368-1644), and that regime invested heavily in this anti-Mongol bulwark. Van den Keere's source for this frontier region was certainly the Barbuda map just mentioned. North of the wall and westward into inner Asia we find Marco Polo's three-centuries-old legacy, filtered through later cartographers (see Figure 3). One can identify many names that match those found in Polo's *Travels*, but not all, and not all of Marco Polo's place names are included in Van den Keere's map. Marco Polo's information seems rather scrambled, resulting in a quite inaccurate account of these regions. "Cathay" was a name for northern China of the Yellow River region. But Van den Keere displaces it north of the wall, thereby shifting "Cambula" (Polo's Kanbalu, or Beijing) and associated places away from their proper locations.

In the far north appear places named by Marco Polo, such as the plain of Bargu, the kingdom of Erginul, the province of Tenduk, and the city of Changanor. But a careful effort to match Marco Polo's text with the map reveals much hopeless guessing and confusion. Van den Keere, to his credit, most appropriately attaches a note nearby:

This district of northern Asia is very uncertain; we, however, imitating others, have drawn it lest those less knowledgeable might think some thing was missing here, until something more certain emerges.

On the other hand, there is a surprisingly good delineation of the northern Russian coast near Novaya Zemlya. Attempts to reach Asia along a northern route in the 1550s led to this knowledge. Sir Hugh Willoughby, who in 1553 led three ships to seek a northeast passage to Cathay and India and who reached the coast of Lapland and there died of cold and starvation, is noted on the map. Novaya Zemlya, appropriately placed but represented only by one side and not as an island, is given the following notation:

Novaya Zemlya began propitiously to be traversed in 1594 and 1595, in the name of the most illustrious orders of the federated regions of Lower Germany, by which a route to the court of China was sought; but, in their opinion, the result has not yet matched their desires.

III

Just as the outlines of Asia were clarifying and Europeans were lifting the veil on those fabled parts, Asia ironically was being diminished within a new world conception. Paralleling the fact that as a result of the Columbian discoveries the New World blocked easy access to Asia, so cartographically the New World overshadowed the East as well. Asia (although by no means inconsequential) lost some of its allure.

The symmetry of Van den Keere's map is striking. Arrayed on either side of a central prime meridian lie the Old World and the New. Balance is reinforced by the symbolic border decorations drawn from the classical world: the seven "planets" above, the seven wonders of the (ancient) world below, four seasons to the right, and four elements to the left.

Within this balance and order, Asia, which is distinguished from Europe and Africa by color tinting, no longer counts as one of just three continents, as it had for Ptolemy. It has drifted to the edge and is truncated so that the mid-Atlantic meridian can mark the map's midpoint. To accommodate this scheme, Japan's main island must be partly carried over to the western edge, and similarly for extreme northeastern Asia.

Within this symmetry the western hemisphere, particularly to the north, has acquired an extravagant allure. As was common in maps of this period, Van den Keere's greatly exaggerated North America: the entire west coast should be shifted as much as 60° to the east at some latitudes, and at least 10° to 20° in others. Also North America is the one continent decorated with a cartouche, complete with two seminude native females (to be sure, partly for the purpose of filling up the blank interior).

As is well known, the freshness of America captured the seventeenth-century European imagination, inspiring Shakespeare's *The Tempest* as well as Sir Thomas More's *Utopia*. Contemplating Van den Keere's map, whose general organization goes back to Ortelius, one must concur with John Gillies:

Its symmetry notwithstanding, the Ortelian map draws the viewer's gaze west rather than east. Why? Because the New World 'beckons', even in this apparently unpoeticised form . . . Donne imagines his hands roving over the continent of his mistress's body:

License my roving hands, and let them go,
Before, behind, between, above, below.
O my America, my new-found-land.¹³

IV

Another perspective on this representation is provided by comparing contemporary European and East Asian cartography. Recent scholarship in the area of Chinese, Japanese, and Korean world maps reveals how comparatively innovative and dynamic the European practice was.

In the fourteenth and fifteenth centuries a world map circulated in China and Korea, based on East Asian and Arabic information. The oldest survival of this tradition is the Korean: "Honil kangni yŏktae kukto chi to" (Map of integrated lands and regions of historical countries and capitals), known among scholars as the *Kangnido* and which was first drawn in 1402. The New World, of course, was lacking, but East and South Asia, Africa, and the Mediterranean area can be clearly identified, despite considerable distortion.¹⁴ The surviving *Kangnido* maps, all in Japan, are startling, when one considers their time. Yet what sets them off from Van den Keere's tradition is the direction of development. The *Kangnido* did not generate a more exact and informed world cartography. The rulers who patronized these works had little practical use for such documents. Eventually the *Kangnido* maps joined with a Korean-

Japanese Buddhist tradition to constitute the elements of the popular *Ch'ŏnhado* (map of all under heaven) in which the outlines of Eurasia-Africa were further simplified and distorted (Figure 12).¹⁵

Equally interesting is the fate of the European cartographic tradition introduced into East Asia in Van den Keere's time. As the Portuguese and others went east, beginning in the early sixteenth century, they introduced Western world maps. Through the mid-seventeenth century, the most influential were the planispheres drawn by the Jesuit Matteo Ricci and propagated originally in China. Because of his broad Jesuit training, Ricci was able to draw maps based on Ortelius, Mercator, and Plancius. This world picture followed the Ortelian world map—"Typus Orbis Terrarum"—published in the first edition (1570) of the *Theatrum Orbis Terrarum*, except that Ricci placed the prime meridian in the Pacific, thereby removing China from the edge to near the center (Figure 13).¹⁶

In addition to its several editions in China, the Ricci map also made its way to Japan, where Jesuits were also active. Of the various Western world maps, Ricci's seems to have been the most widely known, probably because of his use of Chinese writing for names and explanations. Many modern scholars have concluded that the introduction of Ricci's maps to China and Japan deeply affected those lands and marked the convergence of a modern world science of cartography with older Eastern traditions.¹⁷

However, recent studies rather lead to the opposite conclusion: namely, that native cartographic traditions remained overwhelmingly dominant until the nineteenth century. In China, Ricci's planisphere was influential within limited circles. But the vast majority of maps made in the Ming and Qing periods preserved the well-established traditional methods and conventions. They represented the empire or its regions, there being virtually no interest in the world as a whole. Even the extraordinary eighteenth-century Jesuit maps, commissioned by the Manchu emperors of the Qing Dynasty, failed to influence Chinese cartography.¹⁸



Japan was influenced more than China by Western cartography. In addition to Ricci's maps, especially one he produced in 1602, there were other sources, perhaps including even Van den Keere's map.¹⁹ From them, Japanese geographers produced many "nanban" maps of the world. However most took the form of large ornamental screens, indicating that, although the Japanese were aware of a wider world, they did not require exactitude. It was just at this time that the Tokugawa seclusion policy was implemented, removing any practical need for good maps of foreign places. Later, in the eighteenth century, Japanese cartography began to be influenced by "Dutch learning" via the restricted contacts between Dutch traders and Japanese at Nagasaki. Even so, the full impact of modern scientific cartography did not take place until the nineteenth century.²⁰ A similar attachment to traditional cartography is seen in Korea, which was even more seclusionist than either China or Japan.²¹

V

This detour through East Asia to examine Van den Keere's world map provides a vantage point from which to appreciate the dynamism of seventeenth-century Dutch world maps. Not only had great amounts of new information been accumulated, but also a new global symmetry, pairing old and new worlds, was created to contain these new facts. It may be true, as John Gillies says, that Van den Keere and his model Blaeu in fact added little to

the cartography of Ortelius and Mercator.²² But however much we may view them as an eddy, rather than part of a moving stream, the fact remains that the whole spirit of the map is one of anticipation: new discoveries are noted; things not yet known are indicated.

In contrast to the map makers of Asia, who encountered and then ignored European cartography, the Western geographers were eager to use information from alien sources. As Donald Lach points out,

For the common man the world was visibly becoming vaster and more complex. Debates about the northern routes to Cathay included a large public By the last generation of the sixteenth century it was no longer possible for even the semiliterate to believe in a flat earth or in Ptolemy's picture of the world.²³

Or, as Gillies argues

The Eurocentrism of an educated sixteenth-century European cannot be compared with the Sinocentrism of a sixteenth-century Chinese (prior, at least, to the advent of the Jesuits). One would be the result of preference, the other of necessity.²⁴

Of Blaeu and Van den Keere, but not of the East Asian map makers, the lines of Seneca, Englished in 1566, could well serve as a guiding tenet:

time shall in fine out breake
When Ocean wave shall open every Realme.
The wandring World at will shall open lye.²⁵

Notes

¹ See the discussion of Columbus's objectives in Lionel Cecil Jane, *Select Documents Illustrating the Four Voyages of Columbus*, Hakluyt Society 2s, 65 and 70 (London: Hakluyt Society, 1930-33; reprinted in one volume as *The Four Voyages of Columbus: A History in Eight Documents, Including Five by Christopher Columbus, in the Original Spanish, with English Translations* [New York: Dover, 1988]), xiii-cxxii.

² Rodney W. Shirley, *The Mapping of the World: Early Printed World Maps, 1472-1700*, 3d ed. (London: Holland Press, 1993), 283, discusses Van den Keere's world map and, 285, calls him "a skilled and versatile imitator."

³ See John Gillies, *Shakespeare and the Geography of Difference* (Cambridge: Cambridge University Press, 1994), 47, on the different uses of world maps and maritime maps.

⁴ See Donald F. Lach, *A Century of Wonder: The Scholarly Disciplines*, vol. 2.3 of *Asia in the Making of Europe* (Chicago: University of Chicago Press, 1977), 446-89.

⁵ See Lach, *Scholarly Disciplines*, 466ff.

⁶ Edward Luther Stevenson, *Willem Janszoon Blaeu, 1571-1638: A Sketch of his Life and Work, With an Especial Reference to his Large World Map of 1605* (New York: Hispanic Society of America, 1914), 24-25. A prize-winning popular account of the longitude problem may be found in Dava Sobol, *Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time* (New York: Walker & Co., 1995).

⁷ C. R. Boxer, *The Christian Century in Japan, 1549-1650* (Berkeley: University of California Press, 1967), 22ff.

⁸ Kazutaka Unno, "Cartography in Japan," in *Cartography in the Traditional East and Southeast Asian Societies*, edited by J. B. Harley and David Woodward, vol. 2.2 of *The History of Cartography* (Chicago: University of Chicago Press, 1994), 346-477, esp. 377.

⁹ Lutz Walter, "A Typology of Maps of Japan Printed in Europe (1595-1800)," in *Japan, A Cartographic Vision: European Printed Maps from the Early 16th to the 19th Century*, edited by Lutz Walter (Munich and New York: Prestel Verlag, 1994), 40-47, esp. 41.

¹⁰ Walter, "Typology of Maps," 15.

¹¹ Unno, "Cartography in Japan," 379.

¹² Theodore N. Foss, "A Western Interpretation of China: Jesuit Cartography," in *East Meets West: The Jesuits in China, 1582-1773*, edited by Charles E. Ronan and Bonnie B. C. Oh (Chicago: Loyola University Press, 1988), 209-51, esp. 211, quoting Lach, *Scholarly Disciplines*, 818.

¹³ Gillies, *Shakespeare*, 62.

¹⁴ Gari Ledyard, "Cartography in Korea," in *Cartography in the Traditional East and Southeast Asian Societies*, edited by J. B. Harley and David Woodward, vol. 2.2 of *The History of Cartography* (Chicago: University of Chicago Press, 1994), 235-345, esp. 244.

¹⁵ Ledyard, "Cartography in Korea," 254-67.

¹⁶ See Foss, "Western Interpretation"; also J. F. Baddeley, "Father Matteo Ricci's Chinese World-Maps," *Geographical Journal* 50 (1917): 254-70, and Helen Wallis, "Missionary Cartographers to China," *The Geographical Magazine* 47 (1975): 751-59.

¹⁷ Joseph Needham and Wang Ling, *Mathematics and the Sciences of the Heavens and the Earth*, vol. 3 of *Science and Civilisation in China* (Cambridge: Cambridge University Press, 1959), 587.

¹⁸ On these points, see Cordell D. K. Yee, "Traditional Chinese Cartography and the Myth of Westernization," in *Cartography in the Traditional East and Southeast Asian Societies*, edited by J. B. Harley and David Woodward, vol. 2.2 of *The History of Cartography* (Chicago: University of Chicago Press, 1994), 170-202.

¹⁹ Unno, "Cartography in Japan," 380.

²⁰ On these points, see Unno, "Cartography in Japan," 346-477.

²¹ Ledyard, "Cartography in Korea," 237.

²² Gillies, *Shakespeare*, 157.

²³ Lach, *Scholarly Disciplines*, 488.

²⁴ Gillies, *Shakespeare*, 51.

²⁵ Gillies, *Shakespeare*, 24.



Chapter Five

Art History and Cartography: Picture Making and Map Making in the Seventeenth-Century Netherlands

Donna M. Cassidy

Art historians have traditionally separated fine art from other types of artifacts and have examined these products as autonomous entities whose meanings are controlled by the artist and his/her intentions. More recently, however, scholars of the “new” art history have begun to analyze the visual arts in relation to other cultural artifacts and to focus on the meanings of images rather than on aesthetic worth. For these art historians, similar assumptions and values are encoded in varied texts throughout the culture, and meaning is constructed by the interchange between art representations and representations in these other texts.¹ Adopting such a strategy, we can look at both maps and paintings as products and producers of the same formal or stylistic conventions and approaches to organizing ideas, information, and the natural world. The intersection of these two visual forms was especially notable in the seventeenth-century Netherlands, and we can explore some of these connections by comparing Pieter van den Keere’s *Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula* (1608) and contemporary paintings. These images possess a similar visual language, cultural ways of seeing, and social and ideological functions in seventeenth-century Holland.

The Visual Language

Van den Keere’s *Nova Tabula* includes allegorical figures of the Four Seasons and Four Elements in the right and left borders. Adorned with decorative drapery, these idealized nudes stand, twist, spiral, and display attributes or signs of their emblematic status. *Ignis* holds fire in both hands as his locks emulate the fire’s flames; *Aer* floats on clouds and holds birds to mark his identity; *Terra* with her headdress of lush foliage leans against the earth em-

bracing a cornucopia filled with the land’s bounty; and *Aqua* stands in a similar pose against a vessel that functions as a wellspring. The figures of the Four Seasons also serve as allegories. *Ver* is characterized by the attributes of spring, the newly-sprouted leaves in her basket and wreath on her head; *Aestas* holds sheaves of summer wheat; *Autumnus* is identified by the harvest fruits of fall; and, *Hymens*, the only garbed figure, carries a steaming pot for winter warmth. While such symbolic figures and the impulse to embody “Ideas” in human form were part of ancient Greek and Roman art, their appearance in Van den Keere’s map depended on a more recent resurgence of this practice, in Italian renaissance art and aesthetic theory institutionalized in the emerging art academies of the sixteenth century.

Northern European artists had drawn from Italian renaissance art since the mid-fifteenth century, yet their interest in this art accelerated during the sixteenth century with increased travel and economic exchange between northern and southern parts of the continent. The German artist, Albrecht Dürer, for instance, visited several Italian art centers including Venice (first in 1494 and subsequently in the early 1500s) and he brought back to his native country new artistic ideas and systems of representation, specifically linear perspective, the classical figure style, and humanist and neoplatonic theories. Dürer’s Italianized manner is evident in his print, *The Fall of Man* (Figure 14). Here, he uses a Biblical subject to study ideal human proportions after the fashion of Italian artists like Jacopo de’ Barbari.² The figure of Adam is not only an image of the perfect human form but stands in a *contrapposto* stance with one straight leg, one bent leg, and the torso twisting with this movement, emulating ancient classical statuary like the *Apollo Belvedere*. Dürer

also fills this engraving with disguised symbols—that is, ordinary objects with symbolic significance—which had meaning for erudite audiences of the period, and especially for Dürer’s humanist patrons like Willibald Pirckheimer of Nuremberg. Emblems in this print picture the Four Temperaments—the elk stands for melancholy, the ox for sluggishness, the cat for choler, and the rabbit for sanguineness—and these categories resurrected the concept of the Four Ages of Man that dated back to Hellenistic times.³ This way of organizing and defining humans and the natural world is apparent in Van den Keere’s *Nova Tabula* as well in his images of the Four Seasons and the Four Elements. This map and Dürer’s print reveal the northward movement of classical ideas from humanist circles in Florence and Venice, of ideas that betray a belief in human nature and an essential, underlying order to the world.

Van den Keere’s allegorical figures are not only indebted to this importation of humanist ideas to the north but to Italian renaissance and mannerist pictorial conventions as well. In the sixteenth and continuing into the seventeenth centuries, Dutch mannerist artists began to work with a classical style mannered after artists like Michelangelo and Agnolo Bronzino. Influenced by Italian art theory through treatises like Carel van Mander’s *Het Schilder-Boeck* (*The Painter’s Book*) (1604), these Dutch artists were not concerned with mirroring nature but rather with representing an idea or a *disegno interno* that surpassed nature. Their art was modeled after artistic representations and was not a close study of nature. Impressed with Michelangelo’s skill in creating figures in *contrapposto*, sixteenth-century mannerists were preoccupied with producing figures in the most improbable *contrapposto* stances. Nude figures in stressful or seemingly impossible poses with exaggerated *contrapposto* stances, elongated bodies with small heads, and over muscular forms populated mannerist paintings and sculptures such as Hendrick Goltzius’s *The Marriage of Cupid and Psyche* (after Bartholomeus Spranger).⁴

Northern mannerists also worked in the allegorical language of their Italian counterparts and predecessors, as evidenced in Pieter Jansz. Saenredam’s *Allegory of Gratitude and Ingratitude* (after Cornelius Kettel).⁵ As Italian art

and art theory moved northward, so too did emblem books like Cesare Ripa’s *Iconologia* (Dutch translation by Dirck Pietersz. Pers, 1644).⁶ These texts instructed artists as they dressed up and propped up their classical nudes as “Ideas.” Saenredam’s figures possess all the markers of the mannerist style such as the s-curves of the body and exaggerated muscles along with the attributes that signal their identity—again, a method of figural representation found in Van den Keere’s Four Seasons and Four Elements.

This mannerist allegorical language was enlisted to embody the Americas in the seventeenth century as well. At this time, visual artists commonly presented their vision of the world—that is, the four continents—as allegorical figures, as the Italian sculptor Gian Lorenzo Bernini did in his *Four Rivers Fountain* (1648–51; Piazza Navona, Rome).⁷ Even images of the “New World” purported to be “realistic” were shaped by this classical visual language. In his watercolors, English artist, John White, used the mannerist mode and the language of classical idealism to frame his perceptions and representations of Native Americans (Figure 15). Similarly, in Van den Keere’s map, *America* is represented as an idealized, mannerist nude replete with curving arms and swinging hip. The cartographer uses an allegorical figure to represent the continent of the Americas. In Van den Keere’s map, *America* is adorned with signs of this continent’s identity. Her feathered headdress and grass skirt refer to Native Americans and to the “wildness” of these areas of the world, and, here, as in such seventeenth-century images as Jan van Kessel’s *America* (1666),⁸ *America* becomes allegorized as a Native American. In Van den Keere’s map, *America* also wears a necklace with a cross; she has become a Christian, thereby signifying European colonial interests in this part of the world.

The “Mapping Impulse” and Cultural Ways of Seeing the Physical World

In seventeenth-century Holland, picture making and map making also shared cultural ways of seeing the natural world—describing and cataloguing

nature, and reading the real as emblematic. As art historian Svetlana Alpers has demonstrated, the focus on description, or what she calls the “mapping impulse,” shaped image making in the seventeenth-century Netherlands. She writes:

There was perhaps at no other time or place such a coincidence between mapping and picturing . . . The basis of this coincidence is a common notion of knowledge and the belief that it is to be gained and asserted through pictures.

And, she adds:

The aim of Dutch painters was to capture on a surface a great range of knowledge and information about the world . . . Like the mappers, they made additive works that could not be taken from a single viewing point. Theirs was not a window on the Italian model of art but rather like a map, a surface on which is laid an assemblage of the world.⁹

During this period, landscape painters in the Netherlands not only shared this “mapping” or describing impulse with cartographers like Van den Keere but image-making conventions as well. Many northern artists including Pieter Pourbus, Pieter Jansz. Saenredam, and Gaspar van Wittel were engaged in different aspects of map making. “Mapped landscapes” or panoramas translated cartographic conventions for representing the physical world into the domain of painting, as Jan Christaensz Micker did in *View of Amsterdam*, drawing on the work of Cornelis Anthonisz. (1544) (Figure 16).¹⁰ Other painted landscapes paralleled images found on maps: topographical city views like Johannes Vermeer’s *View of Delft* (Figure 17) were common in both maps and paintings of the period, while views of the seemingly infinite, expansive landscape in paintings like Philips Koninck’s many mid-century panoramic landscapes replicate the process of geographic surveying and the continuous view of city and country that typifies maps.¹¹

In addition, like many seventeenth-century maps, Van den Keere’s *Nova Tabula* represents history. The cartographer pairs contemporary historical nar-

ratives in the legends and inscriptions about exploration and discovery with ancient history represented in the bottom border of the Seven Wonders of the Ancient World; he thereby connects present and past. Geography was related to history in the Netherlands at this time, as cartographer Willem Jansz. Blaeu wrote in 1663: “Geography [is] the light of history . . . maps enable us to contemplate at home and right before our eyes things that are farthest away.”¹² The seventeenth-century Dutch painter Vermeer links history with geography in his *Art of Painting* (Figure 18). Here, the artist in his studio sits at his easel with his back to the viewer and paints a female model posing as Clio, the muse of History. This figure sports the appropriate attire for History as prescribed in contemporary emblem books: she is crowned with a laurel wreath and holds a book and trumpet. Vermeer pairs Clio/History with geography; in fact, her face is superimposed on the map.¹³

In addition to linking maps and history, Vermeer defines maps and paintings as similar products in *Art of Painting*. He identifies and allies three types of visual representation—the tapestry in the foreground, the easel picture in the middleground, and the map in the background. Although each is situated in a separate plane or space, they are tied together visually: the tapestry’s decorative foliage is repeated in Clio’s crown and its representation on the artist’s canvas, while the red of the tapestry is picked up in the artist’s brush and the map. Vermeer himself engages in different types of image making: we see him in the act of painting in his studio, but we also see a map on his studio wall signed (and therefore made) by him.¹⁴ Considered a summation of Vermeer’s ideas about painting, *Art of Painting* defines different yet related types of image making. We also see the *descriptive* work of the map with its view of the Netherlands and topographical pictures of towns and cities juxtaposed with the *play acting* of the studio model dressed up as Clio. But Vermeer does more than contrast the allegorical and descriptive, the metaphoric and literal. The painter presents the allegorical in realistic terms: he interweaves two approaches to image making—the ideal/Italian, the real/Northern—by presenting both as dependent on visual description. Vermeer looks at, ob-

serves, and studies the real to create the emblematic figure of History, just as the map-maker Van den Keere describes the physical world and then frames it with the allegory of the Four Seasons, the Four Elements, and the Seven Wonders of the Ancient World.

This mixture of the description of the real and the emblematic reading of the real was common in seventeenth-century Dutch paintings. Maps commonly appear in paintings as evidence of their use as wall hangings, but, more than this, they functioned as emblems or disguised symbols in period art. In his *Woman in Blue Reading a Letter*, Vermeer employs a map to signify the geographic distance of the letter writer, and Jan Davidsz. de Heem uses a map and globe as emblems of material, worldly pursuits in his *Still Life*.¹⁵ The world described on maps and in paintings also took on emblematic meaning as the real and ideal were interconnected in northern image making. Emblem books reached their height of popularity in the seventeenth-century Netherlands, evolving from sixteenth-century Italian iconological literature and a late medieval emblematic tradition in the north. Viewers familiar with Italian classical language and northern disguised symbolism read naturalistic representations from still lifes to landscapes emblematically. Seventeenth-century Dutch artists and cartographers used pictorial objectification not only as a mode of aesthetic appreciation and factual description but represented the contents of their pictures as exemplary of unchanging cosmological or moral realities.¹⁶ Maps and paintings functioned as “moral geographies” and “patriotic scriptures”—terms that Simon Schama uses in his study of seventeenth-century Dutch culture, *The Embarrassment of Riches*. Seascapes with battles and shipwrecks such as Willem van de Velde the Younger’s *The Gust of the Wind* were read or interpreted as “trials by water” and deliverances; they be-

came emblematic narratives that translated contemporary explorations, conflicts with Spain for independence, and battles to control the sea into moral and Biblical terms.¹⁷ In similar fashion, Van den Keere’s map, with its border of the Seven Wonders of the Ancient World and allegory of America wearing a cross, presented geographic exploration as part of a larger enterprise, both moral and historical.

As cultural artifacts, moreover, maps along with landscape and seascape paintings functioned ideologically to define the terms of colonial expansion and nationalism. “Mapping” and describing the world served as a way of controlling, ordering, and understanding it as well as possessing it. Graphic images re-enacted the processes that the Dutch experienced in their economic and imperialist ventures, their scientific ordering of the natural world, and landfill and water-control projects devised at home. Jacob van Ruisdael’s landscape *View of Haarlem* (Figure 19) displays the use possible with this land control, specifically the bleaching of linens in the field, an activity connected to the urban economy.¹⁸ Similarly, Van den Keere’s *Nova Tabula* visually orders and controls the world and its territories. Used as an instrument of Dutch economic and imperialist expansion, this map described the world and placed this description into accepted ways of understanding the physical world—the Four Elements and the Four Seasons. Like paintings of the period, this map also visualized the encounter of two image-making conventions—the Italian mode with its idealized, classical allegorical figures and the “mapping impulse” characteristic of the north, especially seventeenth-century Holland. And, like contemporary landscapes and seascapes, Van den Keere’s map shaped and defined the culture, creating a “moral geography” that celebrated and fueled national independence, identity, and expansion.



Notes

¹ See, for example, Norman Bryson, Michael Ann Holly, and Keith Moxey, eds., *Visual Culture: Images and Interpretation* (Hanover, NH: University Press of New England, 1994) and Keith Moxey, *The Practice of Theory: Poststructuralism, Cultural Politics, and Art History* (Ithaca, NY: Cornell University Press, 1994), 29-40. For discussions of the relation of art and cartography see David Woodward, ed., *Art and Cartography: Six Historical Essays* (Chicago: University of Chicago Press, 1987).

² Charles D. Cuttler, *Northern Painting from Pucelle to Bruegel* (New York: Holt, Rinehart and Winston, 1968), 339.

³ Cuttler, *Northern Painting*, 339-40.

⁴ For a discussion of Dutch mannerism, see Madlyn Millner Kahr, *Dutch Painting in the Seventeenth Century* (New York: Harper and Row, 1978), 28-30, 44-48. Goltzius's *Marriage of Cupid and Psyche* (1587) is most recently reproduced by Reindert Falkenburg, Jan Piet Filedt Kok, and Huigen Leeftang, eds., *Goltzius-Studies: Hendrick Goltzius (1558-1617)*, *Nederlands Kunsthistorisch Jaarboek*, nos. 42-43 for 1991-92 (Zwolle: Waanders Uitgevers, 1993), fig. 14.

⁵ Saenredam's *Allegory* is reproduced in Woodward, *Art and Cartography*, as figure 5.25.

⁶ Kahr, *Dutch Painting*, 294.

⁷ Bernini's *Four Rivers Fountain* is illustrated in Rudolf Wittkower, *Gian Lorenzo Bernini: The Sculptor of the Roman Baroque* (New York: Phaidon, 1955), fig. 8 and pls. 74-78.

⁸ Kessel's *America* is reproduced by Woodward, *Art and Cartography*, as figure 2.49.

⁹ Svetlana Alpers, *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago: University of Chicago Press, 1983), 119, 122.

¹⁰ Cornelis Anthoniszoon's 1544 panoramic view of Amsterdam has been reproduced in James Elliot, *The City Mapped: Urban Mapping to 1900* (London: British Library, 1987), plate 2, Micker's painted panorama in Woodward, *Art and Cartography*, as figure 2.44.

¹¹ See Alpers, *Art of Describing*, 119-68, for an extensive discussion of the connections between art and cartography in seventeenth-century Holland.

¹² Willem Jansz. Blaeu, *Le Grand Atlas* (Amsterdam, 1663), quoted in Alpers, *Art of Describing*, 159.

¹³ Alpers, *Art of Describing*, 165-66.

¹⁴ Alpers, *Art of Describing*, 122.

¹⁵ Kahr, *Dutch Painting*, figs. 212 and 151, reproduced both Vermeer's *Woman in Blue Reading a Letter* and de Heem's *Still Life*.

¹⁶ See Kenneth John Myers, "On the Cultural Construction of Landscape Experience: Contact to 1830," in *American Iconology: New Approaches to Nineteenth-Century Art and Literature*, ed. David C. Miller (New Haven, CT: Yale University Press, 1993), 58-79.

¹⁷ Simon Schama, *The Embarrassment of Riches: An Interpretation of Dutch Culture in the Golden Age* (New York: Alfred A. Knopf, 1987), 15-125, esp. fig. 12, reproducing van de Velde's *The Gust of the Wind*.

¹⁸ Alpers, *Art of Describing*, 145

Chapter Six

Places Real and Imagined: Indigenous North America on the Van den Keere World Map of 1608

Dave D. Davis

The half-century that began around 1570 bridges two profoundly different periods in the European exploration, mapping, and ethnographic understanding of North America. Because the second half of the sixteenth century witnessed little exploration and no permanent colonization of the lands north of Mexico, European cartographers were left to construct images of North America from reports associated with the first wave of explorations, all of which were carried out before 1543. Information (and misinformation) from those early chronicles were further emended by legend and by the cartographers themselves. Thus, the map makers played no small role in crafting the popular European image of North America at the dawn of colonization.

The Pieter van den Keere world map of 1608, *Nova Totius Terrarum Orbis Geographica ac Hydrographica Tabula*, is one of a succession of maps produced in the period after 1550 that drew upon earlier discoveries to paint a picture of North America that was one part fact, one part exaggeration, and at least one part imagination. On this and other world maps of the period, toponyms that refer to indigenous peoples and places, whether real or imagined, are the most conspicuous manifestations of the evolving European understanding of the cultural landscape.

Sources of Principal Toponyms

The overwhelming majority of North American place names that are depicted on Van den Keere's map originate in three groups of documentary sources: first, the records of French voyages to Maritime Canada and the St. Lawrence River dating from and before the middle of the sixteenth century;

second, the De Soto entrada into the southeastern United States (1539-42); and, third, the Coronado Expedition of 1540-42 and its immediate predecessors in the U.S. Southwest.

In eastern Canada, Van den Keere's *Terra de La Borador* records the name that was derived from the voyage of Joao Fernandes Lavrador in 1500.¹ Immediately to the south, *Terra Corterealis* recalls the voyage of Gaspar Cortereal, a Portuguese nobleman who explored parts of eastern Canada in 1500 in one of the earliest searches for a Northwest Passage to the Orient. Several other toponyms associated with eastern Canada were among the earliest recorded indigenous place names north of Mexico. The word "Canada" itself quite properly appears on the Van den Keere map as an indigenous dominion within New France. Jacques Cartier visited the native region of this name on the St. Lawrence River during his second voyage as guest of its chief, Donnacona, and the name entered the public domain with publication of Cartier's *Brief Recit* in 1545 (translated and published in Italian by Ramusio in 1556).²

The three remaining prominent toponyms that derive from early French explorations are *Norumbega*, *Totuna gay*, and *Chilaga*. *Norumbega* was, of course, the longtime reference for Maine and adjacent areas of New England. It is not known just how the word came into use in early maps and manuscripts. Its first known appearance is on a 1529 map by Girolamo da Verrazzano, brother of the famous explorer, where it appears as "Oranbega."³ Initially, this region that centers on the Penobscot River held little interest for the French, as is reflected in Giovanni da Verrazano's account after his visit in 1523:



The people [were] all different from the others [to the south] . . . [They] were full of uncouthness and vices, so barbarous that we were never able, with howsoever many signs we made them, to have any intercourse with them . . . We do not know any value of any moment in this land except the very great forests.⁴

Yet, less than two decades later, in a manuscript written in 1539 and published in 1565, Pierre Crignon would describe the people of the same region as “tractable, friendly, and peaceful,” and their land as a place of great natural abundance.⁵ Somehow the name Norumbega had become associated geographically with the Penobscot River drainage, and culturally with Verrazzano’s “Refugio,” an idyllic bay to the south (apparently Narragansett Bay) where natives were friendly and noble in demeanor, and the land bountiful. It was this cultural ideal of Norumbega that held the European imagination for the rest of the sixteenth century,⁶ and that was probably assumed in letters patent, issued in 1540, that named French nobleman Jean Francois de la Rocque de Roberval “Lord of Norumbega, Viceroy and Lieutenant-general of Canada, Hochelaga,” and other areas.

The two toponyms that dominate the general vicinity of the upper St. Lawrence River in Van den Keere’s map can both be traced to French explorers, and in particular to a description of the upper St. Lawrence in the early 1550s by André Thevet: “there are many great rivers—among others, that one called Estendue, which has its source in the high mountains of Chilaque and of Tortinage.”⁷

Needless to say, there are no “high mountains” anywhere in south-central Canada. Chilaque and Tortinage, which are probably francocized versions of Native American words, must thus be counted as imaginary places, at least in the manner that they were depicted to European audiences, although Chilaque is also cognate to Hochelaga, the first indigenous name for the St. Lawrence to be recorded by Cartier on his second voyage in 1535.⁸ Chilaque and Tortinage appear in derivative form on the Van den Keere map as Chilaga and Totuna Gay. Other toponyms immediately to the south of Chilaga are, as we shall see, rather grossly misplaced references to places recorded by the De Soto expedition.

To the south and west of New England, North America in the sixteenth and early seventeenth centuries was essentially a Spanish playground. To be sure, there were other explorers from several European nations, but before 1620 their efforts had little lasting impact below the St. Lawrence. Much of interior North America at this date was little more than a hypothesis for Europeans. However, throughout the East from the Chesapeake southward, the Van den Keere map draws very heavily upon Spanish explorations of the mid-sixteenth century. At the mouth of the Chesapeake, the words “*Santa María*” recall a Spanish belief, current in the 1560s, that a short overland passage to the Pacific lay just beyond the land called Santa María Axacán.⁹ Indeed, for much of the middle and late sixteenth century, the Spanish persisted in the conviction that a short inland route existed between the Mid-Atlantic and the mineral-rich lands to the north of Mexico. To the south, in place of the Santee River, we find the *Rio Santa Helena*, gaining its name from an outpost established at the mouth of that river in 1565 by Pedro Menéndez de Avilés, who also founded St. Augustine. The outpost had fallen to Indian attack in 1576.

Most of the remaining place names in eastern North America derive from records of the De Soto entrada. The adventures of De Soto’s party became well known in Europe through the publication of the narrative of the Gentleman of Elvas in Oviedo’s *Historia General y Natural de las Indias* in 1547. *Apalachen*, which appears near the middle of the Atlantic Seaboard on the Van den Keere map, is derived from the name of the Muskogean tribe that actually inhabited part of northern Florida. Their territory marked De Soto’s first failed hope in his quest for precious metals in the southeastern U.S., just as it had for the disastrous Narváez expedition eleven years earlier. In the interior Southeast, *Xula* and *Tali* represent the Indian villages of Xuala and Talisi that were visited by De Soto in 1539-40, and later by Tristan de Luna in 1559-60. Farther west, the map’s *Nissoani*, *Ayx*, and *Xualitino* mark the Indian territories of Nissohani, Aays, and Soacatino that were crossed by the De Soto expedition under Moscoso’s command in 1542. The map fails to correctly place the three villages of the same names on the Red River, but

then North American river systems were a source of confusion for explorers and cartographers alike.¹⁰ The east-west mountain chain that appears as an extension of the Appalachians above the Gulf of Mexico, and which occurs on many other maps of this period, also has its origins in the De Soto narratives.¹¹ Three of the five prominent toponyms in the midcontinent to the south of Chilaga also derive from the De Soto records. The exceptions are *Avanares*, which appears to refer to an indigenous group called Avavares who were visited by Cabeza de Vaca,¹² and *Albardos*, which I cannot relate to any historical source. *Avacal* is probably derived from Aguacay, a town in Arkansas that was visited by the De Soto group under Moscoso's command;¹³ the town appears as "Auacal" on several maps that predate Van den Keere (see Appendix). Earlier, the De Soto expedition had also visited Capachequi and, near present-day Little Rock, Coligua, in pursuit of silver and gold that never materialized.¹⁴ These towns are the sources of Van den Keere's *Capaschi* and *Calicuas*.

It is a minor irony of cartographic history that none of these places were of much consequence in their own right. There were larger and more important Indian villages and European settlements that are not noted on the map at all. Where is St. Augustine? Where are the numerous Spanish missions that dotted the Florida peninsula in Van den Keere's time? Where is the great Indian town of Cofitachequi on the Savanna River, a town that De Soto found to be almost awash in pears and ruled by a "queen" who was carried on a litter?

Of course, De Soto was not the first European to explore the southeastern quarter of the continent. That honor belongs to the failed Narváez expedition and, most notably, to the small clutch of men who survived to tell the story. Led by Alvar Nuñez Cabeza de Vaca, they traveled from the U.S. Gulf coast into the interior around and beyond the Red River, and eventually westward into New Mexico before turning south and making their way to New Spain.

It was Cabeza de Vaca who first connected the famous "Seven Cities" legend with the North American mainland. It had been long believed that

seven Portuguese bishops, escaping the Moorish invasion in the early eighth century, had founded an equal number of cities somewhere to the west. The cities appear on maps as early as 1546, sometimes on the imaginary islands of Brasil or Antillia in the Atlantic, or else on the eastern seaboard of North America.¹⁵ But Cabeza de Vaca conveyed reports from Indians that seven prosperous cities could be found in an area to the north of New Spain, in the region that now includes northern New Mexico and southwestern Colorado.

The first of Cabeza de Vaca's successors to venture into the region was the curious character Fray Marcos de Niza. It was this priest's brief journey in 1539 that added the name "Cíbola" to the group of seven cities, which his party claimed to have found in Zuni territory in northern New Mexico.¹⁶ A year later, an expedition commanded by Francisco Vazquez de Coronado set out to further explore the region. The primary source on the Coronado expedition is a manuscript written by one of his soldiers, Pedro de Castañeda, in the 1550s. On the Van den Keere map, the Latin *Ceptem Citta* designates the presumed locations of the individual towns to the east of the Rocky Mountains, while Cíbola appears as *Cevola*, immediately to the southeast of the group of cities.

First-hand observation was not enough to break the spell of longstanding myth. The Zuni towns encountered by Fray Marcos and Coronado offered no gold, no silver, and nothing remotely holy by Christian standards. Yet the Seven Cities appeared on maps for over a century thereafter. Indeed, Ramsay has noted that

As late as 1622, Henry Briggs, professor of geometry at Oxford, spoke of "the large Kingdoms of Cébola and Quivira" as having "great and populous cities of civilized people, whose houses are said to be fine stones set high, and to have within them pillars of turquesses [turquoise]."¹⁷

Just to the south of the seven cities, Van den Keere's *Ahacus nuña Granata* incorporates both Fray Marcos's and Coronado's names for the native community of Háwikuh (the Acoma pueblo).¹⁸ Coronado recorded his visit to Granada in a letter to Mendoza in 1540 that was subsequently published in

the 1556 edition of Ramusio's *Terzo Volume delle Navigazione et Viaggi*.¹⁹ However, according to Coronado's letter, Granada was in fact one of the seven cities, not an eighth town as Van den Keere's map suggests.²⁰ Somewhat farther west of Granada, *Totonteac* represents the region inhabited by the Totonac, who were also visited by Coronado, and who were in fact known by the Spanish before Coronado.

The toponym *Axa*, which appears conspicuously to the west of the Seven Cities, was one of two significant fabrications of Coronado's Indian guide. "The Turk," as he is known, persuaded Indians in eastern New Mexico to tell Coronado that they could find to the east "a very large river, along whose banks the army could travel through continuous settlements for ninety days . . . and that the first settlement was Haxas."²¹

It is perhaps not surprising that the most imaginary of all places in the North American portion of the Van den Keere map are consigned to the unexplored northwestern coast. Here, indeed, is the only part of the continent where we find the word "kingdom" (*Regnum*), and it occurs in two toponyms: *Regnum Quivira* and *Regnum Anian*. "Quivira," another product of the Coronado expedition, was essentially a lie that became a myth. The lie was the second great fabrication of The Turk, who told Coronado of a land that was "abundant and fruitful in everything," including gold, silver, and fabrics. The kingdom centered around a river that was two leagues wide, and its people ate their daily meals from plates of gold. On the strength of this story, Coronado spent the better part of a year looking for Quivira before his guide admitted that he had concocted the tale in an effort to move the expedition closer to his homeland.

However, The Turk's confession was not enough to set the record straight. Within little more than a decade after Coronado's return to Mexico, the idea of Quivira had taken root in the geographic imagination of Europe. The story was embellished by Francisco de Gómara in a 1552 history of American ex-

plorations, and the kingdom continued to appear on European maps of North America for two centuries.²²

The matter of Anian is a little more complicated. The notion of a kingdom or nation of Anian had its origins in Marco Polo's report of a huge gulf which

extends to a distance of two months' navigation along its northern shore, where it bounds the southern part of the province of Manji, and from thence to where it approaches the countries of Ania, Tolman, and many others . . . The gulf is so extensive and the inhabitants so numerous that it appears like another world.²³

The use of Anian as a North American toponym apparently originated with the first voyage of Gaspar Cortereal in 1500. Concluding that the St. Lawrence led to the gulf reported by Marco Polo, Cortereal named the river the Strait of Anian.²⁴ Reports of this voyage were widely available in Europe in the form of a letter written in 1501 by Pietro Pasqualigo and published in López de Gómara's *Historia General de las Indias* (1554) and in Ramusio's *Terzo Volume delle Navigazioni* (1556).²⁵ Anian appeared frequently on maps as a strait, as a kingdom, or as both, beginning with Paolo Forlani's *Il Disegno del scoperto della noua Franza* of 1565 (Figure 20). Among those to seek the Strait of Anian in a century-long quest for a Northwest Passage over a northern route from China to the Atlantic, out of reach of Spain, were Martin Frobisher in 1576 (the first English explorers to pursue this goal) and, in 1577-78, Francis Drake. It was Drake who, failing to find the passage, concluded that it must be a great deal farther north than he and others had assumed. Thus, over the course of the sixteenth century, Anian migrated from the St. Lawrence to the Pacific coast, and thence northward toward the Arctic, where it appears on Van den Keere's map. The "kingdom" of Tolm, the land mentioned in connection with Anian by Marco Polo, is not depicted by Van den Keere, but appears on a number of maps of the period, and is usually positioned somewhere to the west or northwest of the seven cities and east of California.

The Evolving Cartographic Interpretation of North American Places

The Van den Keere map is by no means unique in its presentation of real and fabled places in the New World. Indeed, it is a rather late representative of a pattern of interpretation of the North American cultural landscape that dominated European mapmaking during the second half of the sixteenth century. Cartographers borrowed freely from each other.²⁶ Moreover, as the preceding discussion illustrates, reports of the major explorations were rather widely available in published form, particularly from the mid-1550s onward. The Appendix records eight examples of other major maps of the period which contain variants of North American place names that are prominent on the Van den Keere map. The majority of the conspicuous toponyms that were used by Van den Keere recur with some frequency on maps dating to the previous half-century.

Taken together, these maps reveal the captivating effect of early sixteenth century explorations on the European imagination of the Americas. With the sole exception of Maritime Canada and the St. Lawrence, the dominance of Spain is everywhere evident. Spain's achievements, which were actually quite modest in what is now the U.S., were exaggerated by the fact that, until the 1580s, Hapsburg Spain controlled much of the Netherlands; the influence of Spanish dominion is widely apparent in Dutch cartography of this period.

However, Van den Keere's map and its predecessors are not mere reflections of political claims and conditions. They are also filled with hypotheses—hypotheses about landforms, water bodies, tribal locations, and cultural nomenclature—that represent a combination of third-party reports, legends, and sheer guesswork. In the category of geographic guesswork, perhaps the most prominent and consistent feature in the interior of the continent is the chain of east-west mountains that were postulated but never visited by

the De Soto expedition. Three places reported in the De Soto chronicles—Capaschi, Avacal, and Calicuas—appear to the north of these mountains on the Van den Keere map, but most late sixteenth century maps place them to the south. Inland from the east-west mountains, the continent remained *incognito*, with no hint of the Great Lakes or other major water bodies.

Norumbega and Chilaga were the most consistent fixtures in the European representation during this period of what is now eastern Canada. The latter served as a *de facto* reminder of the western limit of French exploration of the St. Lawrence. Norumbega, however, remained in Van den Keere's time larger than life, conveying as it still did the vision of a riverine paradise. Indeed, by 1600, Norumbega was the only remaining fantasy land in North America east of the Mississippi. All of the other principal toponyms depicted in this region by Van den Keere were real places (towns and villages, for the most part), none of which had fulfilled the expectations of wealth that had prompted the early explorations. And, within a decade, the image of Norumbega would be irrevocably marred by Samuel de Champlain's exploration of the Penobscot.

Although Cibola appears frequently on regional maps during the half-century after 1560, the "Seven Cities" were not usually depicted and identified as such. The major exception prior to the turn of the century was Wytfliet's (1597) regional map, *Granata Nova et California*, one of 19 images that were included in the first atlas of the Americas (Figure 21).²⁷

The location of Cibola and its associated towns remained rather well fixed in maps of the period. However, the mythical "kingdom" of Quivira was pushed even farther west over the course of the sixteenth and early seventeenth centuries, "along the fortieth parallel from Espíritu Santo river to the Pacific coast."²⁸ As I noted earlier, Anian had its own westward and northward migration in the imaginations of European explorers, from the St. Lawrence to the far northern Pacific. However, the Straits (and the presumed





"Kingdom") of Anian only became popular toponyms on world maps after Drake's voyage of 1577-78.

The chronicles that brought knowledge of the place names of North America, real or imagined, to European attention also contained descriptions of the people who inhabited the towns, villages, and presumed kingdoms. Thus, the place names that are recorded by Van den Keere and his predecessors are also icons that represent the underlying state of geographic and ethnographic interpretation of the continent at the beginning of the seventeenth century. Chilaga (Hochelaga), the great town visited by Cartier during his second voyage, calls forth the explorer's description of the bounty of the St. Lawrence, and of Donnaconna's tales of gold and rubies in the lands that lay beyond. The sixteenth-century chroniclers of the St. Lawrence, most notably André Thevet,²⁹ had also produced a significant corpus of ethnographic information about the indigenous peoples of eastern Canada. The numerous toponyms associated with the De Soto entrada in the Southeast marked Spanish claims to the region, but also reflected a cultural landscape that, in European eyes, was filled with "kingdoms" and "territories." Cultural divisions of the kind later recognized by anthropologists and historians (Creek, Cherokee, Timucua, etc.) are nowhere in evidence. The Spanish inclination to find "kingdoms" was played out more strongly in the American West, per-

haps in part because Fray Marcos and Coronado had directly experienced the high civilizations of central Mexico.

Considered overall, the European interpretation of the native cultural landscape of North America that we see on Van den Keere's map is an uneasy blend of fantasy and harsh ethnographic fact. Cortereal, the Cabots, Cartier, Narváez, De Soto, Tristán de Luna, Fray Marcos, Coronado, and their peers had consistently failed to find in North America either the gateway to the Orient or significant quantities of gold and other precious resources. The real native towns and villages that appear in eastern Canada, the Southeast, and the Southwest, were all backed by chronicles that documented occasional abundance in agricultural land and fisheries, but none of the spices and precious metals that were the objects of the European quests. The known cultural landscape was, to be sure, curious, but by no means utopian. Yet the reported facts weren't enough to derail European belief that the wealth and the passages to Asia, and even the utopias, would yet be found. Norumbega in New England, and Quivira and Anian in the Pacific West, are cartographic projections of these persistent hopes. It was these lands, all more imagined than real, that would be the repositories of European hopes for North America until later in the seventeenth century, when they would gradually fade in the light of further exploration and settlement.

Appendix: Variants of North American Toponyms

Variants of North American Toponyms on Certain World and Hemispheric Maps of the Late Sixteenth and Early Seventeenth Centuries: Van den Keere's world map of 1608; Matthias Quadus, *Fasciculus Geographicus* (1608); Cornelis Wytfliet, *Vtriusque Hemispherii Delinaetio* (1597); Theodor De Bry, *America sive Novus Orbis* (1596); Gerardus Mercator, *America sive India Nova* (1587); Abraham Ortelius's version of Hieronymo Chaves's map of Florida in the *Theatrum Orbis Terrarum* (1584); Abraham Ortelius, *Americae* (1570); Mercator, map of northwestern part of New Spain (1569); Forlani, *Il Disegno del discoperto della noua Franza* (1565).



Van den Keere 1608	Quadus 1608	Wytfliet 1597	De Bry 1596	Mercator 1587	Ortelius 1584	Ortelius 1570	Mercator 1569	Forlani 1565
Norumbega	Norembeca	Norumbega	Norumbega	Norombega	—	Norumbega	Norobega	Terra de Norumbega
Canada	Canada	—	Canada	Canada	—	Canada	Canada	Canada Pro
Totuna Gay	—	—	—	—	—	—	—	—
Chilaga	Chilaga	Chilaga	Chilaga	Chilaga	—	Chilaga	Chilaga	Chelaga
Avacal	Auacal	—	Auacal	Avacal	—	Avacal	—	Avacal
Capaschi	—	—	—	—	—	Capaschi	—	Capaschi
Calicuas	—	—	—	—	—	Calicuas	Calicuas	—
Apalachen	—	—	Apalates	—	—	Apalachen	—	—
Xula	—	—	—	—	Xuala	—	—	—
Tali	—	—	—	—	Tali	—	—	—
Nissoani	—	—	—	—	Nisoona	—	—	—
Ayx	—	—	—	—	Ayx	—	—	—
Xualitino	—	—	—	—	Xualitino	—	—	—
Avanares	—	—	Auanares	—	—	—	—	—
Albardos	—	—	—	—	—	—	—	—
Ceptem Citta	—	—	—	—	—	—	—	—
Cevola	—	—	Ceuola	Ceuola	—	Ceuola	Ceuola	Civola
Ahacus nua Granata	Granata	—	Granata	Granata	—	Ahacus nua Granata	Granata	Granata
Totonteac	—	Tontonteac Reg.	Totonteac	Tontoneac r.	—	Tototeac	Totonteac	Tontonteac
Axa	—	Axa	Axa	Axa	—	Axa	Axa	Axa
Regnum Quivira	Regn Quivira	Quivira	Quirira regnum	Quiuira reg.	—	Quivira	Quivira regnu	Quivira
Regnum Anian	Anian Regnum	Anian regnum	Anian	Anian Regnum	—	Anian	Anian regnum	—

Notes

¹ B. G. Hoffman, *Cabot to Cartier: Sources for a Historical Ethnography of Northeastern North America, 1497-1550* (Toronto: University of Toronto Press, 1961), 13-15.

² Giovanni Battista Ramusio, *Terzo Volume Delle Navigazioni et Viaggi Nel Quale Si Contengono Le Navigazioni al Mondo Nuovo* (Venice: Tommaso Giunti, 1556; reprinted Amsterdam: Theatrum Orbis Terrarum, 1967).

³ Richard D'Abate, "On the Meaning of a Name: 'Norumbega' and the Representation of North America," in *American Beginnings: Exploration, Culture, and Cartography in the Land of Norumbega*, edited by Emerson W. Baker et al. (Lincoln: University of Nebraska Press, 1994), 61-88.

⁴ Alessandro Bacchiani, "Giovanni da Verrazzano and his Discoveries in North America, 1524, According to the Unpublished Contemporaneous Cellere Codex of Rome Italy . . . English Version with Introduction by E. H. Hall," *Fifteenth Annual Report, 1910, of the American Scenic and Historic Preservation Society* (Albany, NY, 1910), Appendix A, 135-226.

⁵ [Pierre Crignon], "Discorso D'un Gran Capitano di mare Francese del luoco di Dieppa," in Ramusio, *Terzo Volume*, fols. 423-34.

⁶ D'Abate, "On the Meaning of a Name."

⁷ William Francis Ganong, "Crucial maps in the Early Cartography and Place-Nomenclature of the Atlantic Coast of Canada, VIII," *Transactions of the Royal Society of Canada* 3s 30 (1936): 109-129, reprinted as *Crucial Maps in the Cartography and Place Nomenclature of the Atlantic Coast of Canada*, Special Publications of the Royal Society of Canada, 7 (Toronto: University of Toronto Press, 1964), 415-35.

⁸ Henry S. Burrage, *Early English and French Voyages, Chiefly from Hakluyt, 1534-1608* (New York: Charles Scribner's Sons, 1906; reprinted New York: Barnes and Noble, 1967), 41.

⁹ Eugene Lyon, "Pedro Menéndez's Plan for Settling La Florida," in *First Encounters: Spanish Explorations in the Caribbean and the United States, 1492-1570*, edited by Jerald T. Milanich and Susan Milbrath (Gainesville: University Presses of Florida, 1989), 150-65.

¹⁰ John R. Swanton, *The Indians of the Southeastern United States*, Bulletin of the Bureau of American Ethnology, Smithsonian Institution, 137 (Washington: GPO, 1946), 57.

¹¹ W. P. Cumming, R. A. Skelton, and D. B. Quinn, *The Discovery of North America* (London: Elek Books, 1971), 116.

¹² Frederick Webb Hodge and Theodore H. Lewis, eds., *Spanish Explorers in the Southern United States, 1528-1543* (New York: Charles Scribner's Sons, 1907; reprinted New York: Barnes and Noble, 1965), 73.

¹³ Hodge and Lewis, *Spanish Explorers*, 237-238.

¹⁴ Swanton, *Indians of the Southeastern United States*, 42-43 and 54.

¹⁵ Raymond H. Ramsay, *No Longer on the Map: Discovering Places that Never Were* (New York: Viking Press, 1972).

¹⁶ George Parker Winship, *The Coronado Expedition, 1540-1542*, in *Annual Report of the Bureau of American Ethnology for 1892-93* (Washington: GPO, 1896; reprinted Chicago: The Rio Grande Press, 1964), 1: 329-613.

¹⁷ Ramsay, *No Longer on the Map*, 132.

¹⁸ H. E. Bolton, *Coronado: Knight of Pueblos and Plains* (Albuquerque: University of New Mexico Press, 1964), 179.

¹⁹ Ramusio, *Terzo Volume*. An English translation is published in Hodge and Lewis, *Spanish Explorers*, 273-387.

²⁰ Coronado-Mendoza letter, published in English translation in Winship, *The Coronado Expedition*, 326.

²¹ Bolton, *Coronado*, 249.

²² Ramsay, *No Longer on the Map*, 133 and 138.

²³ Quoted in John Goss, *The Mapping of North America: Three Centuries of Map-Making, 1500-1800* (Secaucus, NJ: The Wellfleet Press, 1990), 73.

²⁴ Robert Silverberg, *The Longest Voyage: Circumnavigators in the Age of Discovery* (New York: Bobbs-Merrill, 1972), 56.

²⁵ Hoffman, *Cabot to Cartier*, 26-27.

²⁶ Dirk de Vries, "Official Cartography in the Netherlands," in *La Cartografia dels Països Baixos* (Barcelona: Institut Cartogràfic de Catalunya, 1995), 17-69.

²⁷ Peter van der Krogt, "Commercial Cartography in the Netherlands, with Particular Reference to Atlas Production, 16th-18th Centuries," in *La Cartografia dels Països Baixos* (Barcelona: Institut Cartogràfic de Catalunya, 1995), 71-140, esp. 116.

²⁸ Winship, *The Coronado Expedition*, 93fn.

²⁹ André Thevet, *Les Singularitez de la France Antarctique, autrement nommée Amerique* (Paris: Chez les Heritiers de Maurice de la Porte, 1557); *The New Founde Worlde, or Antarctike* (London: Henrie Bynneman for Thomas Hackett, 1568); and, *La Cosmographie Universelle d'Andre Thevet Cosmographe du Roy*, 2 volumes (Paris: Pierre l'Huillier, 1575).

Combined Bibliography

Addison, Joseph. *A Letter from Italy, to the Right Honourable Charles Lord Halifax in the Year 1701*. London: H. Hills, 1709.

Alpers, Svetlana. *The Art of Describing: Dutch Art in the Seventeenth Century*. Chicago: University of Chicago Press, 1983.

Andel, Tjeerd H. van, and Curtis Neil Runnels. *Beyond the Acropolis: A Rural Greek Past*. Stanford CA: Stanford University Press, 1987.

Andel, T. J. van, and N. Lianos. "High-Resolution Seismic Reflection Profiles for the Reconstruction of Postglacial Transgressive Shorelines: An Example from Greece." *Quaternary Research* 22 (1984): 31-44.

Andel, T. J. van, and J. C. Shackleton. "Late Paleolithic and Mesolithic Coastlines of Greece and the Aegean." *Journal of Field Archeology* 9 (1982): 445-454.

Bacchiani, Alessandro. "Giovanni da Verrazzano and his Discoveries in North America, 1524, According to the Unpublished Contemporaneous Cellere Codex of Rome Italy . . . English Version with Introduction by E. H. Hall." *Fifteenth Annual Report, 1910, of the American Scenic and Historic Preservation Society*, Appendix A, 135-226. Albany, NY, 1910.

Baddeley, J. F. "Father Matteo Ricci's Chinese World-Maps." *Geographical Journal* 50 (1917): 254-70.

Bailey, Helen Miller, and Abraham P. Nasatir. *Latin America: The Development of its Civilization*. Englewood Cliffs, NJ: Prentice Hall, 1973.

Bolton, H. E. *Coronado: Knight of Pueblos and Plains*. Albuquerque: University of New Mexico Press, 1964.

Boxer, C. R. *The Christian Century in Japan, 1549-1650*. Berkeley: University of California Press, 1967.

———. *The Dutch Seaborne Empire*. New York: Alfred A. Knopf, 1965.

Braudel, Fernand. *The Perspective of the World*. Volume 3 of *Civilization and Capitalism, 15th-18th Century*. New York: Harper & Row, 1984.

Bryson, Norman, Michael Ann Holly, and Keith Moxey, eds. *Visual Culture: Images and Interpretation*. Hanover, NH: University Press of New England, 1994.

Burrage, Henry S. *Early English and French Voyages, Chiefly from Hakluyt, 1534-1608*. New York: Charles Scribner's Sons, 1906; reprinted New York: Barnes and Noble, 1967.

Cumming, W. P., R. A. Skelton, and D. B. Quinn. *The Discovery of North America*. London: Elek Books, 1971.

Cuttler, Charles D. *Northern Painting from Pucelle to Bruegel*. New York: Holt, Rinehart and Winston, 1968.

D'Abate, Richard. "On the Meaning of a Name: 'Norumbega' and the Representation of North America." In *American Beginnings: Exploration, Culture, and Cartography in the Land of Norumbega*, edited by Emerson W. Baker et al., 61-88. Lincoln: University of Nebraska Press, 1994.

Elliot, James. *The City Mapped: Urban Mapping to 1900*. London: British Library, 1987.

Falkenburg, Reindert, Jan Piet Filedt Kok, and Huigen Leeftang, eds. *Goltzius-Studies: Hendrick Goltzius (1558-1617)*. Nederlands Kunsthistorisch Jaarboek, nos. 42-43 for 1991-92. Zwolle: Waanders Uitgevers, 1993.

Foss, Theodore N. "A Western Interpretation of China: Jesuit Cartography." In *East Meets West: The Jesuits in China, 1582-1773*, edited by Charles E. Ronan and Bonnie B. C. Oh, 209-51. Chicago: Loyola University Press, 1988.

Ganong, William Francis. "Crucial maps in the Early Cartography and Place-Nomenclature of the Atlantic Coast of Canada, VIII." *Transactions of the Royal Society of Canada* 3s 30 (1936): 109-129. Reprinted as *Crucial Maps in the Cartography and Place Nomenclature of the Atlantic Coast of Canada*, Special Publications of the Royal Society of Canada, 7 (Toronto: University of Toronto Press, 1964), 415-35.

Gillies, John. *Shakespeare and the Geography of Difference*. Cambridge Studies in Renaissance Literature and Culture, 4. Cambridge: University of Cambridge Press, 1994.

Goss, John. *The Mapping of North America: Three Centuries of Map-Making, 1500-1800*. Secaucus, NJ: The Wellfleet Press, 1990.

Grun, Bernard. *The Timetables of History: A Horizontal Linkage of People and Events*. New York: Simon & Schuster, 1975.

Herring, Hubert. *A History of Latin America, From the Beginnings to the Present*. New York: Alfred A. Knopf, 1973.





Hodge, Frederick Webb, and Theodore H. Lewis, eds. *Spanish Explorers in the Southern United States, 1528-1543*. New York: Charles Scribner's Sons, 1907; reprinted New York: Barnes and Noble, 1965.

Hoffman, B. G. *Cabot to Cartier: Sources for a Historical Ethnography of Northeastern North America, 1497-1550*. Toronto: University of Toronto Press, 1961.

Jane, Lionel Cecil. *Select Documents Illustrating the Four Voyages of Columbus*. Hakluyt Society 2s, 65 and 70. London: Hakluyt Society, 1930-33. Reprinted in one volume as *The Four Voyages of Columbus: A History in Eight Documents, Including Five by Christopher Columbus, in the Original Spanish, with English Translations* (New York: Dover, 1988).

Kahr, Madlyn Millner. *Dutch Painting in the Seventeenth Century*. New York: Harper and Row, 1978.

Keyes, George S. *Mirror of Empire: Dutch Marine Art of the Seventeenth Century*. Minneapolis, MN: Minneapolis Institute of Arts, 1990.

Koeman, Cornelis, comp. *Atlantes Neerlandici: Bibliography of Terrestrial, Maritime and Celestial Atlases and Pilot Books, Published in the Netherlands, up to 1880*. 5 volumes. Amsterdam: Theatrum Orbis Terrarum, 1967-71.

Krogt, Peter van der. "Commercial Cartography in the Netherlands, with Particular Reference to Atlas Production, 16th-18th Centuries." In *La Cartografia dels Països Baixos*, 71-140. Barcelona: Institut Cartogràfic de Catalunya, 1995.

———. *The Folio Atlases Published by Gerard Mercator, Jodocus Hondius, Henricus Hondius, Johannes Janssonius, and Their Successors*. Volume 1 of Koeman's *Atlantes Neerlandici*. 't Goy-Houten: HES Publishers, 1997.

Lach, Donald F. *A Century of Wonder: The Scholarly Disciplines*. Volume 2.3 of *Asia in the Making of Europe*. Chicago: University of Chicago Press, 1977.

Ledyard, Gari. "Cartography in Korea." In *Cartography in the Traditional East and Southeast Asian Societies*, edited by J. B. Harley and David Woodward, 235-345. Volume 2.2 of *The History of Cartography*. Chicago: University of Chicago Press, 1994.

Lyon, Eugene. "Pedro Menéndez's Plan for Settling La Florida." In *First Encounters: Spanish Explorations in the Caribbean and the United States, 1492-1570*, edited by Jerald T. Milanich and Susan Milbrath, 150-65. Gainesville: University Presses of Florida, 1989.

McNeill, William H. *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000*. Chicago: University of Chicago Press, 1982.

Marx, Jenifer. *Pirates and Privateers of the Caribbean*. Malabar, FL: Krieger Publishing, 1992.

Millard, A. R. "Cartography in the Ancient Near East." In *Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean*, edited by J. B. Harley and David Woodward, 107-16. Volume 1 of *The History of Cartography*. Chicago: University of Chicago Press, 1987.

Moxey, Keith. *The Practice of Theory: Poststructuralism, Cultural Politics, and Art History*. Ithaca, NY: Cornell University Press, 1994.

Myers, Kenneth John. "On the Cultural Construction of Landscape Experience: Contact to 1830." In *American Iconology: New Approaches to Nineteenth-Century Art and Literature*, edited by David C. Miller, 58-79. New Haven, CT: Yale University Press, 1993.

Needham, Joseph, and Wang Ling. *Mathematics and the Sciences of the Heavens and the Earth*. Volume 3 of *Science and Civilisation in China*. Cambridge: Cambridge University Press, 1959.

Postma, Johannes Menne. *The Dutch in the Atlantic Slave Trade, 1660-1815*. Cambridge: Cambridge University Press, 1990.

Ramsay, Raymond H. *No Longer on the Map: Discovering Places that Never Were*. New York: Viking Press, 1972.

Ramusio, Giovanni Battista. *Terzo Volume Delle Navigationi et Viaggi Nel Quale Si Contengono Le Navigationi al Mondo Nuouo*. Venice: Tommaso Giunti, 1556; reprinted Amsterdam: Theatrum Orbis Terrarum, 1967.

Romer, John, and Elizabeth Romer. *The Seven Wonders of the World: A History of the Modern Imagination*. New York: Henry Holt, 1995.

Schama, Simon. *The Embarrassment of Riches: An Interpretation of Dutch Culture in the Golden Age*. New York: Alfred A Knopf, 1987.

Schilder, Günter, and James Welu. *The World Map of 1611 by Pieter van den Keere*. Amsterdam: Nico Israel, 1980.

Schivelbusch, Wolfgang. *Tastes of Paradise: A Social History of Spices, Stimulants and Intoxicants*. New York: Pantheon, 1992.

Shirley, Rodney W. *The Mapping of the World: Early Printed World Maps, 1472-1700*. 3d edition. London: Holland Press, 1993.

Silverberg, Robert. *The Longest Voyage: Circumnavigators in the Age of Discovery*. New York: Bobbs-Merrill, 1972.

- Singleton, Esther. *Dutch New York*. New York: Benjamin Blom, 1968.
- Smith, William. *A Delineation of the Strata of England and Wales, with Part of Scotland; Exhibiting the Collieries and Mines, the Marshes and Fenlands Originally Overflowed by the Sea, and the Varieties of Soil According to the Variations in the Substrata*. London: John Cary, 1815.
- Snyder, John P. *Flattening the Earth: Two Thousand Years of Map Projections*. Chicago: University of Chicago Press, 1993.
- Sobol, Dava. *Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time*. New York: Walker & Co., 1995.
- Stevenson, Edward Luther. *Willem Janszoon Blaeu, 1571-1638: A Sketch of his Life and Work, With an Especial Reference to his Large World Map of 1605*. New York: Hispanic Society of America, 1914.
- Swanton, John R. *The Indians of the Southeastern United States*. Bulletin of the Bureau of American Ethnology, Smithsonian Institution, 137. Washington: GPO, 1946.
- Thompson, Edward Maunde. *Handbook of Greek and Latin Paleography*. New York: D. Appleton, 1893; reprinted, Chicago: Ares, 1966.
- Tooley, R. V. *Maps and Map-Makers*. London: B. T. Batsford, 1949; reprinted, New York: Dorset Press, 1990.
- Unno, Kazutaka. "Cartography in Japan." In *Cartography in the Traditional East and Southeast Asian Societies*, edited by J. B. Harley and David Woodward, 346-477. Volume 2.2 of *The History of Cartography*. Chicago: University of Chicago Press, 1994.
- Vries, Dirk de. "Official Cartography in the Netherlands." In *La Cartografia dels Països Baixos*, 17-69. Barcelona: Institut Cartogràfic de Catalunya, 1995.
- Wallis, Helen M. "Missionary Cartographers to China." *The Geographical Magazine* 47 (1975): 751-59.
- Walter, Lutz. "A Typology of Maps of Japan Printed in Europe (1595-1800)." In *Japan, A Cartographic Vision: European Printed Maps from the Early 16th to the 19th Century*, edited by Lutz Walter, 40-47. Munich and New York: Prestel Verlag, 1994.
- Whitfield, Peter. *The Charting of the Oceans: Ten Centuries of Maritime Maps*. New York: Pomegranate Books, 1996.
- Wilson, Charles. *The Dutch Republic and the Civilisation of the Seventeenth Century*. New York: McGraw-Hill, 1968.
- Winship, George Parker. *The Coronado Expedition, 1540-1542*. In *Annual Report of the Bureau of American Ethnology for 1892-93*, 1: 329-613. Washington: GPO, 1896; reprinted Chicago: The Rio Grande Press, 1964.
- Wittkower, Rudolf. *Gian Lorenzo Bernini: The Sculptor of the Roman Baroque*. New York: Phaidon, 1955.
- Wolf, Eric R. *Europe and the People Without History*. Berkeley: University of California Press, 1982.
- Woodward, David. "Medieval Mappaemundi." In *Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean*, edited by J. B. Harley and David Woodward, 286-370. Volume 1 of *The History of Cartography*. Chicago: University of Chicago Press, 1987.
- Woodward, David, ed. *Art and Cartography: Six Historical Essays*. Chicago: University of Chicago Press, 1987.
- Yee, Cordell D. K. "Traditional Chinese Cartography and the Myth of Westernization." In *Cartography in the Traditional East and Southeast Asian Societies*, edited by J. B. Harley and David Woodward, 170-202. Volume 2.2 of *The History of Cartography*. Chicago: University of Chicago Press, 1994.

*The Osher Map Library and
Smith Center for Cartographic Education
University of Southern Maine*

The Osher Map Library and Smith Center for Cartographic Education is the only separately established rare map library in northern New England. The cartographic collections comprise fine examples of original maps, atlases, geographies, and globes spanning the years from 1475 to the present. They constitute a rich and multifaceted resource for the study and teaching of a number of subjects, especially geography, history, and art. These materials offer such compelling insights that anyone, regardless of age or educational level, can enjoy and learn from them. For the University, the people of Maine, scholars, students, and visitors, the collections are indeed a treasure.

The Collections

The cartographic collections were formed from two major gifts, the first from the late Lawrence M. C. and Eleanor Houston Smith, and the second from Dr. Harold L. and Mrs. Peggy L. Osher. Other generous gifts from several individual donors, notably Professor Peter H. Enggass and Tony Naden, have substantially augmented the collections. The combined collections contain approximately 60,000 maps, as separate sheets or bound in books and atlases. These books include works on cosmography, astronomy, and navigation, as well as geography and cartography. While the collections possess a global scope, they emphasize the discovery, exploration, and mapping of North America. The original materials are supple-

mented by many facsimile maps and atlases in reprint editions, together with a reference collection containing monographs and journals on the history of cartography, cartobibliographies, regional histories, and exhibition catalogs.

The Mission

As an integral part of a comprehensive regional university, the Osher Map Library is committed to sharing its collection with a broad constituency by means of exhibitions, publications, lectures, conferences, and other special events. It encourages collaborative efforts with other institutions including museums, historical societies, and teaching institutions ranging from primary schools to the university level. It serves the University community and residents of Maine and northern New England, including the general public and local school systems. Indeed, by means of its Web site, it serves the global community of scholars and researchers.

The Facilities

The Osher Map Library is located on the ground floor of the Glickman Family Library on the Portland campus of the University of Southern Maine. In addition to the collections and reference materials, the Osher Map Library contains exhibition areas, a seminar room, and facilities for research and study. The Osher Map Library provides access to its resources to the general public and scholars alike.

Osher Map Library
Smith Center for Cartographic Education
University of Southern Maine
P.O. Box 9301 / 314 Forest Avenue, Portland, Maine 04104-9301
(207) 780-4850 or (800) 800-4876 ext. 4850
Fax: (207) 780-5310 / TTY: (207) 780-5646

www.usm.maine.edu/maps



Smith Center for
Cartographic Education

UNIVERSITY OF
Southern Maine