



ANTIPODES

In Search of the Southern Continent

AVAN JUDD STALLARD

*Psitacorum regio,
sic à Lusitanis appellata ob in-
credibile eorum animum ibidem
magnitudinem.*

I S N O N D V M C O G N I T A .

Antipodes: In Search of the Southern Continent is a new history of an ancient geography. It reassesses the evidence for why Europeans believed a massive southern continent existed, and why they advocated for its discovery. When ships were equal to ambitions, explorers set out to find and claim Terra Australis—said to be as large, rich and varied as all the northern lands combined.

Antipodes charts these voyages—voyages both through the imagination and across the high seas—in pursuit of the mythical Terra Australis. In doing so, the question is asked: how could so many fail to see the realities they encountered? And how is it a mythical land held the gaze of an era famed for breaking free the shackles of superstition?

That Terra Australis did not exist didn't stop explorers pursuing the continent to its Antarctic obsolescence, unwilling to abandon the promise of such a rich and magnificent land till it was stripped of every ounce of value it had ever promised. In the process, the southern continent—an imaginary land—became one of the shaping forces of early modern history.

About the author

Avan Judd Stallard is an historian, writer of fiction, and editor based in Wimbledon, United Kingdom. As an historian he is concerned with both the messy detail of what happened in the past and with how scholars “create” history. Broad interests in philosophy, psychology, biological sciences, and philology are underpinned by an abiding curiosity about method and epistemology—how we get to knowledge and what we purport to do with it. Stallard sees great benefit in big picture history and the synthesis of existing corpuses of knowledge and is a proponent of greater consilience between the sciences and humanities. He lives with his wife, and dog Javier.

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AVAN JUDD STALLARD



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DEDICATION

To Mum, for your support, belief, and patience.
Now when someone asks what the boy's been up to
for the last 15 years you can point to this and tell them
he's been searching for the southern continent.

Preface

IMAGINING GEOGRAPHIES

It is not given man to envisage reality. His is the greater gift to brood over chaos and shape it as he will.

*Clark Firestone*¹

The Age of Discovery is known as much for feats of exploration as acts of discovery. Stories of variously brave and foolhardy explorers pursuing grand ideas of irresistible geographies are legion; many of these geographies and the expeditions in their pursuit continue as part of modern lore: treks through jungle and desert toward the Mountains of the Moon, voyages chasing ice through a Northwest Passage, the unending quest for Solomon's gold-rich mines. Their histories comprise true stories about imagined geographies—geographies constructed in rich detail in the mind's eye regardless of whether they do or do not have a real-world equivalent.

The remarkable thing about the many imagined geographies of the early modern period is that these invented entities were conjured with such likeness to existing geographies and yet such promise of surpassing all that was had and known, that people were driven to commit their lives to their discovery. In the history of those willing to seek out the geographical entities they held true, only a fraction went on to find a reality amenable to their preconceptions; those few were rewarded with glory, vindication and remembrance

¹ Clark Firestone, *The Coasts of Illusion: A Study of Travel Tales* (New York: Harper and Brothers Publishers), p. 377.

among the great explorers. For the greater number who failed in their quests for an imagined geography—there was only truth, though even that was infrequently appreciated.

This book is about one such imagined geography. A place that existed in the minds of humans both because and regardless of physical reality: the great southern continent.



The name of Charles Sturt is little known outside the oldest continent, but, to an Australian, Sturt's exploits make him one of the great explorers. Like so many of his ilk, this is both because and in spite of his dogged pursuit of an imagined geography. In 1844 Sturt embarked on a quest of fancy and folly as spectacular in scope as it was cruel in its execution: thirteen gruelling months on foot, thousands of miles covered, and the veil lifted on some of the least hospitable environs of the world in the search for a Mediterranean-style sea in the harsh Australian interior. So sure was Sturt that a navigable inland sea must exist, he dragged a boat across countless miles of stones, sand and desolation, his hopes and expectations always pushing ahead of the unpromising horizon. Suffice to say, Sturt did not launch his vessel, his disappointment couched in the sort of stoicism we have come to expect from the great explorers.

Yet the fact of existence or non-existence and the history of pursuit is only ever half any story about the hunt for an imagined geography. Just as interesting and just as important is the fact that, before any audacious expeditions are embarked, people first figure upon the possibility of such geographies, and then, most stunningly of all, place their faith and trust in their actual existence. Even more extraordinary is that such belief rarely terminates at the intersection with reality. History shows that time and again faith trumps reality: unambiguous evidence is gathered that disproves the ideas or arguments about a particular geography, yet people go on believing anyway—believing

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in El Dorado, believing in an inland sea, believing in an eastern Eden. That is what makes these stories truly compelling: not the apparent folly of heroic explorers dragging whaleboats through the arid outback, but the facility of imagination and belief that generate geographies so real and so essential, they become more powerful than reality itself.

The mythical southern continent has always loomed as one of the most intriguing and most significant imaginative geographies of the recent past. Anyone with a passing interest in early modern cartography will have seen it at the bottom of ornate Renaissance maps—enormous, elusive and transfixing. The continent's list of names and guises suggests a pedigree that spans multiple ages and empires: Antipodes, Magellanica, Beach, the Great South Land, Austrialia del Espiritu Santo, Gonneville Land, Jave la Grande, Terra Australis, and the list goes on. In its various iterations, the mythical southern continent has been the single most potent receptacle for European geographical expectation about the southern hemisphere, and one of the shaping forces of early modern history. It pushed men to the farthest reaches of the earth in search of fame, riches, kingdoms, souls, and ultimately truth, in the process revealing worlds hitherto unimagined.

The question is why. To apprehend what happened in the search for a southern continent is nigh meaningless without understanding why it should have been so—why these people sought this imagined geography, why they so often failed to see the realities they encountered, and why this mythic continent held the gaze of an era famed for breaking free the shackles of superstition. To understand all of this is not merely to compare the real with the imagined, or discovery with expectation, but to try to understand the society, the era, and the individual as perceivers and constructors of reality. This is the work of geosophy: “the study of geographical knowledge from any or all points of view.”²

2 John K. Wright, “Terra Incognita: The Place of the Imagination in Geography,” *Annals of the Association of American Geographers* 37, no. 1 (1947), p. 12.

The idea is to follow a narrative from the primary perspective of epistemology rather than ontology; that is, of people's idea of the earth rather than the strict realities of it. The value of such an undertaking is summarised by J. Wreford Watson:

The geography of any place results from how we see it as much as from what may be seen there. Not all geography derives from the earth itself; some of it springs from our idea of the earth. This geography within the mind can at times be the effective geography to which men adjust and thus be more important than the supposedly real geography of the earth. Man has the peculiar aptitude of being able to live by notions of reality which may be more real than the reality itself. Thus mental images should be of prime importance to the study of geography.³

Around the beginning of the sixteenth century, in the span of just a few decades, the Antipodes transitioned from a subject of occasional conjecture—as it had been throughout ancient and medieval times—to a geography proclaimed real. Powerful, influential people started believing not just that a

3 J. Wreford Watson, "The Role of Illusion in North American Geography: A Note on the Geography of North American Settlement," *The Canadian Geographer* 13, no. 1 (1969), p. 10. Many historical geographers who can be loosely said to follow a geosophical framework of inquiry have contributed key ideas that have informed the present study. See John L. Allen, "An Analysis of the Exploratory Process: The Lewis and Clark Expedition of 1804–1806," *Geographical Review* 62, no. 1 (1972); John L. Allen, *Passage through the Garden: Lewis and Clark and the Image of the American Northwest* (Chicago: University of Illinois Press, 1975); John L. Allen, "Lands of Myth, Waters of Wonder: The Place of the Imagination in the History of Geographical Exploration," in David Lowenthal and Martyn J. Bowden (editors), *Geographies of the Mind: Essays in Historical Geosophy* (New York: Oxford University Press, 1976); John L. Allen, "Introduction to Volume I," in John L. Allen (editor), *North American Exploration, Volume I: A New World Disclosed* (Lincoln: University of Nebraska Press, 1997); James P. Ronda, *The Exploration of North America: Essays on the Columbian Encounter* (Washington: American Historical Association, 1992); Martyn J. Bowden, "The Invention of American Tradition," *Journal of Historical Geography* 18, no. 1 (1992); Francesc Relaño, *The Shaping of Africa: Cosmographic Discourse and Cartographic Science in Late Medieval and Early Modern Europe* (Aldershot: Ashgate, 2002); Clark B. Firestone, *The Coasts of Illusion: A Study of Travel Tales* (New York: Harper and Brothers Publishers, 1924); J.D. Overton, "A Theory of Exploration," *Journal of Historical Geography* 7, no. 1 (1981); Wright, "Terra Incognita"; John K. Wright, *The Geographical Lore of the Time of the Crusades: A Study in the History of Medieval Science and Tradition in Western Europe* (London: Dover Publications, 1965); John K. Wright, *Human Nature in Geography: Fourteen Papers, 1925–1965* (Cambridge: Harvard University Press, 1966).

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southern continent might exist, but that a southern continent does exist. So the question is: what changed?

A second issue relates to the inevitable result of belief in a geography that does not exist: people set out to discover it, only to find it is not there. Yet from the sixteenth through eighteenth centuries, people kept on believing anyway, despite coasts of the southern continent being sailed through and disproved time and time again. Until the voyages of James Cook, there was no amount of violence that could be done to the imaginary southern continent sufficient to stop people believing.

This book, then, is focused on addressing two elements of a single question: why did people believe, and why did people continue believing, in a great southern continent? The nuances of an adequate answer demand the remainder of this book's pages, but at the heart of it all is a simple proposition. People believed in the southern continent because they wanted it to be real—it was a geography worth believing in. People then continued to believe in the southern continent in the face of overwhelming proof of its non-existence because authorities on the matter had always taught that it was real, and people still wanted it to be so.

There is a danger that this concept, so simply stated, may appear facile and mundane. States of mind, dispositions, tendencies, historical patterns—they can easily be described in a few words or a few sentences, and as a result seem obvious, devoid of any real insight. It is only once you see how those patterns or dispositions play out in terms of the elaborate web of things that people do and conspire to do, that they start to mean something. Thus, the concept might be a simple one, perhaps even making for a basic historical truism—that people (then as now) choose to believe in things that seem worth believing in, and they then work to make those things real—but it is a concept that takes on enormous meaning and significance when it is seen how this has shaped a history that begins in the second century BC and ends in the furious two decades of voyaging that mark the 1760s and 70s.

The focus of this book is the Western tradition during the early modern period—the period when the southern continent transitions from a conceptual entity engaging intellectual curiosity, to an entity of indeterminate geography but cosmographic certitude.⁴ It is the period in the history of the southern continent when the possible became the probable and the probable became, for all intents and purposes, real.⁵

4 The term cosmography, as used in this work, relates to the enterprise of sketching a complete picture or conception of the earth's geographies in their entirety. Geography concerns the physical features of a region. The term imaginative geography refers less to the characteristics of a region than to the way in which it is conceived; an existing, corporeal geography can nevertheless be part of an imaginative geography based on how people perceive, interpret and conceptualise that space or place. Any attempt to more rigidly delineate these terms runs afoul because attempts to communicate understandings about place and space are unavoidably coloured by the imprecision of perception and mediation.

5 There is, nevertheless, much to be said about the ancient and medieval periods. As starting points, see Wright, *The Geographical Lore of the Time of the Crusades*; Rudolf Simek, *Heaven and Earth in the Middle Ages: The Physical World before Columbus*, trans. Angela Hall (Woodbridge, 1996); Alfred Hiatt, *Terra Incognita: Mapping the Antipodes before 1600* (London: University of Chicago Press, 2008); Avan Stallard, "Origins of the Idea of Antipodes: Errors, Assumptions, and a Bare Few Facts," *Terrae Incognitae* 42, 2010. Also note that there is some discussion of Antipodes in non-Western scholarship of the early modern period, mostly derivative or syncretic of Western materials. As these materials have little or no bearing on the Western tradition they are not discussed.

WHAT EXISTS BEYOND

... truth isn't the reward of free spirits, the child of protracted solitude, not the privilege of those who have succeeded in liberating themselves. Truth is a thing of this world: it is produced only by virtue of multiple forms of constraint.

*Michel Foucault*¹

Armed with meagre knowledge of geographies over the horizon, and even less understanding of the universe beyond, somehow the ancients were able to conjure the extravagant hypothesis of southern-hemispheric lands.

The ancient Greek philosophers knew little about the geographies that would one day be found across the earth. To them, the known world (or *oikoumene*) encompassed the Mediterranean and surrounding lands. The totality of geographical knowledge extended to a mere fraction of the globe's surface (see Figure A).² That it was a globe at all was a revelation, one that required the deductive thinking for which the ancient Greeks became famous. Just whether it was the sort of knowledge a layperson possessed is not known, but through the fourth century BC enough philosophers were discussing the concept of sphericity—Aristotle and Plato among them—that it soon assumed the mantle within scholarship of cosmographic

1 Michel Foucault, *Power* (New York: New Press, 2000), p. 131.

2 James S. Romm, *The Edges of the Earth in Ancient Thought: Geography, Exploration, and Fiction* (Princeton: Princeton University Press, 1992), pp. 9–25.



Figure A. This map represents the range of knowledge articulated by Hecataeus of Miletus, circa sixth century BC. The representation is based on written, not graphic, sources. Map based on an original by Edward Herbert Bunbury, *A History of Ancient Geography among the Greeks and Romans from the Earliest Ages till the Fall of the Roman Empire*, 2 vols., vol. 1 (New York: Dover Publications, 1959 [original 1883]), p. 148. This version by Bibi Saint-Pol, released as public domain, available from http://en.wikipedia.org/wiki/File:Hecataeus_world_map-en.svg.

orthodoxy.³ In the third century BC another important piece of information came to light when, based on an ingenious method, Eratosthenes proffered a new calculation of the circumference of the earth. His calculation was remarkably accurate.⁴ Combined, these three pieces of knowledge revealed to the Greeks what it was they did not know: if the earth is huge, round like a ball, with the lands and seas of the *oikoumene* occupying but a fraction of its surface, then something must exist beyond—but what?

The question of what exists beyond the bounds of present knowledge—be it in the realms of geography, divinity, astronomy, teleology or countless other fields of wonder—has been the unceasing driver of imaginations for as long as humans have possessed writing. That the ancients did eventually hypothesise lands on the other side of the globe is, perhaps, surprising more for the late

3 See William Arthur Heidel, *The Frame of the Ancient Greek Maps* (New York: Arno Press, 1976 [original 1937]).

4 Aubrey Diller, “The Ancient Measurements of the Earth,” *Isis* 40, no. 1 (1949), pp. 7–9.

INTRODUCTION

date at which it came than the fact they should have reached such a position. Based on contemporary knowledge, there were, after all, only three likely possibilities for the composition of the southern hemisphere: land, water, or land and water. The prospect of unknown lands carried the potential fascinations of new worlds; the prospect of endless seas promised nothing.

As for just who it was to first ask the question and offer the answer of a southern continent, historians cannot be sure. It was not Pythagoras, and nor is there any evidence for priority in the frequently misunderstood writings of Plato and Aristotle. The man who brilliantly calculated the earth's circumference—Eratosthenes—is a possible candidate, but his extant writings are inconclusive.⁵ The fact is, because most ancient treatises have not survived the ravages of time, only a skerrick of ancient knowledge is now known. Trying to establish chronologies, let alone determine the progenitor of a given idea, is fraught with difficulty and often leads to misattribution. Conclusions about priority may reflect no more than the earliest extant work, or the most popular work that followed others breaking new ground.

With those caveats established, the most defensible candidate for progenitor of the idea of southern lands is Crates of Mallos, a scholar of the second century BC who not only posited the possibility of southern lands, but argued for their actual existence. Crates' original works are lost, but he is known through Strabo, writing two centuries later, commenting with what scholars trust is fidelity on what are hoped to be Crates' original words and not those of one or more intermediaries. The surprising thing about Crates is that he was not a famed cosmographer pushing the bounds of his discipline; he was a respected Homeric scholar who conjured southern lands as part of his efforts to mount a defence of Homer's sixth-century epic, *Odyssey*.

To impugn the cosmographical coherency of the *Odyssey* would have been to impugn the wisdom of its author, a state of affairs Crates repudiated. The confounding passage appears in Book I of the *Odyssey* and seems innocuous

5 For a fuller discussion of this subject see Stallard, "Origins of the Idea of Antipodes," pp. 35–38.

at first glance: “the Ethiopians that are sundered in twain, the uttermost of men, abiding some where Hyperion [the sun] sinks and some where he rises.”⁶ However, an issue arose because Homer authored this remark in the sixth century BC, before it was known that the earth was a sphere. Crates was now compelled to make sense of this statement in full cognisance of second-century BC knowledge. At that time, the “Ethiopians” were considered to be those humans inhabiting the African part of the *oikoumene* in the land called Libya (see Figure A). In order to sunder the Ethiopians in twain—or separate them into two groups—Crates conjectured a geographical barrier that effected this separation. That geographical barrier would be the great river Ocean that Homer and many other philosophers mention. Crates’ positioning of that barrier turned on the belief that no people could live in the sun-scorched equatorial “torrid zone”; thus, Crates posited Ethiopians in the distant “temperate zone” of the southern hemisphere, sundered from the *oikoumene* by a river Ocean running along the equator (see Figure B, a diagram representing the ancient Greek zonal theory of climate).

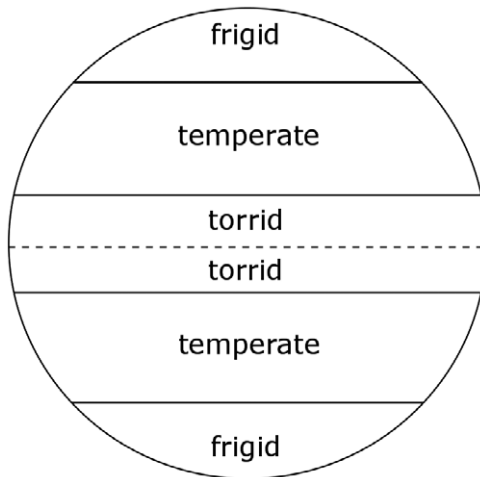


Figure B. Representation of the theory of zones in its simplest version. Only the temperate zones are, in principle, habitable. Drawn by the author.

6 Homer, *The Odyssey of Homer, Done into English Prose*, trans. Samuel Henry Butcher and Andrew Lang (New York: The Macmillan Company, 1906), p. 2.

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That gave Crates—and more importantly, Homer—two distinct landmasses, and two distinct groups of people, one in the northern hemisphere and one in the southern hemisphere. But there was more. The Ethiopians were said by Homer to abide both where the sun rises and sets, which is to say, in east and west. Crates interpreted this to mean that the group of Ethiopians in the southern hemisphere must, in fact, exist as two separate populations—separated by another river Ocean running north–south. In sum, then, the Cratesian cosmography found in Strabo’s *Geography* comprises, at the least, the *oikoumene* in the northern hemisphere, and two additional landmasses within the temperate zone of the southern hemisphere. It is possible that Crates also had a fourth landmass in mind, a counterpart in the northern hemisphere to the *oikoumene*, but if he did Strabo neglects to mention it.

What makes Crates’ role as progenitor in the history of Antipodes doubly important is that due to the scholarly rigour of Strabo we are afforded an explanation of the reasoning behind Crates’ conception of the earth. Why this should matter—and, indeed, why locating this progenitor is more than a matter of trivial interest—is apparent when one considers the current explanations for the ancient conjecturing of southern lands. The standard view is that the Greeks subscribed to a notion of cosmographic symmetry. Symmetry in ancient Greek times would entail the presence of either two or four landmasses: either an additional antipodal landmass on the opposite side of the globe to the *oikoumene*, or a landmass in each quadrant of the globe. Alongside this notion stands the equally popular explanation of hemispheric balance, or what is referred to in this book as the theory of *equipoisure*: a southern landmass was postulated because philosophers believed the earth would be imbalanced without a counter to the *oikoumene*. That is, the land-heavy north would topple over without an equally land-heavy south.

Modern representations (not reconstructions) of what a Cratesian map or globe might have looked like are now commonplace. To the best of knowledge, Crates only posited three landmasses on the sphere, and when it comes to their specific location all that is said is that there is one landmass (the *oikoumene*)

in the northern temperate zone, and two landmasses in the southern temperate zone. There is no indication of how far apart the latter two landmasses are, their configuration, size, shape and so on. We know almost nothing. If one was to map this cosmography it might look like Figure C (or something similarly austere) and should be clearly labelled as an original production, not as an actual reproduction of a globe produced by Crates about which nothing is known. Yet modern authors have ventured much more compelling maps than is justified, intimating very specific knowledge about Crates' cosmography that simply does not exist. Consider Figure D, an elegant drawing that presents a system of oceans and lands that look to be symmetrical, and includes a fourth continent. Such representations of Crates' globe have taken a lot of the attention away from the only existing evidence of Crates' cosmography, which is strictly limited to written texts.

The present ubiquity of these elegant but speculative maps accompanied by elegant but unsubstantiated explanations is what makes Strabo's record of Crates' reasoning so valuable. Crates conjectured the Antipodes as a matter of literary fealty; his Antipodes, and at least one other southern landmass besides, were created in an act of Homeric interpretation. Crates conjectured it, other scholars adopted the idea, and throughout antiquity and the Middle Ages no scholar had need for, and no scholar expressed, theories of symmetry or equipoisure.⁷ It was perfectly adequate for each succeeding generation of scholars to perpetuate the idea of southern land on the basis of tradition and authority alone. How or why modern historians came to believe that ideas of symmetry and balance drove this conjecture is not clear. From the first century BC the concept of a quadripartite cosmography is evident (that is, a landmass in each of the four quadrants of the globe). Perhaps the symmetrical agreement of this cosmography led historians to mistakenly assume that a commitment to symmetry was the actuating factor behind quadripartite cosmographies—thus misplacing effect as cause.

7 Benjamin Olshin has also identified the lack of evidence for a guiding principle of symmetry in Greek and Roman scholarship in his excellent but regrettably little-known thesis, Benjamin Olshin, "A Sea Discovered: Pre-Columbian Conceptions and Depictions of the Atlantic Ocean," PhD thesis (University of Toronto, 1994). For a more detailed discussion of the confusion around the ancient origins of Antipodes see Stallard, "Origins of the Idea of Antipodes".

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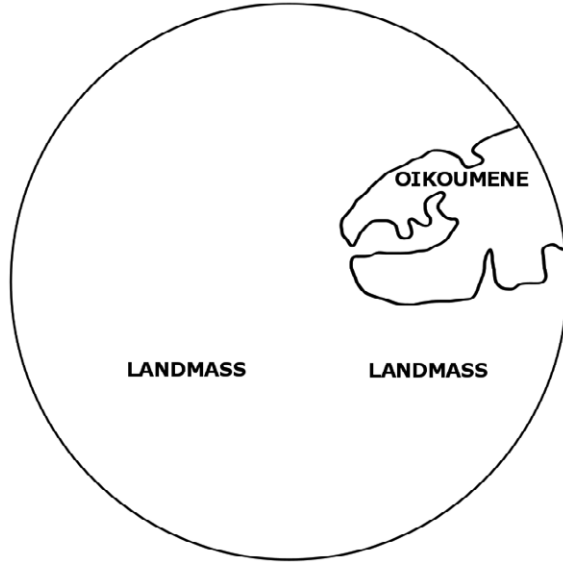


Figure C. One possible interpretation of Crates' cosmography, drawn by the author. This diagram is intentionally spare. It conveys information about Cratesian concepts, but is rather less inspiring than Figure D. It is not hard to imagine how more arresting maps might easily mislead.

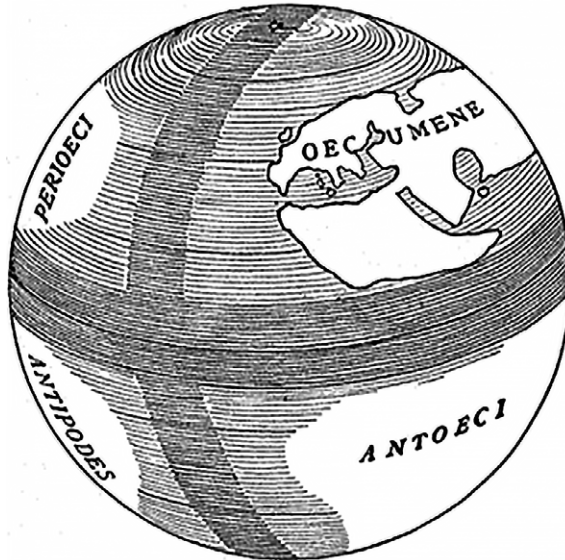


Figure D. Reconstruction of Crates' globe in Oliver J. Thomson, *History of Ancient Geography* (New York: Biblo and Tannen, 1965), p. 203.

As for the concept of equipoisure (hemispheric balance), it was not introduced into literature until the sixteenth century AD. In time it would play a role in the discourse of southern lands, though only at the very end of the Antipodean narrative when good reasons for believing in the southern continent were becoming harder to find. That the theory of equipoisure was not important in the first one thousand nine hundred years that the concept of Antipodes was around is a jarring proposition, but a few uncontroversial facts offer quick confirmation. The notion of balance relates to movement—if something lacks balance then it is liable to move, in the globe's case perhaps topple, perhaps roll away into space, perhaps just spin with an unpleasant wobble. Throughout the medieval Christian era and right up to the seventeenth century there were certain biblical tenets that were not to be challenged. Chronicles 16:30: "The world is firmly established; it cannot be moved." Psalms 104:5: "Who laid the foundations of the earth, that it should not be removed for ever." Building upon the dominant ancient conceptions of geocentrism, this is the era of the fixed earth. It was not that the earth did not move, it was that the earth could not move—what God fixes stays fixed. In such a paradigm the earth could be as misshapen as an old basketball torn at the seam, bladder bulging out, and it would still not tumble, nor roll, nor wobble. A fixed earth, whether due to theories of geocentrism or biblical inerrancy, is impervious to the quibbles of equipoisure, a concept that did not firmly take hold until after Copernicus, Galileo and others had argued the case for heliocentrism.⁸

The point to explaining what people did not believe goes back to one of the driving questions outlined in the preface: if the idea of a southern continent persisted as an abstract, amorphous cosmographical postulate for the better part of two millennia, what was it in the first few decades of the sixteenth

8 The detailed reasoning behind these conclusions about symmetry and equipoisure is available in Stallard, "Origins of the Idea of Antipodes," and Stallard, "Antipodes to Terra Australis," PhD thesis, University of Queensland, 2011. It is relevant to note that the former article is, to the best of my knowledge, the first published work to challenge the role of symmetry and equipoisure in the context of belief in a southern continent (noting, of course, the earlier unpublished comments in Olshin, "A Sea Discovered"), and as such these arguments await challenge or corroboration from other historians.

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century that caused this postulate to form into one of the most extravagant geographies ever imagined, thereafter attracting obsession, devotion and unwavering belief? Denied the explanations of symmetry and equipoise, new avenues of inquiry are not just opened, but demanded. Evidence can be examined afresh; standing interpretations of important events can and should be challenged; context becomes essential in piecing together the motivations and understandings of peoples and periods.

The first piece of the puzzle is establishing why ancient knowledge lasted till the early modern period, and why that knowledge was actively sought and used by the early moderns. While Crates originally proposed a concrete vision of peoples and lands, in the centuries that followed the question of southern hemispheric lands was treated as an open inquiry by most scholars. The Antipodes operated not as a place at that point in history, but a space: intangible, unknown, unknowable. Observe the comments of Cleomedes (thought to have written sometime between the first century BC and 44 AD) who posits other lands and other peoples on the basis of theory and reason:

The theory of Nature teaches us that circumhabitants, antipodes, and contrahabitants must exist, since none of these are described by direct reports. We simply cannot travel to our circumhabitants because the Ocean separating us from them is unnavigable and infested by beasts; nor to the inhabitants of the contratemperate zone, since we cannot traverse the torrid zone. Yet the regions of the Earth that are equally temperate are necessarily inhabited to an equal extent, given that Nature loves Life, and Reason requires that all of the Earth, where possible, be filled with animal life, both rational and irrational. (1.1.262)⁹

As is the case with a number of scholars, Cleomedes makes clear to his readers that antipodality is a normal and necessary fact of spherical geometry:

⁹ Cleomedes, *Cleomedes' Lectures on Astronomy: A Translation of The Heavens with an Introduction and Commentary*, ed. and trans. Alen C. Bowen and Robert B. Todd (Berkeley: University of California Press, 2004).

Our antipodes become contrahabitants of our circumhabitants, since such relations resemble those of friends and brothers, rather than those of fathers and children, or slaves and masters; that is, they convert, in that we become circumhabitants of our circumhabitants, antipodes of our antipodes, and similarly contrahabitants of our contrahabitants. (1.1.209)¹⁰

So Europeans are antipodeans, too. Indeed, we are all antipodeans to some-one, a relativist concept that predates postmodernity by millennia.

It is no coincidence that the various terms employed by scholars like Cicero (first century BC), Geminus (first century BC), Martianus Capella (fifth century AD) and Cleomedes to describe the different lands of the earth evoke spatial conceptualisations.¹¹ Breaking down Cleomedes' terminology, *perioikoi* refers to circumhabitants, *antoikoi* to contrahabitants, *antomoi* to shoulder dwellers, and *antipodes* to opposite dwellers. This is the language of space and geometry, not place and geography. The Antipodes was an idea lacking facts, legends, and the stuff of covetous imaginations.

Consider the fraudulent *Travels of Sir John Mandeville* (circa 1357), an audacious and wide-roaming book with few of the factual limitations of a real travelogue. On his travels the fictitious Mandeville claimed to have encountered the famous Sciopodes of giant-foot-attached-to-head fame ("a marvel to see"); he caught fish from a vast sea of gravel and sand ("very tasty to eat"); he even visited a valley inhabited by hordes of devils ("out of his nose and

10 Cleomedes, *Cleomedes' Lectures on Astronomy*.

11 For instance, Cicero's (106–43 BC) "Dream of Scipio" which comes to us through Macrobius's commentary on this text reads: "You see that the earth is inhabited in only a few portions, and those very small, while vast deserts lie between those inhabited patches, as we may call them; you see that the inhabitants are so widely separated that there can be no communication whatever among the different areas; and that some of the inhabitants live in parts of the earth that are oblique (*obliqui*), transverse (*transversi*), and sometimes directly opposite your own (*adversi*) ... Besides, you will notice that the earth is surrounded and encircled by certain zones, of which the two that are most widely separated, and are supported by the opposite poles of heaven, are held in icy bonds, while the central and broadest zone is scorched by the heat of the sun. Two zones are habitable; of these the southern (the footsteps of whose inhabitants are opposite to yours) has no connection whatever with your zone." (Marcus Tullius Cicero, *De Re Publica De Legibus*, trans. Clinton Walker Keyes (London: William Heinemann, 1970 [original 1928]), pp. 273, 275.)

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mouth comes so much fire of different colours with such an awful stench”).¹² Just about the only two places Mandeville did not claim to visit were Paradise (“I have not been there; and that I regret”), and the Antipodes (the fourth part of the world, whereas “I have seen three parts of it”).¹³ In essence, the ancient and medieval Antipodes were even less tangible than the Sciopodes that sometimes inhabited it: it was an idea sans form, in no way real. Yet once the die had been cast, the Antipodes were perpetuated in scholarship by dint of the respect for pagan learning that persisted throughout the Middle Ages in works of scholars like St Augustine, Capella, Macrobius and Isidore. As both an intellectual curiosity and an article of wisdom, the concept of Antipodes passed from Greek to Roman to Christian scholars.¹⁴

That this knowledge still retained currency at the turn of the sixteenth century is because, in the early modern period, ancient knowledge was venerated for its antiquity and pedigree. Wherever new could be reconciled with old, it was. What is more, as a new age was dawning—the Age of Discovery—ancient cosmographical reckonings became increasingly important, for they seemed to offer ready hints as to the composition of an earth full of surprises. With geographical horizons expanding at a dizzying pace through the series of remarkable maritime discoveries that mark the start of the early modern period, what the world looked like and how one might profit from that knowledge became central pursuits of cosmographers, cartographers, kings and queens, explorers and entrepreneurs alike. New worlds were opening up and, for those driven to make sense of it all, the idea of Antipodes became a crucial tool as they set about organising the chaos of geographical fragments foisted upon them into some sort of cosmographic order. During this period

12 John Mandeville, *The Travels of Sir John Mandeville*, ed. C. Moseley, trans. C. Moseley (London: Penguin Books, 1983), pp. 118, 169, 173.

13 Mandeville, *The Travels*, pp. 128, 184.

14 For more information see Gabriella Moretti, “The Other World and the ‘Antipodes’. The Myth of the Unknown Countries between Antiquity and the Renaissance,” in Wolfgang Haase and Meyer Reinhold (editors), *The Classical Tradition and the Americas: European Images of the Americas and the Classical Tradition, Part I* (Berlin: Walter de Gruyter & Co, 1993) pp. 242–284; Alfred Hiatt, *Terra Incognita: Mapping the Antipodes before 1600* (London: University of Chicago Press, 2008).

empirical data was eagerly sought after, but it must be kept in mind that these early cartographers, cosmographers, raconteurs and entrepreneurs operated in a paradigm where conjecture and adherence to tradition was an accepted part of intellectual culture. That was, indeed, the very nature of the cosmographical enterprise: to extrapolate and postulate based on available empirical evidence combined with theory, tradition and desire. Where data was wanting, other forms of knowledge were sought and trusted. The rigid delineation between the verifiable and empirical on the one hand, and the conjectural and unfalsifiable on the other—so common and important in modern times—simply did not exist in earlier times.

Because cosmography rapidly became the obsession of a dawning era, the ancient concept of Antipodes was eagerly appropriated to bring order and holism to a confused image of the globe. Of course, this early willingness to embrace the concept of a southern continent could easily have been jettisoned before it became entrenched as a part of the new global reality. There were other ideas about the composition of the earth, and however strong the desire to venerate ancient knowledge, patently fanciful constructs demanded no devotion. That the southern continent did demand devotion, that this cosmographic construct did not fritter away as so many antique curiosities, is due to an event of unparalleled fortuity—the single most important event in the history of the mythical southern continent. In 1519 a stubborn explorer named Ferdinand Magellan persisted in the face of mutiny and disaster to execute a voyage that proved the existence of a passage south of the Americas connecting the Atlantic and Pacific. That passage, known from that point as the Straits of Magellan, was flanked by the American mainland to the north and some hitherto unknown land to the south. It was exactly as cosmographical conjecture had supposed, proof positive, it seemed, that the ancients had indeed possessed insight beyond their paltry geographical horizons. It was considered confirmation of the existence of a magnificent southern continent. That it was in fact none of these things is important only to historians looking back and analysing what happened and how it came to be. Perception creates

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its own reality, and in the early sixteenth century the southern continent—corroborated in spectacular fashion—*was* the new reality.

That is to say, real, but unknown. It brings to mind the phrase coiled across countless southern continents in the cursive script of irony-free cartographers: *Terra Australis nondum cognita*. The translation varies with the specific Latin phrasing, but the message was consistent: the southern continent not yet known, the southern continent not yet discovered. The implication is unambiguous: while it may not be known, it is known to exist. While it is not yet discovered, it awaits discovery. These were not suggestions of possibility; they were promises of reward to the suitably industrious and bold. Just what form existence would take, nobody could be completely sure. Nevertheless, more than a few offered suggestions. Reasoning by analogy, extrapolating from the known and nearby, projecting from understandings of climatic zones, postulating based on latitudinal determinism, enlarging rumour, employing deductive reasoning based on fragments of geographical data, resorting to imagination precipitated through the filter of desire—that is how the southern continent came to take form. It was not a form fixed and unchanging like the geocentric earth of God's creation; the southern continent would change based on what was known and desired, and was the more potent for it. Even better, the form was tangible, the sort of form that could be described in instructions to explorers and navigated toward with the maps of cartographers.

Those maps—or a representative selection—appear in just about every history that broaches the story of the southern continent, and for good reason. The map was not a mere expression of cosmographic ideas, but rather a driver, constructor and communicator of cosmographic ideas. By 1531 the world map of Oronce Finé already boasted a southern continent possessing the hallmarks of a real geography: mountains, regions, rivers, inlets, a variegated coast—all that is required to make a conjectural land seem real. By the time Mercator constructed his world map of 1569 there was wide agreement on various of the forms and characteristics of the southern continent; Mercator

took that to a new level, offering unparalleled geographical detail with the buttress of reasoned justification. A wealth of empirical information was combined with ancient learning for each element of his representation. The stunning expression of those ideas—words married to images—was all included on an enormous world map that became the definitive announcement of the southern continent's transition from space to place. The amorphous and abstract Antipodes was no more, replaced by the tangible verisimilitude of Terra Australis.

It was around this time that the world was once again starting to feel small, inadequate to the imperial and commercial designs of competing European powers. But while most corners of the globe had been discovered and claimed, the southern continent remained tantalisingly out of reach. Explorers and their backers soon set their sights squarely on the discovery of Terra Australis—though not the continent in its entirety. It was the warm, lush, bountiful parts of Terra Australis beneath Java and throughout the southern Pacific that interested the Europeans, not the cold misery apparently already known on the southern side of the Magellanic Strait. The first to set out were the Spanish with an expedition in 1567 seeking a combination of land, souls and riches. They discovered the Solomon Islands—not entirely devoid of promise, but hardly what they were seeking. The voyage was judged a disappointment. Nevertheless, there always seemed to be something that pointed to future discoveries that would fulfil all expectation.

In that first 1567 voyage it was the promise of gold: the Spanish could not speak the language and did not share the culture, but, upon showing the Pacific Islanders examples of golden nuggets, they divined from conversation and gesticulation confirmation of the presence of gold. So it was that the gold-poor Solomon Islands would forevermore wear the moniker of a biblical king remembered for his golden mines. In 1606 it was the promise of a subtropical continent fashioned from a visit to Vanuatu, a land that seemed so promising as to be honoured with the name of New Jerusalem, yet in reality so disappointing as to be swiftly abandoned and fled by the Spanish following

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a string of deaths and misadventure; the subsequent name—Terre de Quir—was the more enduring, representing the many hopes for a Pacific continent. In 1616 it was a new promontory to the southern continent seen south-east of Magellan's Strait in the rugged northern coast of Staten Island: undeniably a formidable island, but an island nonetheless. In 1642 the northern coasts of New Zealand were chanced upon, along with displeased Maoris; the captain's first conclusion was the one preferred by European cosmographers, being that the land was, as likely as not, the distant western side of the temporarily continental Staten Island. In 1739 it was more land: a tiny spec of rock in an enormous landless ocean, so small that with a good jacket and crampons you could walk the circumference of the ice-covered extinct volcano in a day; now known as Bouvet Island, it nevertheless became the South Atlantic promontory of *Terres Australes*. In 1764 it was animal, plant and human portents in the Tuamotu Archipelago of the South Pacific that forecast the discovery of a reduced but still commercially and strategically valuable southern continent. And in 1767 it was a distant cloud bank seen beyond the islands of Tahiti that was moulded into enough rock and dirt to form *Terra Australis*.

Journals, accounts and scholarly treatises often describe that which is believed to exist, rather than that which does. Yet there is always data that cannot be consciously or subconsciously massaged to fit an existing conception, that requires a more dynamic and creative response. When Tasman sailed through the prospective coasts of *Terra Australis* in his expedition south of Australia there was no recovering that lost ground; it was permanently excised from the southern continent, and the coasts reshaped to fit the available space. That is how the southern continent persisted throughout the early modern period: so long as it was still worth believing in, and so long as there was a way to reimagine the continent consistent with contemporary knowledge, *Terra Australis* would retain a place in the cosmographical canon. However, by the late seventeenth century enough expeditions had ended in failure that the desire to seek out the southern continent was waning. Maps still sketched its borders and cosmographers still listed it in their books, but not a single

expedition had turned a profit or capitalised on an advantage as a result of seeking Terra Australis. The Dutch East Indies Company (VOC) knew this better than any. In 1645 their directors decreed that there were to be no more voyages of discovery—they would focus on enterprise that could reliably turn a profit. The rest of Europe adopted a similar stance, and for many years Terra Australis was left largely unmolested at the bottom of the map.

When the tide eventually turned and explorers once again set their sights on the southern continent it was for a combination of imperial, commercial, empirical, and scientific factors. Equipoisure finally played a role, articulated by the influential Frenchman Charles de Brosses; there was increasing evidence mounting against Terra Australis, thus theoretical proofs offered needed assurance. Yet it was another theoretical proof concerning a growing body of empirical data that proved much more decisive in reigniting designs for Terra Australis, a proof also articulated by Charles de Brosses. The data was of icebergs encountered by sailors in the southern latitudes. The theory concerned their formation: it was understood that ice, and certainly icebergs, could only form on land, the implication being that ice entailed nearby land. Based on the frequency and size of the bergs encountered in southern seas, it seemed that after all the disappointments there must nonetheless exist an enormous southern continent, a little colder than first hoped, but still worth discovering. A flurry of exploration followed, numerous discoveries were made, and yet the enigma of Terra Australis seemed no closer to being unravelled. It was at that point that the British Admiralty sent out James Cook.

Cook approached the task not with the conviction of a devotee, but with the fire of a true sceptic. He spent two expeditions scouring the southern latitudes with such merciless rigour as to completely extinguish the last lingering hopes for Terra Australis. It was not that he disproved the existence of a particular guise of Terra Australis—that had been done time and time again for centuries—it was that he left so little blank space on the map, and only the most frigid of climes to be explored, that there was nowhere left to reimagine the magnificent southern continent such that it was worthy of the label.

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Cook is also famed for discovering the eastern coast of Australia in 1770. That he should have done so was by no means inevitable, for on that first expedition his instructions were not to reconnoitre the emerging land of New Holland (Australia), but to discover the region of Terra Australis thought to lie in the southern Pacific. Cook eventually reached the Australian coast only because he had an insatiable geographical curiosity, and he had already completed the expedition's main objective, having found no evidence of a southern continent. Contemplating this hierarchy of objectives for Cook's expedition helps bring into relief the very real distinction between Australia and Terra Australis. In modern times Australia is often referred to as Terra Australis, the Great South Land, or any one of the many names associated with the mythical southern continent. It is a practice that conflates two entities into one when, within the discourse of the seventeenth and eighteenth centuries, Terra Australis and Australia were considered separate geographies. Both before and after Australia was known to exist, Terra Australis operated as a distinct geographical entity. Hence, while Terra Australis and Australia share parts of a history, they are no more synonymous than Terra Australis and New Zealand, Terra Australis and Tierra del Fuego, or Terra Australis and Vanuatu.

It is no spoiler to this history to note that the corporeal entity of Terra Australis did not and does not exist. It is a simple question of physics, of matter and time, of the ontology of what is materially there. Dr Johnson could kick a physical rock to purportedly refute the immaterialist arguments of Bishop Berkeley—*this it is, and thus we know it*—but there was no physical rock to be kicked in the name of Terra Australis, not after the manner in which it was imagined.

But in other ways the southern continent did exist. It existed as a concept, as an idea, as a geographical entity as real to its advocates as if it was rock and dirt. It was part of the intellectual landscape of the early modern period, its presence in cosmography determining many of the maritime exploits of the Age of Discovery. It was a defining influence right up until Cook sailed to the South Seas to declare, "I refute it thus!"

ANTIPODES: IN SEARCH OF THE SOUTHERN CONTINENT

The southern continent as you find it in the following pages has never existed as a corporeal entity, but in the not-too-distant past it was manifestly part of our reality.

THE WORLD AS PALIMPSEST

The mind will not tolerate a vacuum. When there is no knowledge there will be data; wish, desire, fear, and deductive thinking will provide them.

*Bernard DeVoto*¹

The horror of the void. This is a borrowed phrase used to describe the geographical and cosmographical imaginings observed in older societies; societies that go to great lengths to fill the unknown spaces of the world with places, whether they are the subject of conjecture, myth, or the whim of imagination. It is the anthropomorphic version of Aristotle's *horror vacui*: it is not nature, but mankind who abhors a vacuum. There is some obvious truth to this, for all societies attempt to make sense of their world, no matter how limited their knowledge or intellectual tools. But is this filling of the void the manifestation of a horror of that void—of anxiety and loathing—or something else? Perhaps it is not a sense of repugnance which makes humankind fill these voids, but a response to opportunity—the opportunity to affirm existence by creating an idea or an image that reflects how one sees self, community, civilisation.

Filling a void allows for the inscription of familiar and comforting beliefs, cultures, and geographies onto a blank slate. Consider the late nineteenth century when the broad strokes of the earth's geography were known—“this Globe has but few geographical mysteries; and it is losing its romance as fast as it is losing its wild beasts,” wrote Edward Arber—but other planets remained

1 Bernard DeVoto, *The Course of Empire* (Cambridge: The Riverside Press, 1952), p. 12.

mysterious.² Mars had become accessible through the power of the telescope, and so what had not long since been a blank slate was now able to be filled with a new geography. Successive geographers and cartographers, both scientists and amateurs, scoured the skies and reported what they saw: continents, mountains, ice caps, seas and built canals. It probably sounds familiar and, indeed, a glance at Figure 1.1 will suggest it looks somewhat familiar, too.

Giovanni Schiaparelli inscribed onto the landscape of Mars the same cartographic grid and same geographical features that had long defined images of our own planet. He was not sketching a planet anew; he was interpreting the unknown through the known. Thus, anyone who looked upon this Martian geography could not help but see our islands, our seas, our canals and, ultimately, the promise of our civilisation—for in essence it was no map of Mars, but a map of the earth overlain on Mars. Just consider how some scientists framed the question of the possibility of Martian life:

These facts ... lead us to speculate as to the kind of inhabitants there may be upon that far away world, and what they are doing; whether they are like ourselves. Are they devoted to science? Are they constructing immense telescopes and gazing at us, making maps of the Atlantic and Pacific Oceans and the eastern and western continents? Do they know whether, at the north pole of the earth, there is an open polar sea, or whether there is an undiscovered continent near the south pole? Are they a great race of engineers, and do they construct public works on a gigantic scale?³

We see ourselves everywhere. Sometimes it is a reflection, sometimes a refraction, and sometimes we look into the yonder and see our contrapart—what it is that we are not. Whatever the particular vision, geographical projections reveal more about the authors of those projections than about their subject.

2 Henri Pène du Bois, *The Library & Art Collection of Henry De Pene Du Bois, of New York* (Leavitt, 1887), p. 380.

3 H.C. Wilson, quoted in K. Maria Lane, “Geographers of Mars: Cartographic Inscription and Exploration Narrative in Late Victorian Representations of the Red Planet,” *Isis* 96, no. 4 (2005), p. 503.

When ancient and medieval scholars imagined the biblical Paradise, they imagined it to be an earthly geography like the most beautiful parts of Europe, except more wondrous and perfect. When St Augustine imagined the southern hemisphere in the fifth century, he rejected the idea of Antipodeans—because for his Christian world to exist no other civilisation could. The images of the world found in classical and medieval maps and books have a limited relationship to empirical inquiry. Rather, they demonstrate the subjective projection of the world as it was desired—and sometimes required—to exist, as determined by a given milieu in time and space.

Thus, there is no horror of the void to be found among classical or medieval geographers and cosmographers. The world appeared to these societies not as a ghastly vacuum, but as a palimpsest: a vehicle through which religious, cultural, cosmographic, geographic, cosmological, and historical ideas were expressed. If the earth you inherited from your peers and forebears was not equal to your purpose, then you could erase those bits which did not serve your designs or disagreed with your ideas, and inscribe your own in their place. There was little in the way of hard empirical geographical data to limit the earth's malleability; much more limiting was an individual's own precepts, be they religious, historical or otherwise. Thus, the world was a palimpsest: inscribed, erased and reinscribed, a different story told in every telling.

Of course, if this is all predicated upon lack of empirical knowledge, it would seem that this malleability could not pertain to the Age of Discovery, for empirical data of geographies near and distant began trickling and eventually flowing back into Europe from the early fifteenth century. Yet the metaphor of the world as palimpsest is just as relevant to the early modern period.

Many modern treatises of historical geography furnish, for the reader's edification, definitions of cosmography, geography, chorography and topography based on the pronouncements of the various alumni of the cosmographic discourses—ancient, medieval and early modern.⁴ The specific definitions

4 For example, see Herman Moll, *The Compleat Geographer: Or, the Chorography and Topography of All the Known Parts of the Earth* (London: Awnsham and John Churchill, 1709), pp. i–ii.

depend on the scholar cited, but they generally suggest that topography is the study of a particular place, chorography of a particular region, geography of the regions together, and cosmography of the whole of the earth. The pitfall of these types of definitions is that they give the impression that cosmography relates as an empirical science to each of the other fields. But it does not. So long as cosmography (as an earth science) has been a true subject of inquiry—for it ceased to exist as a field of scholarship centuries ago—it has always been chiefly concerned with what is not known. Cosmography fills in the gaps to connect known geographies with other known geographies, until there is a comprehensible whole: the earth. So long as there have been gaps between known geographies, speculation has been required to connect them; thus, cosmography was the composite of data plus speculation. Returning to the above definitions of cosmography and geography, they can be seen as two ways of saying the same thing: the whole of the earth is the equivalent of all the regions together. Thus, as the earth was more comprehensively explored, cosmography receded into irrelevance, for all that truly distinguished it from geography was speculation, and eventually there was little left to speculate about.

This means that in the early modern period the earth was yet a palimpsest, because the configuration of all the geographical regions of the earth as a composite whole remained one of the chief practical and intellectual pursuits of European civilisation. Each new unit of empirical data that became public required the addition of that data to geographical discourse, as well as a revision of cosmographical speculation. If Africa is shown to be an insular continent, then Ptolemy's speculated land bridge between Asia and Africa must be erased. If land is discovered in the distant south-west of the Atlantic, then new speculation is required: is it connected to the lands found further to the north, and is it connected to other southern lands? So each discovery entailed both addition and revision. What made this all the more challenging—and simultaneously all the more invigorating an intellectual pursuit—was the sheer volume of non-empirical authorities, containing a huge diversity of

often contradictory information, from which a comprehensible cosmography had to be moulded. A litany of ancient and medieval sources became available to industrious minds of the Renaissance. Thus, the task was one not just of interpretation, but of selection and construction. The inscription accompanying Martin Behaim's globe of 1492 gives a sense of the burden of authority weighing upon the cosmographer who had to interpret the data about Africa's extensive southerly aspect as revealed by Portuguese mariners throughout the fifteenth century:

Be it known that on this form of an apple [globe] here present is laid out the whole world according to its length and breadth in accordance with the art of geometry, namely, the one part as described by Ptolemy in his book entitled *Cosmographia Ptolemai*, and the remainder from what the Knight Marco Polo of Venice caused to be written down in 1250. The worthy Doctor and Knight Johann de Mandeville likewise left a book in 1322 which brought to the light of day the countries of the East, unknown to Ptolemy, whence we receive spice, pearls and precious stones, but the Serene King John of Portugal has caused to be visited in his vessels that part of the south not yet known to Ptolemy in the year 1445, whereby I, according to these indications this apple has made, was present.⁵

Another inscription in the Indian Ocean—a region for which Behaim had limited empirical data—gives an even better sense of the anachronism that underwrote cosmography. Behaim explains that: “Here are found sea-monsters, such as Sirens and other fish. If anyone desires to know more about these curious people, and peculiar fish in the sea or animals upon the land, let him read the books of Pliny, Isidore, Aristotle, Strabo, the *Specula* of Vincent and many others.”⁶ That is to say, let him consult the best thinkers from the fourth century BC, first century BC, first century AD, seventh century AD, and thirteenth century AD. Making sense of all this—part empirical data from exploration, part quasi-empirical information from rumour, and part

5 Relaño, *The Shaping of Africa*, p. 169.

6 Relaño, *The Shaping of Africa*, p. 171.

cosmographical theorising—was the formidable task of the early modern cosmographer. It was a game of trial and error, induction and deduction, science and art, played out across Europe in books, letters, merchant pioneering, maritime exploration and, above all, in maps and globes. This was the world as palimpsest.

Ptolemy in the Age of Discovery

In 1434, equipped with the naval technology of the caravel and medieval techniques of navigation, the Portuguese mariner Gil Eannes sailed beyond Cape Bojador—the southernmost marker of known and safe oikoumenical waters. Cape Bojador had long been confused with Cape Juby, a cape which posed a formidable barrier to explorers, said to be impassable for any number of reasons: boiling seas (the seas at the cape do in fact froth and eddy), scorching sun, dangerous coasts and currents (true enough), and the peril of sea monsters (even Satan himself appeared on an Arab map south of the cape—a sea monster of sorts). In comparison to the voyages of the following decades, Eannes had not travelled far down the African coast—it was only in the hundreds of nautical miles—but it was an act that proved that despite the most fearsome impediments to oceanic travel imagined to exist beyond the *oikoumene*, neither seas nor climes were absolute barriers to determined mariners. What also made Eannes' expedition important was his decision to forsake the practice of coasting the littoral, as he instead sailed well out of sight of land, into the waters of Ocean.

In writing about maritime direction finding, two separate practices and skillsets are often conflated under the one rubric of navigation. But as J.H. Parry explains, navigation is distinct from the much longer-standing practice of pilotage:

Navigation, roughly defined, is the art of taking ships from one place to another out of sight of land; pilotage, the art of taking ships from one place to another when land or navigational marks are in sight.⁷

7 Parry, *The Age of Reconnaissance*, p. 83.

Parry goes on to explain that, “In the late fifteenth and early sixteenth centuries navigation, so defined, was in its early infancy and was not regarded as a distinct technique.”⁸ It is easy to imagine, then, why seafarers were so anxious about the prospect of leaving known waters, or, worse, leaving sight of land: it meant that their finely honed skills of pilotage were no longer applicable, and their fates were largely in the hands of their captains or specialist navigators—men who, unlike themselves, learned their art only in part through sea-faring, and otherwise through book learning of astronomy and mathematics and the principles of navigation.⁹ In this sense, Eannes was a pioneer of navigation. To broach unfamiliar waters at substantial distance from land was a technique crucial to exploration, as by venturing farther from land a ship was subject to currents and winds that provided speed, which equalled distance. It also often meant ships ended up in unexpected places—places they did not even know existed. For example, by 1500 it had become known that along the equatorial west-African coast ships were likely to be inhibited by weak currents and winds. The better option was to take an arc into the Atlantic before turning with the winds south-east for the passage round the Cape of Good Hope. This is exactly what Pedro Álvares Cabral did in 1500 on a voyage to the Indies, but his arc into the Atlantic was much larger than normal, to the point where he ended up on the coast of Brazil—hitherto unknown to Europe.¹⁰

8 Parry, *The Age of Reconnaissance*, p. 83.

9 Parry, *The Age of Reconnaissance*, p. 84. In saying that seafarers were uneasy with the prospect of leaving the sight of land or known waters, this is not to imply that they never ventured onto the High Seas or left the proximity of the coast. For example, when crossing the Mediterranean or venturing to the Azores sailors willingly took to open-waters—but they did so knowing from exactly where they had departed and the necessary bearing to reach their destination, pursuing that course, so far as practicable, along a path of constant-bearing. They were assisted in this by portolans—local maps showing “known courses and distances between major harbours and principal landmarks; distances were measured in miles, not in degrees, and courses shown in the points or winds of the magnetic compass.” (Parry, *The Age of Reconnaissance*, pp. 101–102.) When in unknown waters the principal reassurance sailors had was the sight of land; by taking to the High Seas they were more liable to become lost and encounter unexpected obstacles.

10 William Brooks Greenlee, *The Voyage of Pedro Alvares Cabral to Brazil and India: From Contemporary Documents and Narratives* (London: Hakluyt Society, 1938), pp. lviii–lx. In similar circumstances, Dirk Hartog ended up on the West Australian coast in 1616—then unknown to Europeans—after the fierce winds of the Roaring Forties pushed him further east than expected on his journey to the Dutch East Indies.

In the years that followed Eannes' breakthrough, Portuguese explorers continued to pursue the prospects of sub-Saharan Africa, pushing incrementally further south with regular expeditions. By 1444 the Portuguese had reached Cape Verde; by 1482 they had reached the Congo; and by 1488 they finally rounded the southernmost tip of Africa. Like Eannes' initial breakthrough, these voyages were all in some way iconoclastic. Consider the Portuguese designate for the area of Africa first encountered by Dinis Dias in the zone which had been considered "torrid" since classical times: it was named Cape Verde, so-called because its verdure was a blessed relief from the formidable deserts stretching from today's Morocco to Senegal. So much for the burning sun of the equator and the desert land it creates; the "torrid" tropics proved a verdant marvel. As a result, the zonal theory of climate was revised; for example, it was undeniable that the torrid zone could be and was inhabited, but such was the intensity of the sun that it was believed a man's skin would be scorched black, as was seen with the equatorial Africans. What is more, when Diogo Cão sailed into the Congo River he not only proved that Africa extended well south of the equator, he could also report that formidable tribes lived there—with nary a sign of a monstrous race.

With Bartolomé Dias's rounding in 1488 of what he dubbed the Stormy Cape—later renamed Cape of Good Hope in recognition of the promise of Indian riches beyond—and then Vasco Da Gama's voyage in 1497 which took him round the cape, along the east African coast, and on to India, we see the culmination of something that had begun over half a century earlier with Prince Henry the Navigator's sponsorship of those first tentative voyages along the northern African coast.¹¹ For ocean-faring, Dias's and Da Gama's voyages proved that the journey from Europe to India on the High Seas was possible, even if it could take a perilous two years and involved passage through what became the most feared waters in the world around southern Africa. Da Gama, returning from India with a rich cargo of spices sold at a profit considered sufficient justification for the loss of two ships and the death

11 Fritze, *New Worlds*, p. 95.

of almost half his crew, also proved that it was a commercially viable sea route to the Far East.

These voyages afforded a cosmographical bounty, too, proving that there was no land bridge connecting Asia to Africa. There was ancient authority, as well as information from Arabic sources, suggesting that Africa was surrounded by waters to the south and could be rounded. But this information was overridden by the teachings contained in one of the most sophisticated texts of antiquity to be rediscovered in the fifteenth century: Claudius Ptolemy's *Geography*. Ptolemy flourished in the second century AD, producing a handful of important works from the richly lettered city of Alexandria in Roman-controlled Egypt. Among those works was a book on astronomy, the *Almagest*, and a work on geography and cartography, titled *Geography*. Ptolemy's *Almagest* was known to some in the Middle Ages, thanks to the derivative astronomical treatise of the ninth-century Arab scholar, Alfraganus, and translations which began appearing from the twelfth century. Ptolemy's *Geography*, on the other hand, fell into obscurity. It offered the most sophisticated cartographic models conceived to that time, but was lost to European learning until the beginning of the fifteenth century when a translation was produced from a copy brought from Constantinople. From that point of rediscovery, knowledge of Ptolemy grew quickly and his geographical treatise soon became a standard reference for works of geography. When in the late fifteenth century the technology of printing presses revolutionised the world of letters (allowing more books to be printed at cheaper prices), Ptolemy's *Geography* was duly put in print and its circulation soared, ensuring it became a seminal influence upon the men and societies at the forefront of the Age of Discovery.

Among the merits of the *Geography*, Ptolemy tackled the cartographic problem of flattening the globe, outlining three different methods for producing on a plane surface a world map which possessed geometric felicity. Moreover, he made central to each projection grid-references superimposed on the earth in the form of latitude and longitude. What he offered through

these models was a superior method for depicting location, magnitude and the earth from a single perspective.¹² Also important was Ptolemy's acknowledgment that maps were palimpsests: as better geographic knowledge became available, Ptolemy encouraged his readers to revise cartographic coordinates accordingly. A map should be a record of the accumulation of knowledge, in which case there is no such thing as a final version of a map:

in all subjects that have not reached a state of complete knowledge, whether because they are too vast, or because they do not always remain the same, the passage of time always makes far more accurate research possible; and such is the case with world cartography, too. For the consensus of the very reports that have been made at various times is that many parts of our *oikoumenē* have not reached our knowledge because its size has made them inaccessible, while other [parts] have been described falsely because of the carelessness of the people who undertook the researches ... Hence here, too, it is necessary to follow in general the latest reports that we possess, while being on guard for what is and is not plausible in both the exposition of current research and the criticism of earlier researches.¹³ (Book 1.5)

With this, Ptolemy recommended a model of cartography founded on a philosophy of accretion and revision of knowledge that would not be out of place in modern science. His other main contribution to knowledge through the *Geography* was a catalogue of places within the known world, delineated

12 Nevertheless, throughout the fifteenth and sixteenth centuries portolan charts remained the dominant cartographic instrument of navigators. This was the case up until Mercator outlined a far superior system in 1569, his projection allowing cartographers to flatten the globe without suffering the effects of loxodromic distortion—meaning that navigators could use a map to chart an accurate course using constant compass bearings. It was still several decades after this before chart-makers began to adopt Mercator's method for navigational charts.

13 Claudius Ptolemy, J. Lennart Berggren and Alexander Jones, *Ptolemy's Geography: An Annotated Translation of the Theoretical Chapters* (Princeton: Princeton University Press, 2000), p. 63. For an in-depth discussion of the reception of the *Geography* in the early modern period, see Patrick Gautier Dalché, "The Reception of Ptolemy's *Geography* (End of the Fourteenth to Beginning of the Sixteenth Century)," in David Woodward (editor), *The History of Cartography: Cartography in the European Renaissance, Part 1* (Chicago: University of Chicago Press, 2007), pp. 285–360.

according to latitude and longitude. This geographical data would influence geography and cosmography throughout the early modern period—as, for example, with the fabulous land of Cattigara that Ptolemy catalogued in the Far East, and which continued to appear on maps and guide the way new data was interpreted well into the sixteenth century.

If these were the gifts of the *Geography*, there was, too, false wisdom. Early modern Ptolemaic maps—produced to accompany editions of the *Geography* and to illustrate other geographical texts throughout the early modern period—provide a graphic representation of the most formidable item of geographical apocrypha endorsed by Ptolemy: a land bridge believed to connect eastern Asia with southern Africa (see Figure 1.2). This creates an enclosed Indian Sea, encouraging speculation about the extent of the southerly aspect to this *terra incognita*.

Though spectacularly disproved by the endeavours of Portuguese explorers, only gradually did cartographers eradicate this geography from their maps. In the world map of Henricus Martellus (*circa* 1489, see Figure 1.3) the southern tip of Africa extends far into the east, while the Cattigaran peninsula of eastern Asia extends far to the west—hangovers, both, from Ptolemy. The “Dragon’s Tail” of Cattigara continued to appear on maps for another half century.

On top of this, many modern scholars contend that Ptolemy’s concept of an enclosed Indian Ocean had a further long-term implication for cosmography and cartography, maintaining that his land bridge was the prototypical southern continent. These scholars believe that it is with this Ptolemaic land bridge that the southern continent finally gained magnitude, and, more importantly, gained through Ptolemy’s writings a theoretical justification for its existence in the form of the theory of equipoisure.¹⁴ But, in actual fact, Ptolemy makes no allusions to equipoisure or related concepts, and his so-called southern continent only has implied magnitude, given his geography is strictly limited

14 For example, Michael Pearson, *Great Southern Land: The Maritime Exploration of Terra Australis* (Canberra: Department of the Environment and Heritage, 2005), p. 6.

to the *oikoumene*. As mentioned earlier, a key element of Ptolemy's undertaking was to provide coordinates for regions to which he believed he possessed reliable information, and no other.

The consequence of this was that Ptolemy could not provide a complete cosmography. In sketching the limits of the *oikoumene* Ptolemy conceded that in parts of the north, south, east and west knowledge was incomplete, the borders constituted by "unknown land". The greatest gap in his knowledge was southern Africa ("Aithiopia"), but he nevertheless stipulated that a land bridge connected eastern Asia to southern Africa, thus enclosing the Indian Sea. He states that the Indian Sea is "contained by the *oikoumenē*", with "land on all sides": "Asia is connected to Libyē both by the land-strait at Arabia ... and by the unknown land that surrounds the Sea of India."¹⁵ (Book 7.5)

Does this vague southerly land bridge enclosing the Indian Sea equate to a Ptolemaic southern continent? Certainly modern authors have treated it as such, but without justification. If you imagine this land bridge stretching deep into the southern hemisphere—as moderns are wont to do because of our knowledge of later depictions of the southern hemisphere—then it is a prototype of the early modern vision of the southern continent. This impression is encouraged by Ptolemaic maps (maps interpreting Ptolemy's writings). However, like the reconstructed globes of Crates, no original Ptolemaic maps have passed down, and it is not even certain that Ptolemy ever actually created the sort of map which he describes in such detail.¹⁶ The maps by which Ptolemy is known are much later reproductions, and therein lies the problem. Ptolemy's simple prose is far less compelling than the visual representation of

15 Berggren and Jones, *Ptolemy's Geography*, p. 109. It is interesting to note the argument of Wilcomb Washburn who points to the way Ptolemy also referred to the Mediterranean as a closed sea, seemingly meaning no more than the Mediterranean was bordered by land on multiple sides. Washburn argues that Ptolemy intended the same when speaking of the enclosed Indian Sea, and did not, in fact, believe there was a land-bridge enclosing the Indian Sea. He also points to the problems inherent in any text that is not an original, but is rather a subsequent copy replete with any possible variety of mistakes, interpretations and interpolations. (See Wilcomb E. Washburn, "A Proposed Explanation of the Closed Indian Ocean on Some Ptolemaic Maps of the Twelfth–Fifteenth Centuries," *Revista da Universidade de Coimbra* 33 (1985).)

16 See Joseph Fischer's introduction in Ptolemy, *The Geography*, pp. 3–15.

those words. Thus, Ptolemaic-style maps are well known, whereas his actual comments remain obscure. These maps make it easy—irresistible, even—to imagine the southerly aspect of land extending ever further into the southern climes, whereas Ptolemy himself never encouraged any such notion.¹⁷ Indeed, such extrapolation subverts Ptolemy’s approach to geography by reckoning from the known to the unknown.

With the voyages of Dias and Da Gama, Ptolemy’s land bridge was demolished, but Ptolemy himself was left atop a pedestal by early moderns who had learned to venerate classical authority. Individuals like the Portuguese historian of exploration, João de Barros, could well exclaim, “Had I Ptolemy, Strabo, Pliny or Salinus here, I would put them to shame and confusion,” but in reality his peers continued to rely upon and accommodate the obsolescent knowledge of antiquity.¹⁸ The truth is that texts like Ptolemy’s *Geography* were venerated not merely for the quality of their learning—which in the case of the *Geography* was considerable—but also for their status as classical erudition. Tenets of ancient knowledge were periodically discarded as newly acquired empirical data made that knowledge untenable, but so far as possible ancient authority was accommodated—retrospectively moulded into the stuff of pre-cognition by interpreting it to fit in with the latest discoveries. The Portuguese historian and geographer Duarte Pacheco Pereira epitomises this process in his 1508 history of exploration and geography, the *Esmeraldo de Situ Orbis*:

Since experience is the mother of knowledge, it has taught us the absolute truth; for our Emperor Manuel, being a man of enterprise and great

17 This is not the only problem. Consider the following statement made by Richard Lansdown: “The first influential attempt to impose reality upon the idea of the southern hemisphere was that of the second-century Greek geographer Ptolemy, who believed that a large landmass must exist in the earth’s south to balance the north, or else the planet would roll over like a top heavy ball.” (Richard Lansdown, *Strangers in the South Seas: The Idea of the Pacific in Western Thought* (University of Hawaii Press, 2006), p. 15.) This is an invention and, suffice to say, completely wrong; the extent to which such statements are mistaken should be apparent when you consider the fact that Ptolemy, like Aristotle, believed the earth was completely immobile at the centre of the universe. Under such a system it is simply not possible for the earth to “roll over like a top heavy ball.” See Claudius Ptolemy, *Ptolemy’s Almagest*, trans. G.J. Toomer (London: Duckworth, 1984), pp. 38–47.

18 David N. Livingstone, *The Geographical Tradition: Episodes in the History of a Contested Enterprise* (Cambridge: Blackwell, 1993), p. 34.

honour, sent out Vasco da Guama, Commander of the Order of Santiago, one of his courtiers, as captain of his ships and crews to discover and explore those seas and lands concerning which the ancients had filled us with such fear and dread; after great difficulty, he found the opposite of what most of the ancient writers had said.¹⁹

Pereira is willing to castigate the ancients, whose wisdom has been usurped by empirical data. He furrows his authorial brow and muses: “we have reason to wonder that such excellent authors as these [he lists Pomponius Mela, John Sacrobosco and Pliny] ... should have fallen into so great an error”.²⁰ It is a strange comment, for Pereira well knew that the ancients were orphaned by the “mother of knowledge”—experience. The irony, of course, is that while Pereira is forced to discard some of the errors contained within these ancient and medieval authorities, he elsewhere relies upon the non-empirical theories of the ancients to interpret recent discoveries in the Americas. As shall be illustrated a little later, Pereira’s reconciliation of data from the Americas with ancient cosmographical theories causes him to promote the greatest of all errant cosmographies, turning the circumfluent oceans that border the continents into a single ocean-lake enclosed by land.

Writing in the wake of the great discoveries, João de Barros wanted to put Ptolemy, Strabo, Pliny, and Salinus to shame and confusion; if fair he should add to this list his predecessor, Duarte Pacheco Pereira, and countless other early moderns. But the point is not to list which authors erred and how. The point is that it is the very nature of cosmography to err. Anything less is geography.

New Worlds, Ancient Knowledge

Before returning to the representation of a southern continent, it is worth considering a question that inevitably followed the conception of the earth

19 Duarte Pacheco Pereira, *Esmeraldo De Situ Orbis*, trans. George H. T. Kimble (London: Hakluyt Society, 1936), p. 165.

20 Pereira, *Esmeraldo De Situ Orbis*, p. 165.

as a sphere: just how big is the earth sphere? Keeping in mind that the actual circumference of the earth is around 40 000 kilometres, Eratosthenes, writing in the third century BC, employed an ingenious method to produce a remarkably accurate figure: depending on which value he employed for the unit of measurement known as a stadia, he figured between 39 690 and 46 620 kilometres.²¹ Eratosthenes was not the first to calculate the earth's circumference, nor was he the last. A number of scholars offered much smaller figures. All of this matters because had Eratosthenes' calculation been uniformly adopted across the ages, then anytime someone contemplated the prospect of a sea passage due west from Europe to the far eastern provinces of Asia, they would have been confronted by the concept of an Atlantic Ocean so vast as to present the prospect of a voyage of indefinite duration in seas already feared by mariners. Under those circumstances one wonders whether anyone—even those fortified by religious convictions and possessing a sense of their own divinely bestowed greatness—would have embarked upon an exploratory voyage which promised to end in madness or death, and probably both.

Readers will know, of course, that Eratosthenes' calculation did not hold sway when it mattered, for in 1492 Christopher Columbus set sail across the Atlantic, with Asia in his sights. As Columbus told it, the distance from one side of the *oikoumene* to the other was an eminently traversable 3200 nautical miles—around 7000 nautical miles and one continent short of the mark.²² Had America not happened to exist midway between Asia and Europe, his voyage would have duly ended in tragedy. The question, then, is why did Columbus subscribe to such a small figure? The deceptively simple reason is because he wanted the figure to be small; a small circumference coupled with a wide *oikoumene* made the Atlantic navigable. Columbus's mind was closed to any other possibilities, for a navigable Atlantic offered the prospect of an infinitely valuable ocean passage west to Cathay—the discovery of which was meant to earn Columbus fame and fortune, and the glory of the title: Admiral

21 Aubrey Diller, "The Ancient Measurements of the Earth," *Isis* 40, no. 1 (1949), pp. 7–9.

22 Randles, "Classical Models of World Geography", p. I:9; James and Martin, *All Possible Worlds*, p. 35.

of the Ocean Sea. To construct a reality that equalled his ambition, Columbus sought out authority which supported this prospect, leading him to Pierre d'Ailly's *Imago Mundi*—Columbus's chief cosmographical authority. D'Ailly encouraged two important premises: the *oikoumene* is larger and the earth's circumference is smaller than each one is in reality. D'Ailly accumulated ancient authorities to establish these premises:

Aristotle says that a small sea lies between the end of the western side of Spain and the beginning of the eastern part of India. ... Moreover, Seneca, in the fifth book of *Natural Things* says that if the wind is favorable, this sea is navigable in a few days. And Pliny, in the second book of the *Natural History*, teaches that some have navigated from the Arabian Gulf to the Pillars of Hercules in a time that is not very great. For these and other reasons ... some conclude, apparently, that the sea is not so great that it could cover three fourths of the earth. To this can be added the authority of Esdras, who in his fourth book says that six parts of the earth are inhabited and the seventh is covered by water.²³

Reading the annotations from Columbus's copy of *Imago Mundi*, the aspiring explorer's excitement is patent. In the book's margins Columbus paraphrased key passages—"This agrees that the sea is wholly navigable and that excessive heat is no impediment"—he cited additional authorities—"Note that blessed Ambrose and Aurelius Augustine and several others took Esdras as a prophet and approved his book"—and when really stirred he framed his annotations in a rectangular border.²⁴

Thus fortified, Columbus took his proposal for a trans-Atlantic voyage of exploration to the Portuguese crown. When denied a royal charter, Columbus was given leave to petition the Spanish crown. However, the committee of cosmographers established to report to the Spanish monarchs on the merit of Columbus's proposal concluded that the voyage was unfeasible, and the

23 Edward Grant (editor), *A Source Book in Medieval Science* (Cambridge: Harvard University Press, 1974), p. 637.

24 Grant, *A Source Book in Medieval Science*, pp. 636–639.

proposal was rejected, first in 1487, and subsequently in 1491. Even on the basis of a gross underestimate of the circumference of the earth, the Atlantic seemed to the committee uncrossable based on the arguments of a classical scholar still considered the foremost authority on questions of cosmology: Aristotle.

According to Aristotelian physics, which taught that the earth was comprised of concentric spheres of earth, water, air and fire, the earth-island of Africa, Asia and Europe (raised above the sphere of water by divine intervention) must necessarily comprise such a small proportion of the globe's surface that, regardless of the exact circumference of the earth, the distance between Spain and Asia via the Atlantic was impossibly far. In the meantime, however, the Portuguese had continued to expose the true extent of Africa. This empirical data was taken by Alexander Geraldini as proof that the *oikoumene* had to be much larger than thought. As Aristotelian physics taught that the quantity of exposed earth must be roughly equal in length and width, that meant that not only did the *oikoumene* extend further south than thought, but further east and west, too.²⁵ As the size of the earth-island expanded, the Atlantic shrank. In the end, Columbus was granted a royal charter to voyage west in search of a new passage to Asia; his cosmographical arguments were persuasive, though more practical considerations may have carried the day, given Spain was in dire need of a boost to the imperial coffers, and a western passage to Cathay offered just that.²⁶

When Columbus finally took to the open waters of Ocean he possessed nothing in the order of special knowledge of a sea route to Cathay; what he did have was the cumulative illusions of two thousand years of geographical lore. Each text Columbus consulted was filled with the lore from earlier

25 Randles, "Classical Models of World Geography," pp. I:44–46.

26 It should be noted that there is a lot of argument over exactly what information—apocryphal and otherwise—Columbus had in his possession as he began to contemplate the Atlantic and what lay beyond it. For example, see John L. Allen, "From Cabot to Cartier: The Early Exploration of Eastern North America 1497–1543," *Annals of the Association of American Geographers* 82, no. 3 (1992), pp. 500–506; David B. Quinn, "Columbus and the North: England, Iceland, and Ireland," *The William and Mary Quarterly* 49, 3rd series, no. 2 (1992).

texts; those earlier texts were themselves the product of named and nameless antecedents. With this in mind, consider the weight of preconception derived through just a handful of texts Columbus consulted, including:

Pliny the Elder's *Naturalis historia*, Plutarch's *Lives*, Marco Polo's *Il Milione*, the *Historia rerum ubique gestarum* of Pius II, and Pierre d'Ailly's *Imago Mundi*. In these works Columbus would have encountered the following names: Aristotle, Averroes, Avicenna, Eratosthenes, Marinus of Tyre, Strabo, Ptolemy, Solinus, Seneca, Julius Capitolinus, Flavius Josephus, Augustine, Ambrose, Isidore of Seville, the Venerable Bede, Alfraganus, Roger Bacon, John Mandeville, Joachim of Fiore, Thomas Aquinas, Peter Comestor, Nicholas of Lyre, Francis Mayronnes, and Paolo Toscanelli.²⁷

So it was that, like all explorers, when Columbus sailed in search of seas and lands never before encountered by Europeans, his voyage arrived at the nexus of geographical lore and empirical reality. As historical geographer John Allen explains:

Explorers have seldom gone forth merely to probe about for whatever they may happen to discover. They have gone in quest of definite objectives believed to exist on the basis of such information as could be gathered from the geographical lore of their own and earlier times. When one explorer has failed in the quest, others have taken it up until the objectives have been attained or found to be illusory.²⁸

When land was sighted on 12 October 1492 after 33 days on the High Seas, Columbus rejoiced not at the discovery of a new world, but at the fulfilment of the promise and prophecy of pagan and Christian wisdom of yore. In that vein the land he discovered was not, to Columbus's mind, properly *terra*

27 Pauline Moffitt Watts, "Prophecy and Discovery: On the Spiritual Origins of Christopher Columbus's 'Enterprise of the Indies,'" *American Historical Review* 90, no. 1 (1985), p. 75.

28 Allen, "Lands of Myth", p. 43. Also see George F. Nunn, *The Geographical Conceptions of Columbus: A Critical Consideration of Four Problems* (New York: American Geographical Society, 1924); Felipe Fernández-Armesto, *Columbus* (Oxford: Oxford University Press, 1991), pp. 30–32.

incognita; it was the east of the Old World—the very lands Marco Polo had spoken of; part of the lands the Bible said occupied six sevenths of the earth’s surface. His landfall was, Columbus concluded, an island just east of Cipangu (Japan); it had been found to exist exactly where the cosmographers had predicted, in which case there could be no doubt it was the Indies, entrepôt to the untold riches of the Far East. With his faith and preconceptions vindicated, Columbus was confident he had replaced hearsay and theory with indisputable empirical data. He comments in a letter penned at the conclusion of his voyage, “For although there was much talk and writing of these lands, all was conjectural, without ocular evidence. In fact, those who accepted the stories judged rather by hearsay than on any tangible information.”²⁹ The irony of this comment is that hearsay and conjecture determined Columbus’s interpretation of his discoveries.

To put it another way, “ocular evidence” is only as good as the lens through which it is viewed. This is a dictum that lies at the heart of historical geography and the way historians interpret evidence. Even where the historical actors reporting or interpreting empirical data suggest otherwise, non-empirical lore is rarely completely superseded upon the acquisition of empirical data, as that earlier lore colours the interpretation of all new information and influences the way new data is fitted with both the known and unknown to complete the cosmographic image of the world. It ensures that even after it has been supplanted by empirical data, “redundant” non-empirical lore continues to affect geographical conceptions, potentially for centuries to come. This process—universal to the act of geographical exploration—has been articulated by John Allen:

No exploratory venture begins without objectives based on the imagined nature and content of the lands to be explored. Imagination becomes a behavioral factor in geographical exploration as courses of action are laid out according to preconceived images; later decisions based on field

29 Christopher Columbus, *The Four Voyages of Christopher Columbus*, trans. J.M. Cohen (London: Penguin Books, 1969), p. 122.

observations may be distorted by these images. The results of exploration are modified by reports that have been written and interpreted in the light of persistent illusions and by attempts to fit new information into partly erroneous systems and frameworks of geographical understanding.³⁰

With this in mind, consider a letter written to Columbus by Ferdinand and Isabella—the Spanish monarchs who sponsored his voyage:

this enterprise, was planned, started, and carried out by your hand, labor and industry, and it seems to us that all that which at the beginning you said to us would be realized, for the greater part all has come out exactly as if you had seen beforehand that which you told us.³¹

The Western Antipodes

Columbus may have convinced himself, Ferdinand and Isabella that he had discovered a new passage to Asia, but what did others make of the discoveries in the Americas? Initially, at least, Columbus's campaigning proved decisive, and it was generally accepted that he had indeed crossed to far eastern Asia. Many fellow cosmographers and explorers were willing to suspend the sort of disbelief which Columbus had encountered when proposing his voyage, to subscribe to an altogether more compelling version of reality. Take the comments of Peter Martyr, the Spanish chronicler of explorations, who recognised the problems with Columbus's cosmography, but subscribed to it nonetheless:

though the opinion of this Christopher Columbus seems to conflict with the size of the globe and the opinion of the ancients on the navigability of the antipodes, yet the parrots brought from there and many other things show that these islands taste of the soil of India, either because of their proximity, or through their natural properties, especially since Aristotle about the end of his book, *On the Heavens and the Universe*, Seneca, and

30 Allen, "Introduction to Volume I", in John L. Allen (editor), *North American Exploration, Volume I: A New World Disclosed* (Lincoln: University of Nebraska Press, 1997), p. 7.

31 George Nunn, "The Three Maplets Attributed to Bartholomew Columbus," *Imago Mundi* 9 (1952), p. 15.

others skilled in cosmography testify that to the west no great stretch of sea separates shores of India from Spain.³²

Another case in point is the evolution of beliefs about the Americas held by the man who lent them his name: Amerigo Vespucci. In a letter penned in 1500 after returning from a 1499 voyage led by Alonso de Ojeda that coasted the shores of Central America, Vespucci speaks of having just returned from the “Indian regions”. He then details the following:

And upon our return to the vessels, we weighed anchor and set sail, turning our prows southward, since it was my intention to see whether I could round a cape of land which Ptolemy calls the Cape of Cattigara, which is near the Sinus Magnus [the easternmost part of the Indian Ocean]; for in my opinion it was not far from there, to judge by the degrees of longitude and latitude ...

We were thirteen months on this voyage, encountering great dangers and discovering endless Asian land and a great many islands ...³³

Vespucci’s thinking is a reflection of the dominant cosmographic model then in circulation. He had worked for the businessman Gianotto Berardi, who held closely to the Columbian world view, and his peers and superiors on his first American voyage included men from the crew of Columbus’s groundbreaking original voyage, such as Alonso de Ojeda, captain of Vespucci’s voyage, and Juan de la Cosa, cosmographer and cartographer.³⁴ With these facts in mind it seems reasonable that Vespucci would subscribe to the same cosmographic interpretation as his more eminent contemporaries.

However, digging into the detail of the letters Vespucci wrote in which he discusses his voyages, it becomes clear that Vespucci’s cosmographic understandings were problematic even for their own time: simply, he laboured

32 Peter Martyr, *Selections from Peter Martyr*, trans. and ed. Geoffrey Eatough (Brepols: Turnhout, 1998), p. 47.

33 Amerigo Vespucci, *Letters from a New World: Amerigo Vespucci’s Discovery of America*, ed. Luciano Formisano, trans. David Jacobson (New York: Marsilio, 1992), pp. 4, 15.

34 Felipe Fernandez-Armesto, *Amerigo: The Man Who Gave His Name to America* (New York: Random House, 2007), p. 71.

under incompatible cosmographic apprehensions. In particular, Vespucci subscribed to a significantly more accurate model of the earth's geometry than Columbus. Vespucci states in his letter of 1500 to Lorenzo di Pierfrancesco de Medici that the earth's circumference is 24 000 miles, significantly more than Columbus had allowed for, and much closer to its true value. He then reckons the position of his trans-Atlantic landfall to be 5466 miles west of the Spanish city of Cadiz.³⁵ Even on the basis of an inflated figure for the length of the *oikoumene*, that still meant that the distance between his trans-Atlantic landfall and the farthest reaches of Asia was, according to Vespucci's own calculations, *thousands of miles*. Why, then, did he suppose he had encountered the easternmost Asian region of the *oikoumene*? Vespucci neither recognises nor accounts for this anomaly, nor was it accounted for by the numerous cosmographers who had similarly accepted the Columbian cosmography. This may seem trivial—after all, in coming years some cosmographers would make sense of the new data by simply extending the Asian continent with an enormous American peninsula—but the point is that Vespucci and his contemporaries did not do this. They promoted inconsistent, unreconciled cosmographies.

There is no easy way to explain this away, especially when there are only limited traces to ascertain motivations and misapprehensions, though it is probably fair to say a combination of diffidence, deference to authority and wishful thinking played a role. With Vespucci, however, there may also be a case to be made that the inconsistencies are a product of poor scholarship. As Felipe Fernández-Armesto has shown, Vespucci was a less than competent cosmographer. The appearance of erudition was easily achieved through the deployment of figures and the mention of devices and techniques, and Vespucci certainly achieved this much. True understanding and reliable knowledge were, however, much rarer commodities, ones which Vespucci may have lacked.³⁶

Vespucci's credulity did, of course, have limits, but for some years he would subscribe to the Colombian cosmography. On returning from his first voyage,

35 Vespucci, *Letters from a New World*, p. 8.

36 Fernández-Armesto, *Amerigo*, p. 80.

Vespucci deliberated on the prospect of a second expedition; his forward-looking objectives were “to bring back very great news and to discover the island of Taprobane [Sri Lanka], which lies between the Indian Ocean and Ganges Sea”.³⁷ He set sail on this new adventure in 1501. During the voyage, and once he had time to contemplate his discoveries, a subtle but material shift in Vespucci’s cosmographic reckoning of the recently discovered trans-Atlantic lands can be observed. He makes no ceremony of this shift, but it is amply conveyed by his language. No longer mentioning the Indies or Asia, Vespucci instead refers to a cosmographic concept which was about to undergo something of a golden age. Listing some of the wildlife he encountered, Vespucci says: “who could tell the infinite number of forest animals, the abundance of lions, jaguars, catamounts—not like those in Spain but in the Antipodes—so many lynxes, baboons, monkeys ...”³⁸ “Antipodes” has replaced “Asia”. Is Vespucci employing the motif of antipodality here to suggest the quality of biological inversion? Perhaps. More importantly, he utilises the concept of the Antipodes to frame his spatial reckoning: “In conclusion, I was in the region of the Antipodes, on a voyage which covered a quarter of the world”.³⁹

Vespucci claimed for this voyage the remarkable feat of having sailed to 50°S, roughly the latitude of the Falkland Islands. In an unpublished letter known as the Ridolfi fragment, Vespucci says:

In truth when we were at the latitude of fifty degrees, we were at sea and not on land, because when we managed to push off from land, we were not at a latitude greater than thirty-two degrees, and then we sailed to the south-east until we arrived at the said latitude of fifty degrees without finding land, although we judged that we were near land by many visible signs, among them countless birds of various sorts and much wood in the water: most certain signs.⁴⁰

37 Vespucci, *Letters from a New World*, p. 16.

38 Vespucci, *Letters from a New World*, p. 31.

39 Vespucci, *Letters from a New World*, p. 30.

40 Vespucci, *Letters from a New World*, p. 37.

If Vespucci believed his own press—for it cannot be confirmed that he did in fact sail to such a formidable southerly latitude—then it is little wonder that his cosmographic conceptions were changing. “I have seen during these voyages,” he explains, “nearly two thousand leagues of continental coast”—a great deal of which was in the southern hemisphere.⁴¹ John Parry points out that:

Throughout the Age of Reconnaissance most sailors groped their way about the world. They could find their way well enough by experience and rule-of-thumb (though many of them were wrecked in the process); but they could not explain to others exactly how they did it or show the precise record of their track. It was not until the eighteenth century that reconnaissance gave way to accurate charting and precise knowledge.⁴²

Thus, the process of sifting through the geographical information of explorers like Vespucci is so incredibly difficult because in Vespucci’s time the knowledge and skills did not exist to accurately report or chart geographical data of far-flung regions. Vespucci may well have believed he sailed to 50°S—a feat that simply could not be reconciled with even the most inept conception of the Indies. Thereafter, in a widely published letter titled “Mundus Novus”, Vespucci austere declared these lands to be “a new world, since our ancestors had no knowledge of them and they are entirely new matter to those who hear about them.”⁴³ Thus, with no fanfare, Vespucci became a proponent of the view that he and his predecessors had discovered the Western Antipodes—and with it a New World.

But there was more. Recounting the travails of a third voyage of 1501, the so-called Soderini letter, published under the name of Vespucci but almost certainly written or compiled by some unknown entrepreneur, claimed that Vespucci had sailed some 50 degrees south—a claim the real Vespucci had made elsewhere. Heading on a south-east course in open and bitterly cold waters, readers are told that the fleet was struck by a storm. The letter continues:

41 Vespucci, *Letters from a New World*, p. 38.

42 Parry, *The Age of Reconnaissance*, p. 113.

43 Vespucci, *Letters from a New World*, p. 45.

And sailing in this storm, we sighted new land on 7 April, along which we ran some twenty leagues; and we found it to be all exposed coast, and we saw no harbor or people, I believe because the cold was so great, since no one in the fleet could either fend it off or bear it. Thus since we were in such danger, and in such a storm that we could scarcely discern one ship from another because of the high seas and the great darkness the storm created, we agreed with the captain general to signal the fleet that it should come together and that we should leave the land and set a course back to Portugal.⁴⁴

Modern scholars argue over the details of Vespucci's voyages, in the process sorting through his letters for mistakes, lies, and apocrypha produced by enterprising fraudsters. Whatever the outcome of these debates, it makes no difference to the story of the southern continent. What matters is lore—the content of geographical discourse. The point here is that beliefs and actions turned not on the basis of truth or fact, but on what was accepted as truth or fact. So, did Vespucci really encounter land deep in the frigid southern latitudes—perhaps making a mess of the latitudinal and longitudinal coordinates of the Falkland Islands? Almost certainly he did not, though of this there is no way to be sure. What can be stated definitively is that in the Soderini letter someone published such a claim in his name.

The Soderini letter was subsequently reproduced and popularised in the influential treatise of Martin Waldseemüller, *Cosmographiae Introductio* (1507). Most are familiar with Waldseemüller by dint of his impressive world map of 1507 (see Figure 1.4)—a world map made in 12 sheets and which would, when put together, cover an entire wall. It was with this map that Waldseemüller became the first scholar to dub the new continent of the southern hemisphere “America”—a tribute to Amerigo. As far as Waldseemüller was concerned, America was a new world, while nevertheless being reconcilable with ancient knowledge. Not only does he refer to America as the Antipodes, he endorses the more specific cosmographic labels of antiquity:

44 Vespucci, *Letters from a New World*, p. 91.

It is of these southern climes that these words of Pomponius Mela, the geographer, must be understood, when he says: “The habitable zones have the same seasons, but at different times of the year. The Antichthonēs inhabit the one, and we the other. The situation of the former zone being unknown to us on account of the heat of the intervening zone, I can speak only of the situation of the latter.”⁴⁵

In drawing upon antiquarian scholarship, Waldseemüller was typical of his time. Wherever the opportunity presented itself, cosmographers accommodated new discoveries like those in the Americas with ancient learning. Raffaello Maffei da Volterra, writing in his encyclopaedia of 1506, was even more conspicuously learned: “Ships have crossed as far as our Perioeciāns and have discovered islands. To the south, the sailors of the King of Portugal have sailed in their voyages beyond the Tropic of Capricorn and have reached the Antioeciāns.”⁴⁶ Like Waldseemüller and Maffei, many authors in the early sixteenth century would refer to South America as the Antipodes; in doing so scholars were able to ornament their scholarship with ancient learning without really committing themselves to anything: the label “Antipodes” evoked classical authority, while in terms of functionality it merely served as a spatial descriptor—meaning opposite. Even in this sense, labelling South America the Antipodes was not particularly apt.

Thus, reference to South America as the Antipodes cannot in and of itself be considered part of the evolution of the idea of the southern continent, and the reason why is evident in both the words and maps of Waldseemüller: “Thus the earth is now known to be divided into four parts. The first three parts are continents, while the fourth is an island, inasmuch as it is found to

45 Martin Waldseemüller, *The Cosmographiae Introductio of Martin Waldseemüller*, ed. Charles George Herbermann, trans. Joseph Fischer and Franz Von Wieser (New York: United States Catholic Historical Society, 1907), p. 63.

46 W.G.L. Randles, “Classical Models of World Geography and Their Transformation Following the Discovery of America,” in Wolfgang Haase and Meyer Reinhold (editors), *The Classical Tradition and the Americas: European Images of the Americas and the Classical Tradition, Part I* (Berlin: Walter de Gruyter, 1993), p. 57.

be surrounded on all sides by the ocean.”⁴⁷ As conceived by Waldseemüller and others, South America may well be located mostly in the southern hemisphere, but it is seen as an island of limited extent. If you look at the Cantino Planisphere, produced around 1502, you can see as full a representation of the South American coast as discovery (or purported discovery) then allowed (see Figure 1.5). Thus limited, these maps possessed no Antarctic dimension and so play only a supporting role in the evolution of the idea of the southern continent. Some people, however, had grander designs on South America, as will be seen in the next chapter.

Conclusion

What becomes clear is that geographers, cartographers and all sorts interested in the shape of the expanding world of the late fifteenth and early sixteenth centuries were feeling their way forward with no fixed cosmography to guide their way. There existed a suite of ideas that took in concepts from the classical, medieval and, now, early modern times, which any savant could rake over and selectively appropriate as they attempted to make sense of—in their own minds and for a curious audience—purported geographical discoveries (some real, some apocryphal) that were beyond imagination just a few generations past.

For many, their natural inclination was to preference classical learning when contemplating the inchoate cosmography of the earth. Inevitably, there were revered authorities whose teachings were indefensible in light of the new geographical discoveries. Ptolemy would never completely lose his position as a venerable father of modern geography, but his concept of an Afro-Asiatic land bridge had to give way to geographical reality. Of course, for the most part, knowledge of geographical reality was still many generations from being realised. Even where knowledge of new lands existed, it was knowledge generated, in the first instance, through conceptual filters that would permanently affect the interpretation of that data. What is more, the nascent art of

47 Waldseemüller, *The Cosmographiae Introductio*, p. 70.

navigation (as opposed to pilotage) was yet unequal to the task of reporting the fruits of reconnaissance: many discoveries were made, but recording and reporting the location of those discoveries engendered considerable confusion, sometimes compounded by incompetence. It was a situation that cast a pall of doubt over all geographical data, allowing, if not encouraging, the interpretation of data to fit with preconceptions.

In such a milieu, it seems only natural that cosmographers would blend the old with the new. Rather than fashion a cosmographical model afresh, geographical data could be fitted to ancient learning, and ancient learning to geographical data. Though such an intellectual climate can be validly criticised for the practitioners' willingness to interpolate, interpret, and extrapolate, to do so would be like chastising a car salesman for selling cars. Cosmography was a science and an art that only existed so long as part of the world was known, and part remained unknown. It should be obvious by this point that the notion that cosmographers had a horror of the void is a bizarre concept moderns have invented; in truth, cosmographers shared an unyielding curiosity about the shape of their world. They wanted to make sense of the intertwined geographies of the earth, and drawing upon the classical idea of Antipodes helped them do that.

Chapter Two

THE CARTOGRAPHERS' SOUTHERN CONTINENT

... where men had the choice they preferred to go on believing in their old illusions. Preconceived notions of what they might find, led them to think they had found what they wanted. So often men only see in the world, the world they want to see. Perhaps nowhere is this more true than in the world of maps.

*J. Wreford Watson*¹

Verisimilitude is an ungainly word but it conveys a meaning essential to understanding the appeal of imaginative geographies—that is, the way these entities appear real; the way an imagined geography is drawn or described to approximate reality, with all the hallmarks of a place that is known or knowable. Typically, the more verisimilitude with which a geography is rendered, the more potent its legend, the more visceral the dreams conjured for its shores, the more vigour with which it is pursued, and the more fervent are those who come to believe in and promote its existence. In the first few decades of the sixteenth century, however, the southern continent was yet to crystallise into the verisimilitudinous geography that becomes familiar in later decades. It may have been an enticing idea, but it was just one

1 J. Wreford Watson, “The Role of Illusion in North American Geography: A Note on the Geography of North American Settlement,” *The Canadian Geographer* 13, no. 1, 1969, p. 12.

cosmographic postulate among a range of possibilities. This is where cartography starts to come into play.

As maps became more widely disseminated in the early modern period and increasingly popular as artifacts of erudition, cartographers set to work expressing in visual form both the non-empirical lore and the geographical data that suggested the existence of a southern continent. It was once the map-makers started to give expression to such geographical ideas and information that the southern continent began to gain a relentless momentum as a cosmographic and aesthetic entity synonymous with images of the globe.

It was seen in Chapter One how scholars like Waldseemüller conceptualised the discovery of the Brazilian coastline—supposing (correctly, as it turned out) that South America was insular to the south. Indeed, Waldseemüller's map bears a compelling resemblance to the shape of South America as it is known today. But many people have been right for the wrong reasons, and so while Waldseemüller's prefiguring of knowledge yet to be confirmed is remarkable, his cosmography was no more and no less valid than the interpolations of other cosmographers—for, either way, it is speculation in which he dealt. Where things get interesting for this story is the point at which scholars made the cosmographic leap to ask: what if South America and the Antipodes are one?

Birth of the Southern Continent?

Many old maps do not contain inscriptions, accompanying text, or other notations that reveal the intentions or understanding of their authors. In such cases, close examination of the map in question coupled with insights extracted from studying the context of the fields of study to which the map belongs is often sufficient to provide a set of possible explanations of authorial intent and understanding—while nevertheless not allowing historians to offer definitive conclusions. Such a caveat is necessary before more closely examining a map of special interest, but about which our knowledge is fractured and

incomplete. This map may mark the beginning of a new tradition of imagining austral lands.

The map in question was produced in 1506 by the team of Giovanni Contarini and engraver Francesco Rosselli. The Contarini map (see Figure 2.1) is often compared with a map made by Johannes Ruysch that accompanied the 1507 Rome edition of Ptolemy's *Geographia* (for the Ruysch map see Figure 2.2). Many scholars have suggested that the two maps are based on a common antecedent, though it is also sometimes said that the Ruysch map draws on the Contarini. Whatever these maps' similarities, there is at least one significant difference, and that is in the depiction of the South American coast, labelled by Ruysch *Terra Sancte Crucis sive Mundus Novus*, that is, Land of the Holy Cross or the New World. In Ruysch's map the eastern coast of South America is cut off at the border of the map, at around 37°S. Evidently it is envisaged that this land tends further south, but in what configuration it is not suggested. In a clear reference to Vespucci, Ruysch states in an inscription: "Portuguese navigators have inspected this part of this land, and have sailed as far as the fiftieth degree of south latitude without seeing the southern limit of it." The western border to Ruysch's South American mainland is even more ambiguous, having been foregone entirely—not surprising given Europeans had no information about this region—instead subordinated to a cartouche which obscures the 15° of longitude in which Ruysch otherwise would have had to provide a coast or shade the area as an unknown region. The inscription in this cartouche reads:

As far as this Spanish navigators have come, and they have called this land, on account of its greatness, the New World. Inasmuch as they have not wholly explored it nor surveyed it farther than the present termination, it must remain thus imperfectly delineated until it is known in what direction it extends.

The difficulty of depicting an unknown coast is thus avoided.

The Contarini map, of which but one tattered and incomplete copy still exists, is bolder. Down to around 23°S, the eastern coast of Brazil is depicted

tending south. From there the coast turns abruptly south-east where it runs until around 37°S, beyond which the remnant copy is incomplete. The western coast of South America is also depicted, not obscured by cartouches or inscriptions. This coast tends south-west until around 50°S when it abruptly turns west, tending very slightly to the south. This is a rather more significant difference between Contarini and Ruysch (or other peers) than most scholars have made out. Contarini's South American landmass is unambiguously huge. It is depicted with coasts tending south-east and south-west into the unknown yonder. The most frustrating thing about the map is that the extant copy of the map is in poor condition—in particular, the edges to the bottom and left-hand side of the map have torn away. The map-proper only extends to 50°S, but Contarini continues his depiction of geographies beyond this border, into the decorative frill. So the question that gives rise to tantalising possibilities is this: if the bottom of the map had not been lost, thus obscuring the cartography from around 37°S, how far and in what direction would the eastern coast of South America be found to extend (the same goes for the western coast)? The answer is suggested by the presence of a cartouche to the right of the South American coast. In translation it states: “This is that land named Santa Cruz which was lately [discovered] by the most noble lord Pedro Alvares [Cabral] of the illustrious stock of the most serene King of Portugal in 1499”. Based on the position of this inscription so far east and south of the established Brazilian coast, it most likely refers to a coast running beneath the inscription which is connected to the South American mainland.

In another inscription, Contarini expresses his belief that Columbus found a passage to Cathay, indicating that he was trying to reconcile new discoveries with established geographic and cosmographic knowledge. If Contarini interpreted Columbus's discoveries through the lens of geographical lore, it prompts the question, did he do likewise with Cabral and Vespucci and other explorers' discoveries in South America? In particular, in depicting South America does Contarini incorporate into his cosmographic reckoning the geographical lore of the Antipodes? While it cannot be known for sure, there

is good reason to think he does, based on the inscription Contarini placed to the left of South America: “The world and all its seas on a flat map, Europe, Lybia, Asia, and the Antipodes ...”

The reason Contarini's South American continent is much larger than any cartographer before him had depicted it is because he seems to be joining together—as one continent—the discovered coasts of Brazil with the idea of antipodal lands running across the southern latitudes of the hemisphere. If this is the case, Contarini joins the ranks of cosmographers who in the early years of the sixteenth century subscribed to the notion of the mega-continent: the idea that South America was connected to a sprawling southern hemispheric continent, and then, in some imaginings, with North America and then North America to both Asia and Europe. It would also make Contarini's map the first rendering of the southern continent which extends about the Antarctic region. It will never be known beyond the shadow of a doubt if Contarini had in mind this grand cosmography, but others have left no doubt that they did.

The Mega-Continent

Duarte Pacheco Pereira was a true Renaissance man: cosmographer, geographer, explorer, soldier. He wrote the geographical treatise *Esmeraldo de Situ Orbis* around 1508. Pereira begins by emphasising his knowledge of classical authorities, and he endorses much of that knowledge, except where more recent discoveries have allowed him to refine it. He provides in his opening chapter a sketch of the earth's system of zones; citing Strabo, Pliny and Pomponius Mela, Pereira elaborates on the question of habitability:

[Of the temperate zones] it is said that the Antipodes inhabit one part and we the other; they dwell on the opposite side of the earth, where the sun rises when it sets for us, and their feet are over against our feet, for which reason they are called Antipodes.²

2 Pereira, *Esmeraldo De Situ Orbis*, p. 10.

He goes on to acknowledge the ancient opinion that land is everywhere surrounded by sea, but disagrees. He quotes Genesis in support of his argument:

“Let the waters under the heaven be gathered together unto one place,” the words “unto one place” showing that the earth is not surrounded by the sea, for if it were so these words would not have been used or required ... It follows, therefore, that the earth contains water and that the sea does not surround the earth, as Homer and other authors affirmed, but rather that the earth in its greatness surrounds and contains all the waters in its concavity and centre; moreover, experience, which is the mother of knowledge, removes all doubt and misapprehension ...³

From this foundation, Pereira then draws upon medieval authorities to interpret the discoveries in the Americas. To do so he must reconcile two potentially contradictory tenets. First, Pereira believed in antipodal lands over and above the discovery of land in South America. Second, he endorsed the notion that there are four parts of the world. He reconciles these premises by linking them in the most straightforward way possible:

Such is its [America’s] greatness and length that on either side its end has not been seen or known, so that it is certain that it goes round the whole globe ... Many years before this land was known or discovered Vincent in the first book of his *Mirror of Histories*, chapter 177, said that “besides the three parts of the earth there is a fourth part beyond the Ocean to the South, where the Antipodes are said to dwell.” Since this land beyond the Ocean is so large and on this side we have Europe, Africa and Asia, it is clear that the Ocean is placed between these two lands, with land on either side of it, and we can therefore affirm that the Ocean does not surround the earth as the philosophers declared, but rather that the earth must surround the sea, since it lies in the concavity of the earth and its centre. Therefore I conclude that the Ocean is only a very large lake set in the concavity of the earth and that the earth and sea together form a sphere.

3 Pereira, *Esmeraldo De Situ Orbis*, p. 11.

... [Indeed,] the water only occupies a seventh part of the earth, as is shown in the fourth book of the prophet Esdras ...: "On the third day Thou didst command the waters to be gathered together into a seventh part of the earth but six parts Thou didst dry up."⁴

In Pereira's cosmography, every mainland—imagined and real—is linked: the northern and southern American lands are one, and in turn they join with the Antarctic continent in the south, and the *oikoumene* in the north. You can see just what this cosmography would have looked like in the 1519 map of Lopo Homem (see Figure 2.3). The Antarctic aspect of Homem's mega-continent is labelled, like Brazil, *Mundus Novus* (New World).

Homem's is not the only map to depict such a cosmography. A sketch map centred on the Indian Ocean found in the collection of geographical documents of Alessandro Zorzi was probably produced by Zorzi sometime in the 1520s (see Figure 2.4). This particular map is rarely reproduced or discussed by historical geographers and historical cartographers; more attention is given to Zorzi's other three sketch maps which, placed together, form an abbreviated map of the world and are considered a faithful representation of Columbian cosmography. Yet the sketch centred on the Indian Ocean is equally interesting, for it depicts a landmass stretching across the bottom of the map—some form of a southern continent. To the east this land is labelled "Terra Incognita". Further east the same landmass is labelled "Brasil". The inscription in the southern continent of the Zorzi map translates as: "Land seen by the Portuguese from the Cape of Good Hope, it is distant 600 miles south; it is called Brasil."⁵ The question is, what were the sources for this inscription and the accompanying depiction of a southern continent?

Depending on what date the Zorzi map was created—arguably as late as 1526—the author may have been drawing upon the *Summa de Geographia* of Martín Fernández de Enciso, published in 1519. De Enciso, himself not

4 Pereira, *Esmeraldo De Situ Orbis*, pp. 12–13.

5 This is my own translation. Alternative translations are offered by Olshin, "A Sea Discovered," pp. 308–312, and Randles, "Classical Models of World Geography," pp. 61–64.

revealing his source (though it almost certainly is the Soderini letter attributed to Vespucci) gave the following information about the southern continent:

This Cape of Good Hope has to the west the land called austral; from the Cape of Good Hope to the “tierra austral” the distance is 450 leagues; it is in 42°; it is 600 leagues from Cape St. Augustine [which is located in Brazil 8°S] ... Nothing is known of this land except what has been seen from ships, for no one has landed on it.⁶

Whatever the source or sources the author of the Zorzi map was drawing upon, one thing is certain: he was invoking the theory that a southern continent joins up with the recently discovered lands of South America. This is made clear in a few ways. First, the southern continent is labelled both “Brasil” and “Terra Incognita”; while this may seem contradictory—matching a known place with a land effectively labelled unknown—it makes good sense given the context. On the Zorzi sketch map showing all of Africa and the eastern corner of Brazil (see Figure 2.5) the Brazilian landmass is labelled “Anthipodi” and is cut off by the border of the map, implying the landmass extends further south. It is already clear that the southern continent is conceived by the author as lying just 600 miles south of the Cape of Good Hope. Latitudes on these two maps are easily matched by comparing the location of the Cape of Good Hope (“C de Bona Speranza”) on each. What becomes clear is that the South American landmass (see Figure 2.5) extends further south than the latitude at which the northern border of the southern continent is shown (see Figure 2.4). Considering the way the author has spoken of Brazil as “Anthipodi”, and the southern continent as “Brasil”, the conclusion seems inescapable that the author envisaged the South American continent connecting to the southern continent.

What starts to become clear is that in the early sixteenth century the classical notion of Antipodes was not uniformly explained away as just being the new discoveries in the Americas. Some people were possessed of the idea that

⁶ James R. McClymont, *The Theory of an Antipodal Southern Continent During the Sixteenth Century* (Hobart: 1892), p. 9.

the Antipodean continent stretched to the Antarctic regions, just as the *oikoumene* possessed Arctic regions. Andrea Corsali, a Florentine explorer and merchant who traversed the waters of Southeast Asia, drew together the disparate geographies of east and west in a letter penned in 1516:

In the part of the east are islands where are born aromatic clove-trees called Malucos, and where one finds nutmeg and mace; in another the aloe tree, in others, sandalwood. And navigating until the eastern parts, they say that there is a land of pygmies [New Guinea]; it is the opinion of many that this land goes on to connect with the coast of Brazil by way of a stretch of southern [land].⁷

Within the evolution of this particular cosmographic framework one final map should be situated, a map which attracts considerably more attention than these other articles of evidence combined: the 1513 map of Turkish scholar Piri Reis (see Figure 2.6). This map is a particular favourite of eccentrics who periodically appropriate it to demonstrate pre-knowledge of Antarctica possessed by the Portuguese, Chinese or some other nation of explorers. Well might such remarks be dismissed as ravings, but it does not obviate the task of explaining Reis's cartography.⁸

Upon examination, it is evident that Reis's Antarctic landmass sprouting from South America is actually quite similar to the depiction of this concept by Lopo Homem. Homem's map post-dates Reis by six years, so does that make Reis the prototype for this type of representation of the southern continent? Probably not, as the way South America and the southern continent are represented on this map is not unique. The idea of a connected American–Antarctic continent is established in geographical discourse at the latest by 1508 with Duarte Pacheco Pereira. But there is a reasonable case to be made

7 Olshin, "A Sea Discovered," pp. 311–312.

8 For example, Charles Hapgood argues that the ancients mapped Antarctica during about 9000 BC. (Charles Hapgood, *Maps of the Ancient Sea Kings: Evidence of Advanced Civilization in the Ice Age*, (Philadelphia: Chilton Books, 1966).) Erich von Daniken argues that ancient or medieval maps may be the product of visitation by a more advanced alien race. (Erich von Daniken, *Chariots of the Gods? Unsolved Mysteries of the Past*, trans. Michael Heron (Bantam Books, 1971).)

for the argument that this idea, or a form of it, preceded Pereira, as is seen with the Contarini map which implies South America may not be insular to the south. As for Piri Reis's sources of information, he tells the reader that, among a range of sources, he has utilised Portuguese maps for his geography. The most pertinent inscription upon the southern part of Reis's sprawling landmass may also suggest that he was aware of the contents of the Soderini letter: "This country is barren. Everything is desolate and in ruins and it is said that large serpents are found here. For this reason the Portuguese infidels did not land on these shores and these shores are also said to be very hot."⁹ These comments are by no means a perfect match with any explorer's voyage into the southern Atlantic, though Vespucci seems the best fit; indeed, this inscription seems to be something of a *mélange*, mentioning heat in latitudes known to be cold, and barrenness when the rest of Brazil's shores are lush.

Perhaps what is most interesting is that there is no justification provided for the extent of the southern landmass—that the Portuguese infidels had purportedly discovered land in these southern latitudes was sufficient confirming evidence of a larger undisclosed precept: the idea that extensive lands existed about the Antarctic region. The extent to which classical and medieval authority is at play here is impossible to say, but it is surely significant. It is possible, even, that Reis subscribed to the same view as Pereira, believing that the world's lands encompassed the seas, not vice versa. One inscription is loosely suggestive of this, stating that before Columbus it "was believed that the sea had no end or limit, that at its other extremity darkness prevailed. Now they have seen that this sea is bounded by a coast, and because it is like a lake ..."¹⁰

Rosselli

With all this intrigue about the first map to depict South America connected to an Antarctic landmass, left in our wake is the first extant early modern map

9 Inscription 10. (Gregory C. McIntosh, *The Piri Reis Map of 1513* (Athens: University of Georgia Press, 2000), p. 49.) For further discussion of the Reis map, see McIntosh.

10 Inscription 22. (McIntosh, *The Piri Reis Map of 1513*, p. 33.)

to unambiguously depict a southern continent: Francesco Rosselli's world map of 1508. The Greenwich version of this map is stunningly hand-coloured, and there is, plain to see, a modest southern continent located to the south of the Cape of Good Hope (see Figure 2.7). This is the first map that has passed down which shows a southern (not South American) continent depicted on a map which utilises a latitudinal–longitudinal grid. Early maps like the medieval Macrobian type show a southern continent, but it is generic and figurative—depicted conceptually, without any particular form or characteristics, because the only information being conveyed concerned the general theory that southern hemispheric lands might exist. In early modern maps—starting with Rosselli—the southern continent unavoidably acquires magnitude, location and geographical characteristics, in keeping with the rest of the map.

As for the inspiration for his southern landmass, Rosselli has left no helpful clues. It is possible that he interpreted the Soderini letter or another Vespucci letter in such a way that he believed a new southern continent had been discovered south of the Cape of Good Hope. However, this is unlikely, as Rosselli already seems to represent these purported discoveries, depicting the South American coastline down to roughly 50°S, and showing two long islands off that coast—a geography which makes a better fit with Vespucci's claimed discoveries than a new southern continent unrealistically farther east with a northern coast inexplicably starting at 63°S at its westernmost point. The problem is that with what is known of other voyages and their written accounts, there is no empirical lore which seems to fit Rosselli's depiction of this southern land.

The coastline cannot be confirmed as the stuff of empirical lore, but what about non-empirical lore? In support of this possibility it is worth noting that the modest size of Rosselli's southern land is more in keeping with the ancient quadripartite cosmography of multiple non-oikoumenical landmasses than if he had depicted a mainland sprawling right across the bottom of the map. However, not all is as it seems with this map. The stunning and most well known Greenwich version of Rosselli's map is not, in fact, faithful to the

original print: it contains manuscript additions—meaning it has been altered by hand after being printed. Indeed, of the four extant copies of the 1508 Rosselli map, all contain different manuscript modifications to the original cartography. Thanks to the Holzheimer copy of the Rosselli map, a version which has not been coloured, it is evident that the original print contained the northern border of a southern continent, but no southern border to complete the landmass. It was, then, in the first instance, a lot less suggestive than the bold image seen on the Greenwich version. Whoever coloured the Greenwich version—as with the Zwickau version—added in a southern border to make a complete, insular landmass. By doing so these maps increase their value as both cartographic and aesthetic commodities—which they clearly are, given the expense of colouring was indulged. Indeed, as David Woodward notes, “color has been applied so thickly that it has obliterated the line work underneath, and in this sense has privileged decoration over information.”¹¹ What can be concluded from this is that whatever Rosselli’s original intentions, the hand-colourer(s) of these maps thought it reasonable to turn this land into an insular southern continent, evidence that the geographical lore of Antipodes was a real influence on cartography and geography.

Even more interesting is the Florence version of the Rosselli map (see Figure 2.8) which reveals a different kind of manuscript modification: the northerly coast of the southern continent has been extended east and west to the borders of the map, making the southern landmass circumfluent around the South Pole and turning it into an enormous continent filling the higher southern latitudes. Assuming the manuscript additions are contemporaneous with the map, it means that all of a sudden there exists a fully formed instantiation of the southern continent—a southern continent that approximates to the size and magnitude of the imaginary land that will come to be known in later years as Terra Australis. Of course, it is unclear exactly when the manuscript additions were made, but if they are anything like contemporaneous with the map then this would be evidence of the currency in the first

11 Woodward, “Starting with the Map: The Rosselli Map of the World,” p. 78.

decade of the sixteenth century of the notion that a vast continent existed in the unexplored southern latitudes of the globe.¹²

Schöner

If it is a vast landmass spanning the breadth of the southern hemisphere that is sought, then the first printed map that can be verified to have depicted such a geography is Johannes Schöner's seminal globe of 1515 (see Figure 2.9). It would be natural to describe Schöner's southern landmass as unusual in its composition, given that it forms a broken ring of land encircling an Antarctic sea, rather than filling the entire space with land. On reflection, however, a better word would be unique, because the image of Terra Australis in its Mercatorian guise—the image most familiar to moderns in which a continent occupies the entirety of the more southern latitudes—is the product of years of evolution of this concept. As best is known, Schöner had no specific cartographic predecessor to draw upon (though, of course, the concept of a southern continent in one form or another was already established) when constructing his prototypical southern ring continent.

There seems to be neither rhyme nor reason to the lottery of what documents survive through the centuries and what documents perish by way of neglect, abuse, misfortune and the appetites of cockroaches. Historians can be thankful, then, to have a comparatively rich store of documents from Schöner, including multiple maps and globes and, importantly for the present inquiry, the pamphlet Schöner produced to accompany his 1515 globe. In that pamphlet Schöner describes the southern continent which he labels “*Brasiliae Regio*”:

It is but a little distance from the Cape of Good Hope, which the Italians call *Capo de Bona Speranza*. The Portuguese have circumnavigated this

12 Note that Rosselli's 1508 map includes what appear to be the symbols for five cities populating his southern continent. There is no clue as to what inspired this. (Chet Van Duzer, “Cartographic Invention: The Southern Continent on Vatican Ms Urb. Lat. 274, Folios 73v–74r (C. 1530),” *Imago Mundi* 59, no. 2 (2007), p. 207.) There also exists a marine chart made by Rosselli *circa* 1508 which shows a southern landmass similar to that depicted in his world map (held by the National Maritime Museum, Greenwich).

region, and found a crossing there quite similar to the configuration of the land in Europe, which we inhabit, and situated between the east and the west.¹³

By comparing Schöner's pamphlet with the 1514 German edition of a pamphlet titled *Copia der Newen Zeytung ausz Presillg Landt* (roughly equivalent to "Tidings out of Brazil"), it is clear that Schöner relied on the German pamphlet for key tenets of data which formed the basis of his depiction of a southern continent. The following passage from that pamphlet inspired Schöner to conclude that there existed a strait around the south of Brazil, leading into the oceans of eastern Asia:

When they came to the [latitude of the] Capo de Bona Speranza [Cape of Good Hope] ... they found Brazil with a cape which is a point or place extending into the ocean. And they sailed around or passed this very cape and found that the same gulf lies as Europe does, with the side lying ponente levanter [west to east], that is, situated between sunrise or east and sunset or west.

Then they saw land on the other side as well when they had sailed a distance of sixty miles along the cape in the same manner as when one travels toward the east and passes the Strait of Gibraltar and sees the land of Berbers. And when they had come around the cape as stated and sailed or traveled northwestward toward us, there arose so great a storm and also such a wind that they were unable to sail or travel further. Hence they had to sail through tramontana, that is, northward or midnight, and back again to the other side and coast which is the land of Brazil.¹⁴

13 Translation of Schöner's pamphlet titled *Luculentissima Quaedam Terrae Totius Descriptio* per K. Kretschmer, "Globe," in Emerson D. Fite and Archibald Freeman (editors), *A Book of Old Maps Delineating American History from the Earliest Days Down to the Close of the Revolutionary War* (Cambridge: Harvard University Press, 1926), p. 33.

14 John Parker, *Tidings out of Brazil*, trans. Mark Graubard (University of Minnesota Press, 1957), pp. 28–29. The report in this pamphlet of a strait being discovered is most likely an error of interpretation. It probably refers to a voyage into the Rio de la Plata, mistaken for a strait. Despite the excited claims of modern authors, there is no compelling reason to believe that a European voyage of discovery preceded Magellan in discovering the Straits of Magellan.

Based on the comments in this pamphlet indicating a strait had been found to the south of Brazil, Schöner considered he had empirical evidence of the existence of a southern landmass—given that the notion of a strait necessarily implies some form of neighbouring southern land. Interpreting it to be of continental magnitude, Schöner named this land *Brasilie Regio* on the basis of his misinterpretation of references in the pamphlet to “lower Brazil”. For example, the pamphlet states, “They do not eat one another as is the custom in lower Brazil”, which Schöner took to be a reference to a second—lower—Brazilian continent.

The question, then, is why did Schöner make this land so extensive—and so intricately detailed? While it is eminently plausible that he mistook the comments of the quoted pamphlet as saying there existed another landmass south of Brazil, there is nothing that can be taken to indicate that landmass is of considerable size. What appears to be the case is that Schöner was fired by the notion that there existed a vast southern landmass, and once fortified in this belief by the apparent revelations of the German pamphlet, he took licence to extrapolate. This conclusion is encouraged by the considerable amount of geographical detail which is engraved onto *Brasilie Regio* in the form of coasts, lakes and rivers. As Chet Van Duzer has shown, Schöner was drawing upon ancient authorities when he populated his southern continent with a geography that fulfilled the role of wellspring to the Nile.¹⁵ What all this reveals is that Schöner was doing much more than indulging whim; he was, in fact, accommodating the geographical lore of the ages with the latest and best—even if erroneous—accounts of geographical discovery.

Conclusion

When it comes down to the question, “Who was the first cartographer in the early modern period to depict the southern continent?” the answer—a familiar one by now—is that it is not known. Perhaps it was Contarini on the lost border of his 1506 map; perhaps it was Contarini’s engraver, Francesco

15 Van Duzer, “The Southern Ring Continent,” p. 117–121.

Rosselli, with his own map of 1508; or perhaps it was a cosmographer whose maps have been lost to the ravages of time. Whoever it was, the inchoate cartographic tradition of depicting a southern continent took a firm step toward something concrete with the 1515 globe of Johannes Schöner. With Schöner there is finally a widely distributed cartographer of renown depicting a vast and detailed continent encompassing the Antarctic regions. There was no turning back: the idea of the Antipodes had crystallised into more than just a theory—it had become part of the matrix of geographies determining the cosmographic interpretation of discoveries. It helped make sense of the world.

What makes the ongoing crystallisation and evolution of the idea of a southern continent so fascinating is the way exploration and discovery enhanced the concept of southern lands rather than damaging its currency. Explorers framed their voyages and reported their discoveries—and cosmographers interpreted the explorers' reports—through the preconceptions of geographical lore. To return to the quote of J. Wreford Watson with which this chapter began:

where men had the choice they preferred to go on believing in their old illusions. Preconceived notions of what they might find, led them to think they had found what they wanted. So often men only see in the world, the world they want to see. Perhaps nowhere is this more true than in the world of maps.¹⁶

Thus, the Rio de la Plata becomes a strait leading into the as-yet-unnamed (and unknown) Pacific. The reported sighting of land in the South Atlantic becomes confirmation of the existence of a southern continent. It seems counter-intuitive, but what is observed here is an epistemological quirk whereby the increase of geographical knowledge actually begets the growth of cosmographical illusions. Rather than correcting misconceptions, new empirical information is often interpreted to fit with pre-existing erroneous ideas, thus lending those illusions the epistemological trump card of ontology: it is no

16 Watson, "The Role of Illusion in North American Geography," p. 12.

longer just an idea—discovery has proved the existence of this land. We see what we believe, which normally means we see in some form or another what it is we want to see.

And so the idea of southern lands continued to evolve in the manner of all robust traditions—by incorporating new knowledge where knowledge could be appropriated, and conceding to incompatible knowledge to avoid contradiction. That has been the great strength of the cosmographic concept of a southern continent: it is a theoretical entity well placed to incorporate and appropriate empirical information. In that sense, the map was the ultimate palimpsest, and the southern continent the ultimate meme. But as capable as people proved to be when it came to reconciling a few outlying geographies with the idea of a southern continent, in the approaching decades of the sixteenth century that trickle of data relating to unknown lands amidst the southern hemisphere was to become a torrent. How cosmographers and cartographers were able to reconcile new empirical data with the ancient notion of Antipodes would determine the trajectory of the southern continent.

Chapter Three

TERRA AUSTRALIS TAKES SHAPE

Textbook tradition dictates that a discussion of exploration begin with a list of those forces and events that drew some Europeans out across the Atlantic and into another already settled world. But as the polar explorer Apsley Cherry-Garrard reminds us, exploration is the physical expression of a series of visions about the shape of things imagined but not yet seen. Behind every voyage, whether by land or sea, were expectations born of complex and often elusive dreams.

The dreams that drove explorers sprang to life from journeys made before any expedition ever left home. Those journeys were travels into the country of the mind. Explorers studied themselves and their own worlds before setting out for places distant and remote.

*James P. Ronda*¹

The phrase “voyage of discovery” suggests a bold venture into the unknown, questing after knowledge where none exists. Yet the reality of many of history’s

¹ James P. Ronda, *The Exploration of North America: Essays on the Columbian Encounter* (Washington: American Historical Association, 1992), p. 1.

most important voyages of discovery is that they have been undertaken on the basis of steadfast belief in one or more geographical illusions. Indeed, for as long as history has been recorded, journeying into the complete unknown has been a subject of paralysing fear. It is why it took Europeans so long to discover the extent of Africa: what lay beyond the horizon was almost completely unknown but for the possibility of monsters, boiling oceans and a miserable death lost at sea. Contrast this with Columbus who in one fell swoop crossed the Atlantic to discover the Americas—a feat far more remarkable than the gradual unveiling of the African littoral because had Columbus not discovered land where he did, he would have found himself stranded in a seemingly endless stretch of Ocean that took in the better part of 150° of longitude. But if these were the possible outcomes of a voyage into the unknown, why would Columbus have taken the risk? What made him special? The answer is straightforward: as far as Columbus was concerned, he was not sailing into the unknown. Columbus was thoroughly convinced he was embarking upon a comparatively short ocean-crossing to the lands of eastern Asia.² Thus, it was not that Columbus was uniquely brave or bold; it was that he was lucky enough to subscribe to a geographical illusion which happened to intersect with geographical realities. As Clark Firestone memorably wrote, “The gains of fable are writ large in the history of modern exploration. Error was the guiding star of discovery. A vain fancy was the most precious cargo of the caravels, as it was the keenest weapon of the conquistadors.”³

Examples of significant expeditions pursuing geographical preconceptions are too numerous to list—just consider the dozens of expeditions embarked in pursuit of the North-West Passage, the Lands of Prester John, or the Mountains of the Moon and the wellspring of the Nile. These geographical preconceptions inspired explorers to journey into the unknown—but, then, that is the point: through the accretions of lore, no explorer ever ventures into a geographical vacuum. The geographical “unknown”, so-called, is populated

2 Fernández-Armesto, *Columbus*, pp. 30–32.

3 Firestone, *The Coasts of Illusion*, p. 371.

by myth, rumour, misapprehension, conjecture and fancy. The unknown is never a blank slate.

And so, having finally arrived at the juncture where illusion and reality meet, in this and the following chapter some of the key moments will be broached where empirical lore—both new discoveries and established knowledge—was appropriated to fashion from the Antipodes a fully realised geographical entity. This is a turning point in this history, for it is in the acquisition of empiricism that the southern continent acquires not just the persuasiveness of verisimilitude, but the imprimatur of reality. No longer a mere postulate, the Antipodes becomes *Terra Australis*: a southern continent known to exist, but awaiting the endeavours of intrepid explorers to be fully discovered.

The Straits of Magellan

In history, the threshold that separates the visionaries from the madmen is sometimes so fine that the only way we know which label to apply is to look at the results of their enterprises. Where a subject has failed in their audacious quest, historians are inclined to label them foolhardy and declare that no rational thinker would have ever pursued such a venture: tragedy was inevitable. But for those who succeed against the odds, the record is more likely to laud their bravery and ambition, pointing to their exploits as the archetype of human industry: only a person of their genius and daring could have succeeded. And so history is littered with figures whose reputations have been determined by the caprice of circumstance. For instance, had the tragic figures of Australian exploration history, Burke and Wills, been a few hours earlier arriving at Coopers Creek they would have met their *dépôt* party and likely made it back to civilisation alive. That's just a few hours between life and death, tragedy and glory, or the difference between historical remembrance as visionaries rather than fools.

Of course, sometimes it is not clear on which side of the ledger a subject belongs. Robert Scott's expedition to reach the South Pole ended in tragedy

with the deaths of all members of his crew, but had Roald Amundsen not beaten him to the Pole by five weeks would it have been a different tale—a tale about the success of a visionary, despite his tragic death? And what about Scott's own last thoughts on his legacy: "Had we lived, I should have had a tale to tell of the hardihood, endurance, and courage of my companions which would have stirred the heart of every Englishman. These rough notes and our dead bodies must tell the tale ..."⁴ If his venture is measured by the objective of being the first to reach the Pole, then it is a failure, but if measured according to the "hardihood, endurance, and courage" of its members, surely it becomes a success.

To this end, the story of Ferdinand Magellan shares some parallels with the story of Scott. Today Magellan is normally thought of as a visionary and master navigator thanks to his magnificent success in discovering a southwest passage into the Pacific, with crewman Juan Sebastián Elcano also going on to complete the first circumnavigation of the globe. But this ought to be balanced against the grim realities of the voyage: in crossing the Pacific the men under Magellan's command suffered some of the worst conditions ever experienced by sailors, with just 18 of the original crew of 237 alive by the end of the expedition. Of the dead Magellan himself may be counted, killed by dint of hubris as he involved himself in a local Philippine conflict, electing to wage war against one tribe in part to curry favour with the region's rajah, in part to prove the military prowess of Spain, but foremost because the tribe in question had refused to convert to Christianity.

Battling superior numbers, Magellan entered the fray with just 50 men, while the rajah and his warriors were instructed to stay offshore and not lend assistance, lest the spectacle of outnumbered Christian warriors slaying pagans be diminished. There was slaying, to be sure, and a magnificent spectacle, no doubt, but on this occasion Magellan's faith in God, in country and, above all else, in himself let him down. As it was, Magellan's final violent encounter

4 Robert Scott and Max Jones, *Journals: Captain Scott's Last Expedition* (New York: Oxford University Press, 2005), p. 422.

in the region was not his first. When at the Mariana Islands, Magellan was affronted by the local inhabitants making off with a skiff and other chattels. J.C. Beaglehole's description of Magellan's retribution is remarkable for its understatement and deserves repeating: "Magellan was much irritated, as after such a voyage was perhaps natural; he took forty armed men on shore, burned forty or fifty houses and several boats, killed seven men and recovered his skiff—vengeance which may be called ample."⁵ The same might be said of Magellan's fate in his final fatal encounter driven by Christian hubris. But that, of course, is not the feat for which Magellan is remembered.

Ferdinand Magellan set sail from Spain in August 1519, convinced he would find a passage in the southern latitudes connecting the Atlantic with the provinces of Asia. Like Columbus, Magellan was willing to pursue an extremely dangerous voyage of discovery because he believed he knew what lay beyond the boundaries of recognised knowledge. As neither a personal nor an official journal for his voyage has survived, the exact evolution of Magellan's thinking throughout the various stages of the expedition remain mostly opaque. What we do have are the insights into Magellan's thinking recorded in the *relation* (narrative) written by Antonio Pigafetta, one of but a handful of men who survived the expedition's gruelling three years at sea.

Pigafetta reveals that Magellan was willing to go to great lengths to find a sub-American passage; had a strait not been found at around 53°S, it was Magellan's conviction to push perilously farther south into wild and frigid climes:

Had we not discovered that strait, the captain-general had determined to go as far as seventy-five degrees toward the Antarctic Pole, where in that latitude, during the summer season, there is no night, or if there is any night it is but short, and so in the winter with the day.⁶

5 J.C. Beaglehole, *The Exploration of the Pacific*, Third ed. (Stanford: Stanford University Press, 1966), p. 31.

6 Antonio Pigafetta, *The First Voyage around the World, 1519–22: An Account of Magellan's Expedition*, ed. Theodore J. Cachey (Toronto: University of Toronto Press, 2007), p. 20.

Consulting a world map or globe immediately demonstrates the folly of this: at 75°S Magellan would find himself beyond the Antarctic Convergence in unbearably cold and wild seas and, ultimately, at 75°S, at the Antarctic mainland itself. The plan was madness. As for what his crew would have thought had they been asked to pursue a passage further south, it is not known, but already at 53°S all were anxious and mutiny was fomenting. Indeed, Magellan had already dealt with one mutiny back on the shores of Brazil, but now at this crucial juncture Estêvão Gomes overthrew the captain of the sister ship, the *San Antonio*, and deserted the expedition just as they were at the point of their most important discovery. History is normally quick to judge mutineers—the word alone conjures a sense of dastardliness—but history also shows that Gomes did the sensible thing by returning to Spain, sparing his crew a voyage which, for Magellan's remaining ships, took three years and claimed the lives of nearly every sailor under his command. Of course, being practical will not earn you a place in the annals of discovery.

So while Gomes and the crew of the *San Antonio* returned to Spain, in late October 1519 Magellan was able to rejoice that his conviction and doggedness were amply rewarded with one of the most important discoveries in the history of exploration, as recounted by Pigafetta:

Upon reaching fifty-two degrees towards the Antarctic Pole, we discovered most miraculously a strait on the day of the [Feast of the] Eleven Thousand Virgins, whose cape we named the Cape of the Eleven Thousand Virgins [Cape Virgenes]. That strait is 110 leagues or 440 miles long, and it is one-half league broad, more or less, and it leads to another sea called the Pacific Sea, and is surrounded by very lofty mountains laden with snow. There it was impossible to find bottom [for anchoring], and [it was necessary to fasten] the moorings on land twenty-five or thirty fathoms away, and if it had not been for the captain-general, we would not have found that strait, for we all thought and said that it was closed on all sides.⁷

7 Pigafetta, *The First Voyage around the World*, p. 20.

Magellan had been successful in his quest for a south-west passage, geographical reality fortuitously intersecting with his geographical preconceptions. But this leaves one question. What was the basis for Magellan's unwavering conviction that he would find a passage rounding the tip of South America? A map, of course. Pigafetta explains that Magellan "knew that he had to make his journey by means of a well-hidden strait, which he had seen depicted on a map in the treasury of the king of Portugal, which was made by that excellent man, Martin of Bohemia"⁸

Taken at face value, these comments constitute evidence that Magellan was preceded by some other explorer whose voyage was very nearly kept secret. But rarely is historiography so straightforward. To consult Martin Behaim's globe goes of 1492 brings the problem into immediate relief: neither on this map, nor on any other map known to have come from his hand, does Behaim depict South America as a continent; hence, he could not have depicted a sub-American strait.⁹ And yet Pigafetta has always been considered a relatively reliable source. So where does this leave us?

A possible answer is provided by George Nunn who points out that in Magellan's time it was understood that eastern Asia included a south-east peninsula extending, at its farthest, to the tropic of Capricorn. If Magellan also believed—as many did at the time—that South America was connected as a peninsula to the Asian mainland, then it is conceivable that Magellan conflated and confused these concepts, in doing so mistaking Behaim's Southeast Asian peninsula for America. If so, it would explain why Magellan read Behaim as indicating that a strait was present around the southern tip of the Americas—really Southeast Asia.¹⁰ This is certainly the most plausible explanation, but some scholars have demurred on the question of which map or maps Magellan was relying on. For example, the respected historian of the

8 Pigafetta, *The First Voyage Around the World*, p. 18.

9 Images of Behaim's globe are readily available online. One useful redrawing is available at <http://www.henry-davis.com/MAPS/LMwebpages/258E.html>.

10 George Nunn, *The Columbus and Magellan Concepts of South American Geography* (Glenside: 1932), p. 44.

Pacific, Oskar Spate, suggests that contrary to Pigafetta's stipulation, the map in question was probably one of Schöner's, which also shows a strait south of the Americas.¹¹

Magellanica

Ultimately, the subject of why Magellan believed there was a passage round the south of the Americas is intractable. What can be said is that Magellan was pursuing this passage as a result of his subscription to one or more items of geographical lore—lore which at that stage lacked the substantiation of empirical data. Magellan's remarkable voyage changed all this. Not only did he prove that there was a south-west passage into the Pacific, he provided empirical data reconcilable with the southern continent. Had Magellan explored the higher latitudes and rounded the Americas in the open waters south of the island of Tierra del Fuego, it would have been a blow to the theory of a southern continent. Expectation would have been confounded by evidence and belief in the southern continent may have weakened—though more than likely the concept would have limped on, as however far south an explorer went, the continent could be imagined just beyond the horizon. But it was not open water that Magellan discovered, it was a strait: a seaway flanked on the northern side by the American mainland, and on the southern side by snow-capped mountains amidst a landmass of indeterminate extent. For the theory of the southern continent this was a crucial and providential article of geographical data. Land existed, just as Schöner had drawn on his maps and cosmographers had theorised, south of the recently discovered Americas. It was exactly where land should be if the theory of a southern continent were true. For curious onlookers this presented powerful corroboration of the theory of a southern continent—it was the tipping point where a compelling cosmographic theory about southern lands appeared to crystallise into geographical reality.

11 O.H.K. Spate, *The Pacific since Magellan, Volume I: The Spanish Lake*, 3 vols. (Canberra: Australian National University Press, 1979), pp. 45–46. A reproduction of Schöner's globe gores is presented in Figure 2.9.

But how could one single discovery prove so important? What needs to be remembered is that while cosmography was characterised by conjecture, the discipline carried a great deal of authority. Well-received cosmographical theories like the North-West Passage and the southern continent were presented and received as geographical entities that probably—not just possibly—existed. Faith was already placed in the existence of these geographies before the opportunities arose to test or corroborate the underlying conjectures. All that remained was for empirical confirmation of their presence. In the case of the southern continent, this came with Magellan's discovery of a southern landmass contiguous with the Americas. It was such a profound intersection between prediction and reality that it was considered spectacular confirmation of the predictive power of cosmography—cosmography teaching that if a separate landmass existed at these latitudes then it was in fact the tip of a sprawling southern continent. Consider the process at play here as sketched by John Allen:

However honest, objective, and accurate the reports of exploration, imagination modifies the accounts of discovery. Explorers may present a partial picture of an area by describing only what they have actually witnessed. Those who interpret their reports may have difficulty in adjusting the size of observed features to the scale of pre-exploratory *terrae incognitae* ... What exploration makes known may expand in the imagination to encompass what remains unknown.¹²

So having seemingly identified one piece of the continent through the discovery of Tierra del Fuego, it was as if the existence of the general cosmography of the southern continent had been confirmed. It heralded the ensuing transition of the southern continent from cosmographical idea to geographical reality.

This state of play is best illustrated by the maps produced in the wake of Magellan's voyage. Among the first wave of printed maps incorporating the

12 Allen, "Lands of Myth," pp. 56–57.

new data was Franciscus Monachus's world map of 1527 (see Figure 3.1). The most arresting element of the map is the southern section between Africa and South America where the southern continent is tentatively delineated by means of straight lines. By sectioning off this enormous grid of space Monachus is asserting that it is within this region that the southern continent exists, but that the necessary information to sketch the contours of its coast is yet to be attained. This message is conveyed visually as well as through the inscription annotating this part of the map, which translates as: "This part of the world, not yet discovered by navigators, exists." If yet undiscovered, how does Monachus know it exists? The answer is in the image. Flanking the strait lines are the familiar irregularities of a coastline. In particular, the southern continent is depicted as the land to the south of the strait discovered by Magellan, clearly communicated by the fact the coastline is here contiguous with South America. It is that one piece of information which allowed Monachus to extrapolate an entire continent, occupying up to 50° of latitude and 360° of longitude. Thus, though Monachus adopts a cautious cartographical approach to depicting the unknown regions, the presence of that single item of empirical data transforms the southern continent from cosmographical fancy to geographical reality. Indeed, that single piece of empirical data was capable of standing in for the entire southern continent—it was a proxy for the rest of the southern continent's geography then unavailable to Europeans.

Once Tierra del Fuego had been appropriated by cosmographers and cartographers as a part of the southern continent, the notion of a sprawling southern landmass lying just beneath the tip of South America became a fundamental tenet of cosmography. Even the trump card of empirical data proving that Tierra del Fuego was not part of a larger continental landmass could not extinguish this notion. In 1578 the English privateer Francis Drake attempted passage through the Straits of Magellan. In bad weather his ship was blown south of the straits, where it was reported that Drake saw nothing but open waters. Drake was eventually able to recover his ground and pass through the straits, but what he had seen when thrown off course was proof

that the popular identification of Tierra del Fuego with the southern continent was erroneous (though, be it from ignorance or intransigence, many cosmographers and cartographers ignored this revelation, continuing to present Tierra del Fuego as a part of Terra Australis).

Yet, cosmography being the robust art of speculation that it was, where one geography disappointed another delivered. The voyage of Jacob le Maire and Willem Schouten in 1616 conclusively proved that there was a sea passage south of Tierra del Fuego. But le Maire and Schouten also discovered an island just east of Cape Horn, which the explorers named Staten Island. Cartographers promptly appropriated this new-found land, rendering it a part of the southern continent, in doing so picking up almost exactly where Tierra del Fuego had left off. So compelling was the cosmographical notion of continental land stemming from a main somewhere near the tip of South America, that when in 1642 Abel Tasman discovered New Zealand he decided, in his words, to give “to this land the name of Staten Landt ... since we deemed it quite possible that this land is part of the great Staten Landt”—some six thousand miles distant—“and we trust that this is the mainland coast of the unknown South-land.”¹³

But this is getting well ahead of the story. For the time being—in the immediate post-Magellanic years—cartographers were yet to settle on an agreed way of representing the southern continent due to the scarcity of empirical data available to flesh out the contours of its coastline. In the meantime, and in lieu of relevant empirical data, geographical lore of a more dubious nature sometimes met cartographers’ and cosmographers’ appetites for knowledge.

13 Abel Tasman and Jan Ernst Heeres, *Abel Janszoon Tasman's Journal: Of His Discovery of Van Diemens Land and New Zealand in 1642, with Documents Relating to His Exploration of Australia in 1644 Being Photo-Lithographic Facsimiles of the Original Manuscript in the Colonial Archives at the Hague with an English Translation and Facsimiles of Original Maps, to Which Are Added "Life and Labours of Abel Janszoon Tasman" by J.E. Heeres, and "Observations Made with the Compass on Tasman's Voyage" by Dr. W. Van Bemmelen* (Los Angeles: Kovach, 1965), p. 20.

Regio Patalis

At various stages, ancient knowledge, rumours, legends, and reports from medieval travellers would all be co-opted in very specific ways to flesh out the evolving form of the southern continent. One of the most enduring of these forms was a peninsula pushing deep into the Pacific Ocean, labelled “Regio Patalis”. Alfred Hiatt traces Regio Patalis from its status in Pliny’s time as a region in the Far East said to fall below the tropic of Cancer, to Francis Bacon and thence Pierre d’Ailly who cite it as a region on the southern coast of India, extending as far south as the tropic of Capricorn.¹⁴ As better knowledge of the Asian regions filtered back through merchants and explorers, it became clear that no Indian peninsula extended as far south as the tropic of Capricorn. However, Magellan’s discovery of a passage south of the Americas flanked by land extending into the unknown south seemed to confirm the cosmography advanced by Johannes Schöner in 1515. Thus, when Schöner came to revise his cartography in the 1520s, he chose to appropriate the classical land of Regio Patalis which had become redundant as a northern hemispheric geography that protruded into the southern hemisphere. He was able to relocate it in the same general region about the tropic of Capricorn where it had earlier been associated, except the peninsula bearing its name now projected north from a southern continent rather than south from a northern continent. Following Schöner, Oronce Finé reproduced this feature on his enormously influential map of 1531 (see Figure 3.2), popularising to a generation of cartographers a geography which had its origins in the first century AD at the latest, with Pliny’s *Naturalis Historia*.

In doing so, both Schöner and Finé chose to ornament their depictions of a southern continent with a geography that had simply been lifted from cosmographical discourse and redeployed not where logic necessarily dictated that this geography must exist, but where it was most valuable to the map. What these cartographers were interested in was geographical verisimilitude: the semblance of authenticity. They knew (or thought they knew) that Terra

14 Hiatt, *Terra Incognita*, pp. 170–171, 182 (note 103).

Australis was known only by a single region of that continent in the form of the northern shores of Tierra del Fuego; but they also had faith in the cosmographical theory that postulated a southern continent. When a cartographer depicted a place not known by discovery, but nevertheless believed to exist, they played to the knowledge and expectations of their audience. Both Schöner's and Finé's southern continent, labelled "Terra Australis", possessed a detailed coastline, mountains and rivers, and labels naming regions. Through the appropriation of Regio Patalis they appealed to the wisdom and authority of the ancients, without necessarily saying anything about the specific details of Terra Australis. Thus presented, the southern continent possessed the veneer of reality without pretending to reality itself. Indeed, both Schöner and Finé adorned their southern continents with the inscription: "Terra Australis Re center inventa sed nondum plene cognita." Translated, this means, "Terra Australis, recently discovered but not yet fully known." This statement, repeated by innumerable cartographers in the following centuries, is itself pregnant with meaning.

When cartographers and geographers conveyed the message, "Terra Australis ... not yet fully known", or "Terra Australis ... not yet discovered", they were effectively saying: "It is only a matter of time before we acquire empirical data confirming the existence of this southern continent." It is an expression of confidence not merely in the southern latitudes eventually being explored, but in an actual geography, not yet proved by exploration to exist, being explored. The paradox was not lost on Joseph Hall who wryly commented in his 1609 novel, *The Discovery of a New World*:

It hath ever offended mee to looke upon the Geographicall mapps, and find this: *Terra Australis, nondum Cognita*. The unknowne Southerne Continent. What good spirit but would greeve at this? If they know it for a Continent, and for a Southerne Continent, why then doe they call it unknowne? But if it bee unknowne; why doe all the Geographers describe it after one forme and site? Idle men that they are, that can say, this it is,

and yet wee know it not: How long shall wee continue to bee ignorant in that which wee professe to have knowledg of?¹⁵

The answer to Hall's question is that they did, in fact, have knowledge, just not necessarily empirical knowledge. Because the southern continent existed as a cosmographical entity largely by means of non-empirical lore (cosmographical conjecture) its being discovered presented not as an ontological issue, merely a temporal one. That is why Lancelot Voisin de la Popelinière, in encouraging his king and countrymen to seek out and settle the southern continent, could write: "Behold a world which can be filled by all manner of good and most excellent things. All that is required is to discover it."¹⁶

For the time being, though, the renderings of imaginative cartographers would have to suffice. In the wake of Schöner's and then Oronce Finé's maps, most cartographers of the following generation formed their depictions of the southern continent around three geographical features which became standard to cartography, namely: a coastline contiguous with South America (based on Magellan's discoveries), a region jutting into the Pacific (Regio Patalis), and another region stretching to just south of Java (Finé's *Brasilie Regio* which originated with Schöner).

Cartographic Dead-Ends

Between 1531 and 1569—representing the years between Oronce Finé's and Gerhard Mercator's seminal world maps—the southern continent was depicted in many and varied forms, often, but not always, beginning from the three standard features just outlined. Cartographers had enormous freedom in how they represented the southern continent, if they represented it at all. At their disposal was a vast expanse of unexplored space in the southern latitudes, with *Tierra del Fuego* the only aspect of the southern continent's

15 Joseph Hall, *The Discovery of a New World*, trans. John Healey (Massachusetts: Harvard University Press, 1937), pp. 12–13. The original version of Hall's work was published around 1606, with the first English translation appearing in 1609.

16 Hiatt, *Terra Incognita*, p. 235; French text available in Voisin de La Popelinière, *Le Trois Mondes De La Popelinière* (Geneva: Librairie Droz, 1997 [original 1582]), p. 417.

geography considered fixed and settled. From that point they could be as austere or as elaborate in their depictions as they desired. To get a flavour for this variation, it is worthwhile pausing to consider a few of the more unusual and interesting variations on the theme of a southern continent produced during this period.

One of the more peculiar early modern renderings of the southern continent is found on a map constructed around 1530, now held in the Vatican Library (see Figure 3.3).¹⁷ In this map the southern continent is in the form of a ring continent (of which type Schöner's 1515 globe is the most famous exemplar), but unlike earlier cartographers' versions of a southern ring continent, this landmass has no inlet to the sea at the South Pole. It is one of the strangest and—despite the proliferation of place names and geographical features—least verisimilitudinous imaginings of the southern continent throughout that geography's long life in maps. For the most part, cartographers tended to imagine the unknown after the known, whereas this map is especially visually striking by dint of the way in which the southern continent departs from both existing representations of a southern continent and from the familiar forms of known lands. It makes the Vatican MS a curiosity; even though readers knew that the southern continent was *nondum cognita*, the illusion or promise of reality was often as enticing as reality itself. Imaginative geographies are characteristically marked by analogy, whereas this map presents a southern geography whose form delineates it from the empirical geographies otherwise populating the map. Put simply, the southern continent does not look real; its appearance denotes it as the imaginative geography it is.

But the lack of verisimilitude is not the only thing that makes the Vatican map unusual and interesting. Look carefully at the map and one can see the image of a Chinese dragon, its lithe body snaking across the southern hemisphere as it heads toward South America in perpetual pursuit of its tale. And there is more: is there not the likeness of a human face projecting from South

17 See Van Duzer, "Cartographic Invention," especially pp. 202–208; Van Duzer, "The Southern Ring Continent," p. 127.

America's eastern coast, gazing upon the Atlantic? The author's mother even commented that it could well be a silhouette of the comic-book Phantom.

Of course, no person of right mind would truly suggest that this map surreptitiously incorporates images of a face and a Chinese dragon, but it does illustrate just how powerful the human imagination is and how easily people can see in geographies what it is they want to see or are prompted to see. Indeed, now that the suggestion has been implanted, it will be nigh impossible for any reader to look upon the Vatican map and not see the "face" and "dragon". In this vein, it should be mentioned that it was only recently that the author noticed the American face when scrutinising the map in the mischievous hope of finding a likeness to match the Chinese dragon. It is little surprise to have found that which was sought—not because it was independently there, but because the human mind is able to process obscure forms to make them familiar. It is why we see saucepans and big dippers in the night sky, and dogs' heads in the clouds. It is why you can see an atrocious rendering of a person or a cat or Australia drawn by a non-artist, and yet still make out from those poorly rendered lines a person and a cat and Australia. It is this capacity and function of the mind in interpolating and interpreting that has arguably led numerous authors to contend that they see Australia depicted in a group of world maps produced well before the Dutch reached the Australian littoral in 1606.

Common to these maps, produced around the middle of the sixteenth century by the French school of cartographers based around Dieppe, is the depiction of a large landmass just south of Java that the Dieppe cartographers labelled *Jave la Grande*. On some maps, like the early exemplar of Jean Rotz (1542, see Figure 3.4), *Jave la Grande* stands as an incomplete geography, with northern, eastern and western borders, but no border to the south. Other versions represent *Jave la Grande* as a projection of a larger southern continent which sprawls across the Antarctic regions. An example of the latter is Pierre Desceliers' 1550 world map, where "*Jave la Grande*" is joined to "*Terre Australle*" (see Figure 3.5).

These maps occupy a bizarre niche in the story of the southern continent. Particular to the Dieppe cartographers, Jave la Grande appears in the 1540s with little in the way of precedent, and then, just as abruptly as it appeared, Jave la Grande disappears in the late 1560s, having had almost no influence on cartographers outside Dieppe, and little or no influence on the ideas of geographers, explorers or others interested in geography and cosmography. It is ironic, then, that the Dieppe maps have had such a large impact on modern scholarship. Beginning in the late eighteenth century when Alexander Dalrymple unearthed the Harleian map (*circa* 1540s) and declared that it was a depiction of the east coast of Australia, a succession of authors right up to the present day have pursued the case that the Dieppe maps depict Australia.¹⁸ The necessary implication of this thesis is that, one way or another, Europeans knew of Australia before the Dutch discovery of the northern Australian coast in 1606—most proponents believing that the maps are based on Portuguese data (given the place names on Jave la Grande are derived from Portuguese words), though the French and the Spanish have also been suggested.

The evidence for the thesis that the Dieppe maps depict Australia is flimsy at best and lunatic at worst. My suspicion is that some proponents of this thesis have seen the Rotz map or some other depiction of Jave la Grande and been taken by the coextensivity of the land with Australia, and the apparent similarity of select features with Australia. Indeed, when the author first saw the 1542 Rotz map he could not help but see Australia in the eastern hemisphere. Not quite Australia as it should be, but beneath the region of Indonesia there is a form which is not only in the general region of Australia, but the bottom-most point of which looks a lot like Cape York, and in which the other corner is a passable version of the south-west corner of Western Australia—albeit with the “continent” having been “carelessly” rotated 90 degrees. Thankfully, my rational faculties remind me of two important things: when examined in detail the resemblance and coextensivity of Jave la Grande to Australia is

18 W.A.R. Richardson, *Was Australia Charted before 1606? The Java la Grande Inscriptions* (Canberra: National Library of Australia, 2006), p. 33.

minimal (indeed, entirely non-existent), and there is no other evidence that the landmass is based on knowledge of Australia.

Nevertheless, convinced that Jave la Grande must be Australia, numerous authors have set about constructing arguments to support their visceral conclusions, normally involving the interpretation—or bastardisation—of place names, and the rearranging of the coastline of Jave la Grande so that it looks more like Australia.¹⁹ This is the cartographic equivalent of playing Lego.²⁰ More than any other scholar, W.A.R. Richardson has assiduously demolished these arguments; his impressive catalogue of books and articles on the subject written over the course of 25 years are essential reading on the subject.²¹ But this still leaves one problem.

While Jave la Grande is not Australia, it is nevertheless the product of reconnaissance. That is to say, the geography of Jave la Grande found on the Dieppe maps is almost certainly based on empirical geographical data. When depicting imaginary or unfamiliar coastlines, cartographers had at their disposal a range of conventions which made it clear whether the geography was conjectural or based on empirical data: through the repetition of geographical features or lack of variance in a coastline, the way a coast was shaded or left incomplete, the lack of place names or novelty of place names, descriptive annotations and labels, and the presence of obscuring cartouches and arbitrary embellishments. In this regard, it may be noted that Jave la Grande possesses all the conventions of an empirical geography. Take the version of Jave la Grande on Desceliers' world map, a detail of which is included as Figure 3.6. In the Jave la Grande section of this geography (the right half of Figure 3.6) a coastline of great variation is present, marked with rivers, shoals, and

19 See, for example, Lawrence Fitzgerald, *Jave la Grande: The Portuguese Discovery of Australia* (Hobart: The Publishers Pty Ltd, 1984); Kenneth McIntyre, *The Secret Discovery of Australia: Portuguese Ventures 200 Years before Captain Cook* (Medindie: Souvenir Press, 1977); Peter Trickett, *Beyond Capricorn: How Portuguese Adventurers Secretly Discovered and Mapped Australia and New Zealand 250 Years before Captain Cook* (Adelaide: East Street Publications, 2007).

20 Avan Stallard, "Better Than the *Da Vinci Code*': The Theological Edifice That Is Gavin Menzies' 1421," *History Australia* 5, no. 3 (2008), p. 77.5.

21 Richardson's book, *Was Australia Charted before 1606?*, provides the best introduction to this subject.

islands, and heavily labelled with place names. Compare this with the contiguous section of coastline which is familiar as Terre Australle (the left half). It has no geographical variation in the coastline, no indications of islands, rocks, or shoals, and minimal labelling. There is little doubt that Desceliers and his peers were basing Jave la Grande on empirical data, and the larger Terre Australle on cosmographic conjecture. So, if the Dieppe cartographers were drawing upon empirical data, the question is, what misplaced geography are we looking at?

The two best contenders are Southeast Asia and South America. W.A.R. Richardson outlines the case for Southeast Asia, arguing that with careful philological investigation the place names along Jave la Grande can be matched with misplaced geographies of Southeast Asia.²² Richardson's case is intelligent, comprehensive and well argued, but, though by no means unreasonable, it remains somewhat speculative. A stronger case can be made for the arguments of Robert King, who revives and elaborates a long-neglected thesis first put forward by James McClymont in 1892, who argued that the South American coastline was mistakenly duplicated on the Dieppe maps.²³ King concludes:

South America is bilocated both in the western hemisphere in accordance with Columbus' measurement of longitude and in the eastern hemisphere in accordance with Ptolemy's measurement of longitude. The Dieppe mappemondes show the ultimate stage of this cosmography where the Southern Continent is confused with Brazil, South America is confused with the peninsula of Cattigara (Indochina), and Greater Java—Jave la Grande—is, like Schöener's and Finé's Region of Patala, made into a promontory of the Southern Continent. The outlines of Jave la Grande and the Southern Continent on these mappemondes are drawn, not from actual discovery and exploration of these regions by

22 Richardson, *Was Australia Charted before 1606?*, chapters 9–15.

23 McClymont, *The Theory of an Antipodal Southern Continent During the Sixteenth Century*, pp. 11–23.

Iberian, French or other voyagers, but from the cosmographical ideas of the time.²⁴

King brings new evidence and a keen insight to the subject, and though the controversy over the provenance of Jave la Grande is sure to continue well into the future, King may have come as close to the truth as possible with this vexatious subject. Ultimately, though, for the story of the southern continent the Dieppe maps are no more than a historical curiosity—a cartographic dead end that ultimately played no role in the evolution of ideas about the southern continent.

If the intrigue surrounding the Dieppe maps comprises one of the more sensational sides to this discourse, an altogether more sober observation is the simple recognition that not all world maps produced at this time included a southern continent. For instance, when it came to the key piece of empirical data upon which most sixteenth-century cartographers based their southern continents—that is, the passage by Magellan round the tip of South America—Sebastian Münster, a cosmographer of considerable renown, either had different information than his contemporaries, or he interpreted the known facts of Magellan’s voyage very sceptically, for he suggests that Magellan considered his discovery of Tierra del Fuego to be the discovery of an island, not a mainland: “the land which [Magellan] had on his right hand, he doubted not to be mainland: and that on the left hand, he supposed to be islands.”²⁵ Yet as clear as Münster is on this point in his writing, when it came to mapping Magellan’s discoveries it appears he felt some pressure from convention, for, though he does indeed depict Tierra del Fuego as an island on his world map of 1540, it is unexpectedly large—not quite the stuff of a mainland, but nor the modest island which could be reasonably justified from Magellan’s passage through the straits.

Still, few maps were as restrained in their depictions of the southern latitudes as the map of Münster; even if a cartographer had no particular ideas

24 Robert J. King, “The Jagiellonian Globe: A Key to the Puzzle of Jave La Grande,” *The Globe* 60 (2008), p. 12.

25 Münster quoted in Suarez, *Early Mapping of the Pacific*, p. 87.

about the southern continent, he was wise to the importance of making his maps both as complete and attractive as possible. Not all cartographic representations of a southern continent can be described as handsome—the extravagance of a depiction like the Vatican MS's does not necessarily translate to aesthetic beauty—but in most cases adding in this feature bestowed a map with a certain cosmographic grandeur associated with the depiction of places only on the cusp of knowledge, while at the same time making the map more visually striking. As the years passed and the southern continent appeared in an increasing number of world maps, cartographers were left with little choice but to indulge this geographical phantom.

In many ways the outcome is similar to an arms race: the southern continent keeps getting larger and protrudes further toward regions visited by explorers, as it simultaneously attracts more and more geographical features and cartographic bricolage. Take as an example the prototypical 1546 world map of Giacomo Gastaldi (see Figure 3.7). On this map Gastaldi has a comparatively modest (but, in real terms, still enormous) southern continent abutting the tip of South America.

When Gerard de Jode copied this map in 1555 (see Figure 3.8) he relied mostly on Gastaldi's geography and design, except for when it came to the southern continent. With de Jode, Gastaldi's modest southern landmass has become a much larger entity filling the southern latitudes from 60°S. So in size it is much more impressive than the original, though it remains geographically uninteresting, with neither geographical features nor place names to lift its slab-like appearance at the bottom of the map. The only significant embellishment is an inscription which seems to draw upon a version of the information provided by Martín Fernández de Enciso in his *Summa de Geographia*. The inscription reads: "This as yet unexplored southern land is stated by many reputable authorities to be 350 leagues from the Cape of Good Hope."²⁶ Another 10 years on, Paolo Forlani has again mostly followed the Gastaldi prototype for his world map, but the southern

26 Richardson, "Mercator's Southern Continent," p. 31.

continent is now a sprawling mass bursting with geographical features (see Figure 3.9).

What is interesting about this last map is that Forlani's southern continent is unabashedly aesthetic; readers know that the land labelled "Terra Incognita" continues to be unknown, in which case the profusion of mountain ranges and exotic animals (the ranks of which include a camel, a rhinoceros, a lion and the mythical unicorn) can be appreciated for their decorative qualities without impugning the credibility of the map. What makes Forlani's 1565 map doubly interesting is the fact that just five years earlier he had produced a version of Gastaldi's world map in which he had faithfully copied the southern continent after Gastaldi's prototype (see Figure 3.10). In those few years, what had changed?

Conclusion

What changed was that for cartographers in the late sixteenth century and beyond, imagining the southern hemisphere without a southern continent was quickly fading as an option. Not only had the cosmography of Terra Australis been matched to the empirical data of voyages of discovery, thus entrenching the concept of a southern continent as something altogether more potent and real than an imaginary land, but cartographers had helped make Terra Australis one of the most visually striking geographies of the world map. That process finally reached its apex with the cosmographic and geographic reckonings of Gerhard Mercator, consummated in his peerless world map of 1569.

Chapter Four

MERCATOR'S SOUTHERN
CONTINENT AND THEORY
OF EQUIPOISURE

In the wake of the mingled scepticism and belief, the cross-currents of empiricism and imagination, we glimpse one of the key principles of the Renaissance geographical imagination: eye-witness testimony, for all its vaunted importance, sits as a very small edifice on top of an enormous mountain of hearsay, rumour, convention and endlessly recycled fable.

*Stephen Greenblatt*¹

Imaginative geographies develop through maps. Throughout history maps have provided a powerful and effective medium for the expression of existing ideas, as well as the ideal medium to play with those ideas—perhaps moving around existing geographies, perhaps supplementing geographies with additional details, perhaps adding in entirely new geographies and developing a new cosmographical scheme. Good maps—maps both expert in technique and sophisticated in their development of ideas—are immensely powerful tools; one good map can change the trajectory of an entire discourse. For the southern continent, it happened with the seminal maps of Oronce Finé and

1 Stephen Greenblatt, "Foreword," in Frank Lestringant, *Mapping the Renaissance World: The Geographical Imagination in the Age of Discovery*, trans. David Fausett (Cambridge: Polity Press, 1994), p. xi.

Johannes Schöner, and again with the 1569 world map of Gerhard Mercator (see Figure 4.1). There are two things that make Mercator's world map especially significant.

Mercator went to great lengths to construct what he considered to be a reasoned, justified representation of the southern hemisphere. He did not simply plumb his imagination in constructing a detailed austral geography, for Mercator was operating in a paradigm where cosmography was respected as, at its pinnacle, an empirical pursuit, and, at its core, a discipline concerned with reason. Throughout the early modern period there would always be cartographers willing to indulge fantasy and idle speculation in plotting geographies on their maps, but the work of the most eminent cartographers who completed their cosmographies with imaginary lands was always rooted in geographical lore. Mercator makes a virtue of this: he discusses in detail the sources he draws on and the reasoning he has followed to craft his particular vision of the southern continent. In doing so, history has been bequeathed a remarkable insight into the processes underlying the creation of geographies: Mercator pulls back the veil and shows to the world the intimate relationship between theory, ontological knowledge and geographical lore.

It is also with Mercator that the first iteration of a theory of equipoisure is evident. By no means the straightforward notion of hemispheric balance encountered later in the eighteenth century, Mercator's reasoning is dense and difficult to follow, though not without impressive turns of logic. Mercator constructed the theory as a justification that allowed him to be sure of his work in providing form and characteristics to a still-unknown continent. Without good reason to believe a southern continent did exist, Mercator would have been compelled to offer alternative interpretations to the wealth of empirical data and geographical lore he brings to bear. His theory of equipoisure is the bedrock of his southern continent.

It is that southern continent, elaborated with care and detail on Mercator's 1569 world map, that solidified the forms and features of Terra Australis, building on the work of Schöner and Finé. Once Mercator had added his own

innovations, the standard for depicting Terra Australis was set for the next century.

Mercator

Born in the Netherlands in 1512, Mercator's scholastic interests were fostered during his study of natural philosophy at the University of Louvain, near one of the main centres of European printing and scholarship in the city of Antwerp. It was there that Mercator began to explore some of the pressing philosophical issues of the day, taking particular interest in the problem of reconciling the cosmological origins of the universe, especially as outlined by Aristotle (whose works remained preeminent in the field of natural philosophy), with the revelations of scripture according to the Roman Catholic religion.² Though in his early career Mercator never elaborated his cosmological theories in writing, it is evident that it was an abiding interest which he pursued throughout his career. Toward the end of his life Mercator finally penned his own ideas about cosmology—ideas which helped consolidate his vision of Terra Australis—at a time when he had removed to Germany.

To begin with, however, Mercator adopted, without notable revision, the conception of Terra Australis considered most authoritative at the time. Thus, in his very first world map produced in 1538, he opted for a competent but mostly unoriginal reproduction of Oronce Finé's 1531 double cordiform world map. Such derivative cartography was both effective and acceptable, but copying other cartographers' visions of the southern continent was just a starting point for Mercator. Where his peers may have been willing to accept the existence of the southern continent as a given, Mercator soon began to seek reason and evidence to justify belief. If the southern continent did indeed exist, then Mercator wanted to base his cartography, first, on sound cosmographical theory and, second, on sound geographical data. Conjecture

2 Elial F. Hall, "Gerard Mercator: His Life and Works," *Journal of the American Geographical Society of New York* 10 (1878), pp. 163–166. For a more recent discussion of Mercator's life, see Nicholas Crane, *Mercator: The Man Who Mapped the Planet* (London: Weidenfeld & Nicolson, 2002).

and fancy loomed as impediments; he wanted facts—empirical information—to guide his cartography, and so he set about acquiring the necessary materials for him to produce a southern continent that set down borders based on the interpretation of information rather than the interpolation of possibilities. In time, Mercator's labours culminated in his seminal world map of 1569: a cartographic masterwork, and the subject of this chapter. What makes this map so important is not just the geographical entities contained within its borders, but also the intellectual reckonings which lay behind the construction of the map and the construction of its cosmography.

By 1569, with fully 30 years of experience behind him, Mercator had established his reputation as the preeminent cartographer of his time. The workmanship on his maps was second-to-none, and his eye for detail was exceptional. He had pioneered what would become the ubiquitous use of italic lettering on maps—"the Latin hand for the Latin language"—which he had encouraged with a 1540 publication, *Literarum Latinarum*, and would continue to refine.³ So it was no surprise that Mercator's new world map was exquisitely engraved, highly detailed and geographically very competent—though not without its mistakes. But what made the map truly innovative was the projection Mercator employed, which allowed loxodromes to be represented on the map as straight lines. This meant that a navigator could simply and reliably plot a course between any two points and know what bearing needed to be maintained to reach that point.

The significance of Mercator's world map does not end there. Not only did he provide the template for maps to better serve navigation, he also provided the template of a southern continent which dominated the southern latitudes of maps right up until the voyages of exploration that eroded its shores. How he came to piece together his southern continent shall be discussed in a moment. First, we follow Mercator in the cosmological and cosmographic theorising which convinced him that a southern continent, whatever its particular guise, must exist.

3 David Woodward, *Art and Cartography* (Chicago: University of Chicago Press, 1987), p. 187.

In approaching cosmographic theory, the first problem Mercator faced was an epistemological one. Historically, cosmographic conjecture about southern lands had been based on inductive reasoning; that is, cosmographers guessed at what might exist in the southern hemisphere on the basis of what existed in the northern hemisphere. Since the invention of the printing press and well before, cosmographers had imagined lands outside the *oikoumene*, lands which, whether represented in familiar terms or presented more as grotesqueries, were in one form or another derivative of knowledge of the *oikoumene*. As for why other lands should exist at all, cosmographers had rarely if ever felt the need to justify themselves. Better that land exist in other hemispheres than the rest of the globe be an ocean waste. But from a methodological perspective, this sort of reckoning left Mercator with very little substance to work with. The conjecture of southern lands was unable, and, indeed, was not required, to offer any explanations about the physical workings of the earth. It was a theory that possessed no explanatory power. In the early modern period, the southern continent was assumed to exist on the basis of tradition, not argument.

Mercator demanded more. To be confident in mapping its geography, Mercator knew that he had to first prove the continent's existence from a theoretical basis. He did so by constructing the theory of hemispheric equipoiseure. According to his friend, Walter Ghim, Mercator was

determined to divide the world into three equal continents, one comprising Asia, Africa, and Europe, another West India with all its adjacent kingdoms and provinces, and a third, which he realised was unknown and still awaiting discovery, but whose existence he thought he could clearly prove by solid reasoning and argument. To wit, compared to its counterparts this third continent could not be less in its geometric proportions, size, weight, and gravity and thus either be smaller than or below the other two, otherwise the world would not be arranged in a way that it stands firm through its centre. Writers call this the Southern Continent.⁴

4 Walter Ghim, "Life of Mercator," in Gerhard Mercator, *Mercator: A Monograph on the Lettering of Maps, Etc. in the 16th Century Netherlands with a Facsimile and Translation of His Treatise on the Italic Hand and a Translation of Ghim's Vita Mercatoris*, ed. A.S. Osley

With this line of reasoning, Mercator became the first person of any epoch to articulate in writing a cosmological theory of terrestrial balance, a theory that may finally be identified as the theory of equipoisure. There were others before Mercator who made ambiguous comments about balance, but it is difficult to see them as articulations of a theory of equipoisure. One such figure was John Mandeville, the nom de plume attached to a fictitious but purportedly true travelogue. In *The Travels of Sir John Mandeville* (circa 1357), the protagonist makes a brief comment about the existence of the Antipodes, and goes on to provide what seems to be a justification for this belief:

For you know well that those men who live right under the Antarctic Pole [star] are foot against foot to those who live below the Arctic Pole [star], just as we and those who live at our Antipodes are foot against foot. It is like that in all parts. Each part of the earth and sea has its opposite, which always balances it.⁵

Mandeville speaks of balance: is he suggesting that an equal quantity of land and water must exist in each hemisphere to ensure the poise of the sphere? It is possible, but he does not actually say this, and it is just as probable that he is invoking a doctrine of opposites.⁶ Whatever the case, Mercator read Mandeville, prompting the question, could this ambiguous comment have spurred Mercator on to a much more elaborate theory? It is also possible that Mercator's reading of Copernicus's *De Revolutionibus* (1543) encouraged his thinking about the southern continent and the question of balance. Copernicus writes:

(London: Faber and Faber, 1969), p. 190. Osley translates the passage, “illam in sua proportione geometrica magnitudine et pondere ac gravitate, ex duabus reliquis nulli cedere aut inferiorem vel minorem esse posse, alioquin Mundi constitutionem in suo Centro non posse consistere” as, “It could not be less in its geometric proportions, size, weight, and gravity than the other two, otherwise the world would be unable to remain balanced on its axis.” I have been more literal in my translation, as the phrase “balanced on its axis” may suggest a notion of equipoisure discordant with Mercator's ideas, as elaborated in the following pages.

5 Mandeville, *The Travels of Sir John Mandeville*, p. 129.

6 See Lloyd, *Polarity and Analogy*.

in his *Geography* Ptolemy extended the habitable area halfway around the world. Beyond that meridian, where he left unknown land, the moderns have added Cathay and territory as vast as sixty degrees of longitude, so that now the earth is inhabited over a greater stretch of longitude than is left for the ocean. To these regions, moreover, should be added the islands discovered in our time under the rulers of Spain and Portugal, and especially America, named after the ship's captain who found it. On account of its still undisclosed size it is thought to be a second group of inhabited countries. There are also many other islands, heretofore unknown. So little reason have we to marvel at the existence of antipodes or antichthonos. Indeed, geometrical reasoning about the location of America compels us to believe that it is diametrically opposite the Ganges district of India. (1:3)

Thomas Goldstein thinks that Copernicus may be invoking some sort of “balancing effect’ against the presumable weight of the Old world” with these comments about the Antipodes, but this reading is not well supported by the text.⁷ It seems, rather, that Copernicus is making an inductive generalisation: land has been found to exist outside the oikoumene, therefore additional extra-oikoumenical lands such as the theorised Antipodes may be found to exist.

The Concept of Balance

Whether or not Mercator was inspired by these or other earlier texts, he marks out new territory in his magnum opus, the *Atlas Sive Cosmographicae Meditationes de Fabrica Mundi et Fabricati Figura*, published posthumously in 1595, with a detailed and complex theory of cosmology married to a theory of terrestrial balance.

Up until this point readers will probably have received the central conceits of the theory of equipoiseure without quibble. Indeed, hundreds of books

7 Thomas Goldstein, “The Renaissance Concept of the Earth in Its Influence Upon Copernicus,” *Terrae Incognitae* 4 (1972), p. 39.

and articles state that the early moderns and the ancients believed in the Antipodes because southern lands had to balance northern lands. It is a ubiquitous, deeply entrenched article of knowledge, probably because it appears straightforward and sensible: if the hemispheres are not balanced then the earth will not be stable on its axis. Deduction tells us that things are stable, therefore the earth must possess hemispheric balance. But there are serious complications with this theory—a theory that actually makes more sense in modern times than it did in Mercator's.

Moderns are likely to perceive balance as an issue pertaining to the revolution of the earth about its axis. If the hemispheres were unequal, then, like a lop-sided spinning-top, the earth would have a wobbly rotation. This is how the Enlightenment thinker Charles de Brosses understood equipoiseure in the eighteenth century, and it makes intuitive, if not perfect scientific, sense. The only problem with this conception of imbalance is that it has no applicability whatsoever to Mercator. Neither Mercator nor the vast majority of his contemporaries believed that the earth rotated about an axis; their earth was stationary at the centre of the universe. Cosmologists and astronomers had seemingly confirmed this with their observations and theories, but more importantly it was writ large in the Bible. Multiple passages tell of the earth's immobility. Psalm 104:5: "Who laid the foundations of the earth, that it should not be moved for ever." Job 26:7: "He stretcheth out the north over the empty place, and hangeth the earth upon nothing." Conversely, the Bible tells of the sun's mobility. Ecclesiastes 1:5: "The sun also ariseth, and the sun goeth down, and hasteth to his place where he ariseth." Faced with this body of authority, how could one claim to be a Christian and believe that the earth rotated, and orbited the sun?

Of course, in all generations there have been the few willing to challenge dogma and orthodoxy. One such man was Nicolaus Copernicus, author of the seminal work of heliocentrism, *De Revolutionibus*, published in 1543. Copernicus's book taught that the earth rotated on its axis one full revolution each day, and along with the other planets orbited the sun. These ideas ran

contrary to the cosmological doctrines of the Church that blended scripture with Aristotelianism. Despite this, the *De Revolutionibus* aroused only mild controversy upon publication, attributable to its quiet reception within the scientific community. Not until 1616 was the book banned by the Church. But while Copernicus's ideas about heliocentrism remained in the shadows of public astronomical discourse, the scientific community passed between themselves the *De Revolutionibus* and engaged with its ideas—even if only by dint of scribbles in the margins of the text. With time, the concept of heliocentrism eventually roused curious minds to action. In the late sixteenth century Tycho Brahe proposed a geo-heliocentric model of the universe in response to Copernicus's arguments.⁸ Soon after, Johannes Kepler made his clarion call in the name of science with these words in his *New Astronomy* (1609):

In theology, the preponderance of authority must be weighed, but in science the preponderance of reason. Therefore, revered is Augustine, who admitted sphericity but contested antipodes. Revered is the modern [Holy] Office, which concedes that the earth is small yet denies that it moves. On the other hand, the truth is revered more by me in proving scientifically, with all due respect to the Doctors of the Church, that the earth is spherical, inhabited all round by antipodes, most pitifully tiny, and, finally, in motion among the celestial bodies.⁹

From 1618 Kepler went on to publish the first public defence of Copernicanism in his *Epitome of Copernican Astronomy*.¹⁰ This was followed in 1632 by Galileo Galilei's *Dialogue Concerning the Two Chief World Systems*, a book discussing the relative merits of geocentrism and heliocentrism, which saw Galilei charged with heresy by the Roman Inquisition.

8 According to Brahe's geo-heliocentric system, the sun and moon orbit the earth, while the other planets orbit the sun.

9 Edward Rosen, *Copernicus and His Successors*, ed. Erna Hilfstein (London: Hambledon Press, 1995), p. 232.

10 See Owen Gingerich, *The Book Nobody Read: Chasing the Revolutions of Nicolaus Copernicus* (New York: Walker, 2004); Owen Gingerich, *An Annotated Census of Copernicus' De Revolutionibus (Nuermberg, 1543 and Basel 1566)* (Leiden: Brill, 2002).

It was not until the late seventeenth and early eighteenth centuries that geocentrism and Aristotelianism were comprehensively replaced by ideas about physics and planetary mechanics familiar today. But for Mercator in the sixteenth century, the earth was yet to move or spin. However, Mercator did own a copy of Copernicus's *De Revolutionibus* and so was certainly aware of the theory of heliocentrism.¹¹ In light of the fact that he was imprisoned in 1544 on a charge of Lutheran heresy, a charge of which he was eventually acquitted, it is not unreasonable to wonder whether Mercator subscribed to the theory of heliocentrism, but was unwilling to risk the opprobrium of the Church by supporting such dangerous ideas.¹²

Of course, Mercator was no threat to the Church, but this was no defence to a charge of heresy in the Low Countries where the Protestant Reformation was gaining momentum in spite of the violent resistance by the ruling Habsburg Monarchy. Almost any transgression could land you in strife. Take Pedro Sarmiento, who was behind the 1567 Mendaña voyage in search of the Southland. In earlier years Sarmiento was brought before the Inquisition—this time in Spanish-ruled Peru, but nevertheless under the Habsburg Monarchy—on some of the most peculiar charges you can imagine:

There were questions of a magic ink that he knew of, which no woman, receiving a love-letter written with it, could withstand, and of two magic rings engraved in Chaldean characters. For these high crimes, despite of convincing proof of innocence, he was sentenced to hear Mass in the Cathedral, stripped to the bare skin, and to perpetual banishment from the Indies; but upon appeal to the Pope the second portion of the sentence was remitted.¹³

11 Mercator's annotated copy of the book still exists. See Gingerich, *An Annotated Census*, pp. 290–293.

12 Lloyd A. Brown, *The Story of Maps* (New York: Dover Publications, 1979), p. 159.

13 Lord Amherst of Hackney and Basil Thomson, *The Discovery of the Solomon Islands by Alvaro De Mendana in 1568* (Wiesbaden: Hakluyt Society, 1967), pp. xv, xvii.

A few years later he was again charged with heresy, this time for possessing tools of the black art of necromancy—known outside the Inquisition as navigational instruments.

Nevertheless, if Mercator subscribed to heliocentrism, he left no hints of this in his oeuvre. Indeed, he goes to great lengths to state his support for geocentrism, citing the scriptural authority of Psalms 104:5 and 136:6. His cosmology is clear:

he [God] assigned then a place for the Earth, and the Chaos, to wit, a point in the midst of the void, upon which it rested, and beyond which it is not permitted to moove. This is the greatest Miracle of all nature, surpassing the capacity of man, and humane credence: were it not that the wheeling course of the starres, and the Navigations round about the world, did not manifestly wnesse the same: for who could beleeve, that so ponderous a weight could subsist hanging in the midst of the heaven?

... the Earth, desireth uncessantly the point, which is assigned to it in this vacuity, by an impression from the will of God, and is mooved towards him, by a certaine desire in its ponderosity, till that it hath obtained a like resting place on all parts, supporting and sustaining upon it, the other parts of the world, as upon its shoulders.¹⁴

Mercator leaves no doubt about his stance as a God-fearing geocentrist. But so what? Well, in a universe where everything tends toward the centre—the earth resting centremost—imbalance is largely meaningless. If Mercator's earth was an imbalanced asymmetric oblong spheroid it would have no cosmological ramifications. Earth could not topple off into space due to this imbalance, for all things tend toward the centre of the universe. It could not wobble about its axis, because it did not rotate or move in any fashion. Indeed, Mercator's earth was subject to the same basic forces which Aristotle had outlined in the fourth century BC: rectilinear and

14 Gerhard Mercator et al., *Atlas, or, a Geographicke Description of the World, Volume 1* (Amsterdam: Theatrum Orbis Terrarum, 1968 [original 1636]), pp. 6–7.

violent movement.¹⁵ If earth was created imbalanced (with unequal masses in each hemisphere) it would have nevertheless settled at the centre of the universe—earth's centre of gravity corresponding with the centre of the universe. If somehow the hemispheres later changed, the earth would reposition by rectilinear motion (that is, moving perpendicularly) so that its centre of gravity again occupied the centre of the universe. The notion of hemispheric balance in this system is nonsensical. Balance implies poise, whereas Mercator's earth is not poised in the sense that it might somehow topple or wobble if it loses equivalence between the hemispheres. It sits immobile at the centre of the universe no matter how its geometric shape or distribution of mass is conceived.

The Cosmology of Equipoisure

With this contextual information at hand, the central question may now be broached: based on what conceits did Mercator elaborate his theory of equipoisure?

The answer is not straightforward, because Mercator's theory is difficult to comprehend, if comprehensible at all. The starting point is Mercator's narrative of how the earth was created, which informs his subsequent reasoning; though his creation story is fanciful, there is nevertheless a degree of elegance to his cosmology.

In the beginning, Mercator explains, God created the universe, and spread throughout was matter comprised of the elements: earth, water, fire, air. This was the primordial "Chaos"—matter swirling about with neither form nor function. To order the Chaos, God imposed what would now be called a law of physics—in this case a force which impelled the matter toward the centre of the universe: "For first the Chaos being created, the earth began to settle into the Center." As it settled, the matter was yet a soup of elements; earth and

15 For a detailed discussion of the Aristotelian cosmology that persisted through the Middle Ages till the seventeenth century, see Avan Stallard, "Appendix Two: Aristotle's Theory of the Universe, and What it Meant for Antipodes," in Stallard, "Antipodes to Terra Australis," PhD thesis.

water mixed together and formed a malleable mass, essentially a planet-sized body of mud. It was only on the “third day [of creation], when the earth was made dry, solide and firme”.¹⁶ In the meantime, this malleable, plastic mix of matter began to form into a spherical shape, each side impelled toward the centre. As conceits go, this is quite sophisticated; Mercator draws upon a minimum of premises which, when combined, have great explanatory power (see Figure E for diagrams of his scheme):

Now experience also teaches this, that the weightiest things, by nature draw more easily, and nearest to the Center of the world, and the seate (I say) of ponderous things. Whence proceedeth a most certain reason of order in the universe, that the things which are lightest, and subtilest, have the superior place, and not onely that, but also the Spaericall figure of the Chaos, and of the whole world, take from hence their Source, for seeing the nature of the Chaos was floating, and so altogether, and that all sides of equall virtue, and facility, was borne by its weight to this resting place, so that all the extremities were equally distant from the Center, and subsisted from every part of the Center with a like weight: for if the distance thereof had beene unequall from the Center, more weight had laien upon the one side of the Center, than upon the other. Suppose that in this cube the Center bee *a* the extremities, *b c d e* and that thou beholdest *b* out of *d*, so the Angle *d* in the middle side, the line *d a* is much longer, than the line *c a* or *e a*. The matter then which should rest upon the Center, according to *a b* or *d a* would have much more weight upon it, then that which is according to *c a* or *e a* the weight then of *d a* would beare it downe, and in shoveing it forward, it would fall topsie-turvie, upon *c a* and *e a* till it came together into a like weight, that is to say, of a like distance from the Center, the matter being liquid, and fleeting. The Chaos then must necessarily consist of an equall weight under the Sphericall figure...¹⁷

16 Mercator, *Mercator-Hondius Atlas*, p. 18.

17 Mercator, *Mercator-Hondius Atlas*, p. 7.

MERCATOR'S SOUTHERN CONTINENT

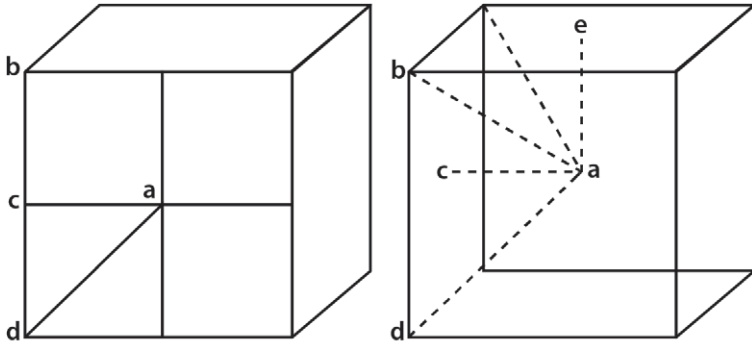


Figure E. Left: reconstruction drawn by the author of the diagram from the Mercator–Hondius Atlas. It is more misleading than helpful, as it is a mis-drawing of Mercator’s model. Right: diagram better illustrating Mercator’s mathematical argument based on Mercator’s written description, drawn by the author.

If one follows Mercator’s premises, it is a necessary consequence of his cosmological model that the earth formed out of the Chaos as a perfect sphere. If he had left his model there, Mercator’s earth would have been created perfectly equal on all sides. However, Mercator envisaged another set of forces acting upon the still malleable earth after it had formed into a sphere. It would be the force of the winds and the buffeting of seas (the waters having begun to separate from the rock and dirt) which would whip the earth—still not yet “dry, sollide and firme”—into the geographical forms of mountains and valleys, highlands and plateaus, seas and oceans:

This naturall cause of separation being observed, the cause also of the inequalitye of the earth, and of the gulphes of the Sea may be knowne. For by this violence of the winde, this *Aphar* created in the beginning, it so came from divers parts, that it elevated very high, and from hence collected the low-setled earth up aloft, but there upon made deepe, and great valleys. Thou wilt thinke then that in that part in the which is now the Atlantick Sea, a most vehement winde to have fallen upon *Aphar*, and in lyke manner in that part where now Asia, and new India are divided: and that the same windes have made in the same place vaste concavities of the low-setled earth and have heaped and raised it up on high into firme lands: also that from hence are raised divers boysterous windes,

which have caused the lesser concavities, and the waters being on both sides carried on high, have congested the earth into mountaynes, so by the collision, repercussion, or beating of the waters one against an other, thou mayest understand, that the earth was separated from the waters, and collected through the middle regions into most high mountains.¹⁸

As the lands dried on the third day of creation, they became firm, and the earth of today took its form. But having now explained how the earth and its physical features were created, Mercator was left with the thought that the random and unpredictable force of the winds and waters could have raised more land into mains and mountains in one region than another. This introduced the prospect of the earth's hemispheres containing unequal masses—meaning even though the earth's form remained roughly geometrically spherical, it could end up with a skewed centre of mass/gravity. Thinking through the consequences of such a possibility, Mercator concluded that while under his cosmological model it is possible for the hemispheres to have been created with an unequal distribution of mountains versus oceans, this did not happen. He reasons by deduction, though whether his argument makes sense is hard to say:

And (which is most of all) that the earth, with the waters collected together, making one Sphere, might remaine in one equall balance: for otherwise the earth should not be established upon the waters, but the more heavy weight being collected into one part, should presse downe all the masse of the earth, towards the center of gravitie, and of the world: and that depression of the earth, having elevated more high, & aloft, the waters lying on the other part, would have caused them to overflow, and possesse the next adjoining lands. For after that the earth in the same quantitie is heavier than the waters, it is necessary that first the bodie of the earth, consist by it selfe in an equall ballance. And also that the Seas environning the orbe of the earth, and communicating together, should

18 Mercator, *Mercator–Hondius Atlas*, p. 19.

be so distributed, that on every side lying in an equall ballance, they should not bring more waight into one halfe of the Sphere, in what circle soever you compasse it, than in an other thereunto opposite.¹⁹

So whereas under a heliocentric model moderns might consider hemispheric equivalence necessary so as to maintain the balance of the earth in its revolutions about its axis, Mercator believed that if the earth's hemispheres were unequal then, rather than it cause the earth to be in irregular motion in space, it would cause the earth's parts to be in motion. Land would depress toward the centre, thus pushing its antipodes up higher—causing the displacement of the waters which would overflow into surrounding lands. What is unclear is what then happens: does this process repeat *ad infinitum*—the earth's parts forever in motion, land depressing toward its antipodes, seas overflowing into surrounding land? If that was to be so, Mercator may have deduced that, given the earth's lands and seas appear stable, the earth's hemispheres must be equally poised with land. But there is nevertheless an inconsistency here: what of the fact that the earth was, according to Mercator, made “dry, solide and firme” by the winds and sun on the third day of creation—how could a dry, solid earth still be malleable? Indeed, once dry and solid, if there was an inequality of mass between the hemispheres, all that should happen in Mercator's model is that the earth moves rectilinearly until its centre of mass is at the centre of the universe.

The reality is that Mercator's theory of equipoiseure was so difficult to comprehend—perhaps more in the telling than the root ideas—it seems no scholar ever did completely follow it. When in later decades and centuries other scholars mention equipoiseure, it is a simplified version of Mercator's conclusions, and not based on his reasoning. Those conclusions were that:

the machine of the earth is it selfe equally balanced, without budgeing one way or other, and consequently also the Sea, which is contained within the bosome of it ... For seeing that the lands knowne to the ancients,

19 Mercator, *Mercator–Hondius Atlas*, p. 19.

are comprehended in 180. degrees of Longitude, that is to say, doe onely possesse the one halfe of the sphere, it was necessary there should be also as much Land in the other halfe. And seeing that Asia, Europe and Africa, for the greater part, are situated beyond the Equinoctiall, towards the North; it was necessary as great a continent to remaine under the pole Antarctick, which should bee equivalent in the other Lands, with the Meridionall parts of Asia and new India, or America.²⁰

Mapping Terra Australis

However abstruse his theory, by dint of “solid reasoning and argument” Mercator now considered that he had theoretical proof of the existence of a vast southern continent. The next step was to compose its geography. To do this Mercator was determined to rely on the geographical traces of explorers and travellers, without resorting to whimsical interpolations. In this vein he set out in unequivocal terms his *modus operandi* applicable to every last detail on his world map:

The second object at which we aimed was to represent the positions and the dimensions of the lands, as well as the distances of places, as much in conformity with truth as it is possible so to do. To this we have given the greatest care, first by comparing the charts of the Castilians and of the Portuguese with each other, then by comparing them with the greater number of records of voyages both printed and in manuscript. It is from an equitable conciliation of all these documents that the dimensions and situations of the land are here given as exactly as possible, account being taken of all observations made till now which have come into our hands.²¹

With these strictures in place, Mercator’s representation of the southern continent would become the most authoritative of his era.

20 Mercator, *Mercator–Hondius Atlas*, p. 20.

21 International Hydrographic Bureau, “Text and Translation of the Legends of the Original Chart of the World by Gerhard Mercator, Issued in 1569,” *Hydrographic Review* 9 (1932), p. 13.

Already in 1541 Mercator had ventured a representation of the southern continent which departed significantly from earlier cartographers' depictions. One of his chief innovations on his 1541 globe, reproduced and elaborated on his 1569 world map (see Figure 4.1), was to designate provinces mentioned in the narrative of Marco Polo as the northern-most regions of a promontory of Terra Australis. There was "Beach, a province yielding gold, where few from foreign parts do come on account of the cruelty of the people," "Maletur, a kingdom in which there is a great quantity of spices," and "Lucach."²² Mercator's mistake in assigning Southeast Asian geographies to Terra Australis stemmed from ambiguities in his copy of Polo's *Travels*. To begin with, the spatial logic of Polo's travels indicated that these regions were further south than the well-known island of Java. This interpretation also helped explain why it was that the regions mentioned by Polo did not match any of the already known geographies of Southeast Asia: because they were further south than European merchants had ventured. In addition to this, these regions were named as "provinces" and "kingdoms", whereas other lands named in the same section of Polo's *Travels* had been designated islands. With this information at his disposal, Mercator reached what must have seemed an obvious and reasonable conclusion: Beach, Maletur and Lucach were part of a mainland comprising the northern-most peninsula of the southern continent.²³ In his own words: "Thus we conclude, therefrom, that the Southern Continent extends far to the northward and makes, with Java Major, a strait".²⁴ This conclusion was reinforced for Mercator by a comment he found in the Italian traveller, Ludovico di Varthema's, narrative of his travels throughout Asia in the first decade of the sixteenth century. Mercator cites him as follows:

Ludovico di Varthema, in Bk. 3, on India, Chapt. 27, reports that on the southern side of Java Major, to the southward, there are peoples who sail

22 Bureau, "Text and Translation of the Legends of the Original Chart of the World by Gerhard Mercator," p. 43.

23 Richardson, "Mercator's Southern Continent," pp. 74–77.

24 Bureau, "Text and Translation of the Legends of the Original Chart of the World by Gerhard Mercator," p. 45.

with their backs to our stars of the north until they find a day of but 4 hours, i.e. to the 63rd degree of latitude and he refers to this as coming from the mouth of his Indian pilot.²⁵

Though it was hearsay, hearsay was often the only source of information available to knowledge-hungry cartographers and geographers, and so Mercator was disposed to give it credence. You can observe on his map the way Mercator blended these two complementary pieces of information, with a huge gouge from the body of the southern continent abutting the peninsula of Beach.

Further west the southern continent is shown running along the 44th parallel, or thereabouts. To the north sits the tip of Africa, with Madagascar easily identified to the east. Below Madagascar another small island is marked as the Los Romeros Isles, now known as Amsterdam Island and properly located much further east. An inscription explains a key piece of information which Mercator used to model the southern continent in this region:

Between Madagascar and Los Romeros Isles there is an extremely violent current of the sea in the East and West direction such that sailing therein is of great difficulty to go from the one to the others according to the testimony of M. Polo the Venetian, Bk. 3, chapt. 40; hence necessarily these coasts [of the southern continent (where this inscription is located)] cannot be very distant from Madagascar, as to flow to and fro between the eastern and western oceans at great speed the channel must be restricted.²⁶

On this basis, Mercator figured the southern continent had, obviously, to be further south than the Los Romeros Isles, but close enough to the tip of South Africa to create the channelling effect which made the east–west current so powerful. The results are plain to see. What is curious about this reasoning is that, as W.A.R. Richardson’s study reveals, the sources Mercator seems to be

25 Bureau, “Text and Translation of the Legends of the Original Chart of the World by Gerhard Mercator,” p. 45.

26 Bureau, “Text and Translation of the Legends of the Original Chart of the World by Gerhard Mercator,” p. 43.

relying upon suggest the east–west current is actually a north–south current.²⁷ This, however, is immaterial to the bigger picture: Mercator may have been mistaken in his interpretation and recounting of this information, but he was nevertheless true to his methodological strictures in relying on empirical data.

With this in mind, it is worth pausing to consider just what counted for empirical data. The key criterion was that it be information sourced in the first instance from direct observation. However, information from an explorer's own hand or mouth was rarely available to cartographers. Rather, most information was available one or more degrees removed from the original source—be it a narrative of a voyage of discovery written by a scholar or raconteur, a more general geography text, word-of-mouth, or the data recorded on a printed map. Of course, the unavoidable methodological foible of relying on second-hand information frequently resulted in errors; the magnitude of an error could quickly multiply as different layers of erroneous information were acquired and reconciled with one another.

On Mercator's world map, this is seen most clearly with his geography of Psitacorum Regio: the Land of Parrots amidst the southern Atlantic region of Terra Australis. It was the product of an accumulation of errors and apocrypha. By the 1530s Brasil had become a common label for eastern South America, named after the Brasil wood found in the region.²⁸ In spite of this, Oronce Finé included on his 1531 world map a Brasielie Regio on the southern continent. This meant that most scholars recognised two Brasils on Finé's map. It was a recipe for confusion. When in 1535 a cartographer (identity unknown) came to compose a new world map, he seems to have been befuddled by Finé's transference of South American nomenclature to the southern continent.²⁹ Rather than resolving the idiosyncrasy of two Brasils, the

27 Richardson, "Mercator's Southern Continent," p. 81.

28 See James R. Enterline, "The Southern Continent and the False Strait of Magellan," *Imago Mundi* 26 (1972); A. Donald Trounson, "Psitacorum Regio (Region of Parrots): Fact or Fiction?" *The Globe: Journal of the Australian Map Circle*, no. 30 (1988).

29 For an image of this map see Rodney W. Shirley, *The Mapping of the World: Early Printed World Maps, 1472–1700* (London: Holland Press, 1983), p. 63.

cartographer did what he no doubt considered the wise thing (according to aesthetic but certainly not methodological dictates) and duplicated his Brasils. Hence, in South America the label Brasilia Regio is found, accompanied by the common Portuguese designate for Brasil, Papagalli Regio: the Land of Parrots. Then, following Finé's world map, he duplicates this information on the southern continent, with Brasielie Regio included on the region of that continent to the south of Asia. Having gone this far the safest thing to do was complete the job and, as Richardson has termed it, hedge his bets.³⁰ Thus, as parrots had been intimately associated with Brasil since the land was first discovered, a little further west on the southern continent there is a small inscription with the words Psitacorum Terra—this time using the Latin term for Land of Parrots. So there are two Brasils, two Lands of Parrots. No doubt the cartographer figured one of these sets of labels was right—and until it could be determined which one, including these labels on the southern continent was at least an effective way of enhancing the verisimilitude of the southern continent.

Decades later, this anonymous cartographer's error was given new life. As W.A.R. Richardson explains, in Mercator's exhaustive search for information on the southern continent, he came across his anonymous predecessor's addition of a Land of Parrots to the southern continent. Mercator

failed to realise that the anonymous cartographer had placed PSITACORUM TERRA on Finé's landmass southeast of the Cape of Good Hope precisely because of the nearby presence of the BRASIELIE REGIO inscription. Mercator consequently placed his *Psitacorum regio* in roughly the same position as the anonymous cartographer had put it, but on his own version of a southern continent.³¹

Mercator was willing to bank on this Land of Parrots truly being a part of the southern continent because it agreed with other information he had at his

30 Richardson, "Mercator's Southern Continent," p. 27.

31 Richardson, "Mercator's Southern Continent," pp. 27–30.

disposal. First, as many cartographers had done before him, Mercator relied on the comments of Enciso to prove land existed beneath South Africa:

Here, in the 42nd degree of latitude, at a distance of 450 leagues from the Cape of Good Hope and 600 from St. Augustin's Promontory, a headland of the Southern Lands was discovered, as stated by Martin Fernandez de Enciso in his *Suma de Geographia*.³²

This information was then paired with an even more compelling article of empirical data—the narrative of Cabral's 1500 voyage to Brasil as told by Lorenzo Cretico, who recorded that:

Near the Cape of Good Hope they were driven by a South-west wind and discovered a new country, which they called the Land of Parrots, because they found these birds there in incredible number; some of them exceed a cubit and a half in length, and are of many colours; we have seen two, so that there is no doubt of the truth of it. When the sailors saw this coast, they believed it to be a continent because they sailed for two thousand miles without coming to the end of it.³³

Finding these different sources of information and then realising that they intersected with one another—Cabral's discovery of a Land of Parrots roughly agreeing with Enciso's report of land south of Africa, then the anonymous 1535 world map showing this very land—must have been compelling stuff for Mercator. It seemed that multiple independent sources had corroborated each other, and on top of this the emerging geography fit in with his understanding of the peninsula of Beach and bight of Varthema. Mercator duly inscribed on his map the Land of Parrots:

Psitacorum regio, so called by the Lusitanians, carried along by the libecio [south-west wind] when sailing towards Calicut, on account of the

32 Bureau, "Text and Translation of the Legends of the Original Chart of the World by Gerhard Mercator," p. 35.

33 James R. McClymont, "A Preliminary Critique of the Terra Australis Legend," *Papers and Proceedings of the Royal Society of Tasmania for 1890* (1890), pp. 43–44.

unprecedented size of these birds at that place. As they had followed the coast of this land unto the 200th mile without finding an end to it, there was no doubt but that they had reached the Southern Continent.³⁴

Terra Australis, Nondum Cognita

And so Mercator's world map of 1569: an incomparable achievement in the developing art and science of cartography. But while taking stock of this, a remarkable fact should be kept in mind. The geography which occupied fully one third of this map—the elaborately constructed Terra Australis—was a composite of data of dubious provenance. The reality understood by Mercator and by all cartographers was that if they were to rely only on original sources then their maps would be very poor indeed, as access to original sources—either to individual observers or their recorded observations—was limited. Thus, cartographers had to rely on second- and third- and twelfth-hand information to source their geographical data; a method born of necessity, but one which often led to errors.

Take the reliance on printed maps. These maps were useful as sources of data because they blended huge data sets into a single, comprehensible, easily accessed whole, and because they often contained obscure or even secret geographical information. The problem was, it only took a single cartographer to make an error or invent a geography to set in motion an entire erroneous geographical tradition. The islandification of Baja California (the peninsula in western Mexico) is a remarkable example of this. Erroneous reports and possibly a chart from a 1602 Spanish expedition to the western coast of northern America led Henry Briggs to recast Baja California as an island in his 1625 map of America and probably in an earlier iteration. Other cartographers who had shown Baja California correctly as a part of the American mainland consulted Briggs' map and quickly adopted his geographic revisions, and others theirs, so that within a few generations the representation of an insular

34 Bureau, "Text and Translation of the Legends of the Original Chart of the World by Gerhard Mercator," p. 35.

California had become cartographic orthodoxy—traceable back to a single errant map. It was not until an overland expedition in 1746 proved that the peninsula was joined to the mainland that Baja California was permanently reattached to America.³⁵

The practicalities of the sixteenth and seventeenth centuries meant that whenever a cartographer offered up what appeared to be a superior mapping of a region—remembering that what might appear to be an advance in the state of knowledge could just as well be the product of interpolation, error and invention—other cartographers were quick to appropriate that information. This informal system of cartographic plagiarism contravened the same basic precepts of intellectual property as exist today, but it was nevertheless common practice and largely accepted as a fact of life by the cartographic community.

In the context of the evolving image of Terra Australis, this meant that the form of the southern continent expressed in Mercator's seminal 1569 world map—whatever its merits or shortcomings—was reproduced by countless of his successors. Abraham Ortelius is credited as one of the most influential figures of sixteenth-century cartography, and even he mostly followed Gerhard Mercator in his depiction of the southern continent (see Figure 4.2). But it would be unfair to retrospectively characterise this as a dishonourable act of plagiarism: Ortelius was deferring to what was considered a superior map, firmly grounded in the sum of empirical and non-empirical lore pertaining to the southern latitudes. What sense otherwise? What is more, Ortelius copied Mercator's cartography with Mercator's full knowledge and blessing.³⁶

The result was that the basic Mercatorian image of the southern continent became a standard of world and hemispheric maps throughout the next century (and remnants of it remained in various guises throughout the late seventeenth and eighteenth centuries). Thus, everyone interested

35 See Seymour Schwartz, *The Mismatching of America* (Rochester: University of Rochester Press, 2003), pp. 127–171; Dora Polk, *The Island of California: A History of the Myth* (Lincoln: University of Nebraska Press, 1995).

36 Shirley, *Mapping of the World*, p. 145.

in geography in the late sixteenth century was inundated with consistent representations of the southern continent across a variety of geographical mediums—in geography and cosmography texts, narratives of exploration, maps of the world and so on. There was no escaping the imperious presence of Terra Australis—even as it continued to carry the label, *nondum cognita*.

Conclusion

Against this backdrop, belief came to be invested in the existence of the southern continent, but, importantly, not unconditionally in the cartography of the southern continent. To be sure, the cartography of the southern continent played a major role in the southern continent's acceptance as a geographical entity by making it both tangible and compelling. Maps were a medium that spoke to people of all inclinations and varying degrees of knowledge and literacy. To see Terra Australis on the map was to see an entity on the cusp of knowledge—real but unknown. However, it is important to not make the mistake of assuming that the cartography of the southern continent was assumed to be a representation of reality itself. It was not. The crux of this point boils down to two intimately related propositions: that the early moderns were rational agents who well knew that the southern continent depicted on maps was in large part conjectural and provisional, and that the early moderns nevertheless had faith that this unknown land did exist. In the simpler words of Joseph Hall, “this it is, yet we know it not.” In subscribing to such a potentially inconsistent worldview, the early moderns collapsed the dichotomy separating what exists from what is known into a spectrum of the real, the probable and the possible. Alfred Hiatt elaborates:

At first glance the proposition that geographers were unable to distinguish false from true information, and consequently represented the fictional as well as the real on their maps, seems self-evident. But ... the opposition between true and false risks misunderstanding and misrepresenting sixteenth-century geography. I do not mean that mapmakers of the era did not distinguish between truth and falsehood, or that they were

uninterested in true representations, or unconcerned to eliminate false information from their maps; on the contrary. However, they operated primarily on axes slightly different to that of truth–falsehood: sixteenth-century geographers, like their medieval counterparts, dealt in certainties and uncertainties, distinguishing between probabilities and improbabilities, the attested and the unattested ... The unknown southern land might have been a fiction, but its shape and features were not random: they were the result of careful consideration and interpretation, however speculative.³⁷

No matter what fantasies were entertained about the lands of Terra Australis, the cartographic image of the southern continent was always provisional; the map offered the promise of existence without deceiving people into thinking this entity had been surveyed by explorers. There were specks of information about the land, hints of a possible coastline, but very little that pretended to distinct and exact geographical knowledge. The distinction is crucial: belief was not in an inflexible version of the southern continent, but in the southern continent as a sprawling geographical entity existing in a shape and form always yet to be finalised. It was the work of the map to establish the southern continent as a geographical orthodoxy, an image inextricably associated with conceptions of the globe, which is what happened throughout the sixteenth and seventeenth centuries. Belief in the southern continent's existence became commonplace.

After this period, when the potential bounds of the southern continent were being progressively eroded by exploration, the map's work had been done. It mattered little that the southern continent was no longer recognisable by the time of Cook; the idea of its existence had been cemented into geographical thinking, such that long after retrospect suggests it should have been discarded it continued to influence the imagining and exploring of the southern hemisphere.

37 Hiatt, *Terra Incognita*, pp. 224–225.

SEEKING TERRA AUSTRALIS

The essence of the exploratory enterprise came when desire and expectation met reality. Reality might have been a fabled city that simply would not appear or a group of native people committed to their own pursuits. Successful explorers struggled to measure their own preconceived images against what the land revealed. If the lore proved misleading, it was time to abandon such views for more realistic ones. But only rarely did such simple substitutions of reality for myth take place.

*James P. Ronda*¹

A continent as vast as Europe, Africa and Asia combined; a land abounding with spices, gold and all manner of natural riches; a civilisation of millions awaiting the salvation of a Christian God. Such was Terra Australis, the locus for a suite of ideas so compelling that from the latter half of the sixteenth century this imagined geography began to figure in the machinations of explorers and entrepreneurs in its own right. And, indeed, well it might: the European powers were running out of new territories to exploit in the better-known regions of the world, whereas the potential of Terra Australis remained completely untapped. If found to exist as it had been imagined, what a prize the southern continent would be: fame and glory would redound to its intrepid

¹ Ronda, *The Exploration of North America*, pp. 6–7.

discoverers, and kings, queens, and their powerful merchants would possess a bounty of inestimable value. But while the British, French, Portuguese and Dutch were still contemplating the merits of sending an expedition to discover the southern continent, the Spanish—spurred by Incan knowledge of gold-rich Pacific islands, and conscious of their unique obligation to deliver salvation to godless heathens—decided to act. In 1567 they launched the first of three expeditions in search of Terra Australis, in doing so heralding a new era where the imagination of cartographers and cosmographers was put on a collision course with geographical reality.

Reality, however, is a slippery beast. Time and again new data—the data produced by explorers' encounters with reality—was considered potentially compatible with pre-existing geographical conceptions: be it because preconceptions coincidentally matched up with observed reality, or because preconceptions were vague enough to be retrospectively fitted with new data, or, more than anything, because observations were only as good as the filter through which they were made, wherein those filters (or existing geographical cognitive frameworks) encouraged the recording and interpretation of observations in accordance with preconceptions.

Nevertheless, geographical preconceptions inevitably came up against incompatible data that could not be reconciled. Recognition of that incompatibility produces *geographical dissonance*: the knowledge that one's geographical cognitions are incompatible or dissonant, attended by the desire to make them consonant. In this case, the dissonant geographical cognitions were the idea of Terra Australis and newly acquired geographical data that put sea or islands where there should have been continental land.

However, as noted, throughout history imaginative geographies have proved to be of profound durability. For centuries an imaginative geography can undergo revision after revision to make that geography compatible with new data; only once that process is exhausted, or once the geography is so diminished as to no longer be worth believing in, is an imaginative geography likely to be discarded. This response to geographical dissonance is a

predictable product of the specificity that characterises empirical data for, whereas empirical data is usually tied to a particular space, even spatially explicit imaginative geographies like the North-West Passage remain largely indeterminate within broad parameters. Indeed, the key to the resilience of imaginative geographies against evidence of their non-existence lies in the dissociation of spatial location from ontological verity. So long as there remains a space on the map which is *nondum cognita* and that space conforms to the basic requirements of the given geography—perhaps being in a certain hemisphere or continent, or of a certain size, or in a certain climatic zone—geographical fictions may be revised, uprooted, or redeployed as required, allowing them to survive the repeated rigours of empirical falsification. For Terra Australis, it was in the wake of the Spanish and then the Dutch voyages that this process began in earnest.

Commodities: Land, Riches, Souls

Before embarking with the Spanish on that first historic voyage, it will pay to know just what it was that made Terra Australis such an enticing prospect. An insight into the mind of a would-be explorer is preserved in Sir Richard Grenville's proposal to pursue Terra Australis—an offer made in the name of service to queen and country, but an act which held the promise of great individual reward. His 1573 petition to Queen Elizabeth of England sought Letters Patent for the following:

The discoverie traffique and enjoyenge for the Quenes M^{atic} and her subjectes of all or anie Landes or Islandes and Countries southewarde beyonde the *æquinocetiall* or where the Pole *Antartik* hathe anie elevation above the *Horison* and w^{ch} Landes or Islandes and Countries be not alredie possessed or subdued by or to y^e use of anie Christian Prince in *Europe* as by the *Charts* and *Descriptions* shall appere.²

2 R. Pearse Chope, "New Light on Sir Richard Grenville," *Transactions of the Devonshire Association* 49 (1917), p. 238.

In Grenville's time, the globe—just a few generations earlier almost entirely unknown—was already starting to seem a very small place. "Portugall", Grenville explained, "hathe attained one parte of the newfounde worlde to the Este, the Spaniarde an other to the Weste, the Frenche the third to the North"³ But this need not be a lament, for Grenville considered that though England had failed to secure her share of the new-found lands, Terra Australis, possibly the most profitable of all the world's regions, had yet to be claimed: "nowe the fourthe to the Southe is by God's providence lefte for Englonde, to whome the other in tymes paste have ben fyrste offred"⁴ What made Terra Australis such a providential prospect was the region's two great "commodities". There was the commodity of human souls: millions of unwitting heathens whose salvation would see "the enlarging of Christian faith, w^{ch} those naked barbarous people are most apte to receive and especiallie when hit shall not carie wth hit the unnaturall and incredible absurdities of papistrie" (i.e., Roman Catholicism).⁵ But of even more importance were the material commodities: "The likelihood of bringinge in grete tresure of gold sylver and perle into this relme from those countries, as other Princes have oute of the lyke regions", as well as spices and other trade goods.⁶

The French also had an interest in Terra Australis, the land they sometimes referred to as the Third World, with the Albacque brothers submitting a proposal for an exploratory venture in 1571, and in 1582 Lancelot Voisin de la Popelinière urging his countrymen to possess the unknown southern land which promised a bounty as great or greater than those reaped in the new and old worlds.⁷ Something that Popelinière and Grenville had in common in

3 Chope, "New Light on Sir Richard Grenville," p. 238.

4 Chope, "New Light on Sir Richard Grenville," p. 238.

5 Chope, "New Light on Sir Richard Grenville," p. 238.

6 Chope, "New Light on Sir Richard Grenville," p. 238. Grenville's petition was enthusiastically endorsed by the queen and her advisers, but by the time Grenville was ready to sail the queen had reversed her decision, worried that Grenville's proposed passage through the Straits of Magellan and beyond would cause conflict with Spain. (Chope, "New Light on Sir Richard Grenville," pp. 228–229.)

7 Leslie R. Marchant, *France Australe: A Study of French Explorations and Attempts to Found a Penal Colony and Strategic Base in South Western Australia 1503–1826* (Perth: Artlook Books, 1982), p. 30.

addition to their belief in Terra Australis and their desire to see it discovered and settled was their concern with over-population in their respective motherlands, and the benefits they perceived in removing the more base elements of society to a distant colony. Thus, Grenville listed under the prospective commodities of the southern continent “The settinge of our Idle and nedie people to worke,” and Popelinière noted that “At the least it will be of use after discovery to receive the purgation of this realm”.⁸ In time, both the French and English would send convicts as well as the “idle and nedie” to South Seas colonies, though not in the circumstances imagined in the sixteenth century.

There is another common element to Grenville’s and other entrepreneurs’ proposals, and that is the blend of speculation with specific claims. On the one hand, the proposals were speculative—based on conjecture rather than fixed data—meaning it was not possible to specify the precise location of lands to which rights were sought. On the other hand, they were able to specify the commodities—people, gold, silver, pearls, spices—that would be found in these lands, wherever it was that the lands were. How to explain this anomaly? Fantasy and whim certainly played their part, as did good business sense which dictated that it was better to tie up the rights to a land and its commodities through a broad and speculative commission before, rather than after, any potential act of discovery. But there was also more substantial reasoning driving these expectations. It was common knowledge that there was gold and silver to be had in South America, and pearls and spices in Southeast Asia. Even without knowing the land’s precise location, it was believed that Terra Australis, when discovered, would be found to exist not far from either of these regions. This knowledge had significant implications. First, many people subscribed to the simplistic geographical rule of thumb that said whatever was found in one region would be found in neighbouring regions—an inductive generalisation whereby observed events or conditions are expected to be repeated. Then there were those who argued for a principle

8 Chope, “New Light on Sir Richard Grenville,” pp. 238–239; Hiatt, *Terra Incognita: Mapping the Antipodes before 1600*, p. 235.

of latitudinal determinism, believing that distance from the equator (latitude) determined climate, and climate helped determine both geography and biological diversity. It was a notion that had been around since antiquity, as seen, for instance, in the writings of Ptolemy: “all animals and plants that are on the same parallels or equidistant from either pole ought to exist in similar combinations in accordance with the similarity of their environments” (Book 1.9.).⁹ On the basis of latitudinal determinism, it was believed that Terra Australis should be found to possess temperate climates like those found in similar latitudes of Europe; spices like those found in similar latitudes of Asia; and gold, silver, and precious stones like those found in comparable latitudes of Africa and the Americas.

The result of these assumptions and arguments was that interest in Terra Australis focused on less than half the prospective extent of the continent. In the imaginations of explorers, merchants, imperial power-brokers, and fellow advocates for Terra Australis, it was the regions contiguous to the Americas and Southeast Asia, and those lands of Terra Australis stretching between those regions (that is, in the southern Pacific), which held the greatest allure. This contrasts with the relative lack of interest that met the proposition of reconnoitring the southern Atlantic or the latitudes south of the Indian Ocean. The latter regions were not contiguous with lands rich in commodities, were of no compelling strategic value, and, given they would exist in the frigid zone, could be expected to be a misery of cold, wet and wind. To explore those regions would amount to the pursuit of knowledge for its own sake, a proposition inimical to the exigencies of sixteenth-century imperial and commercial existence. Explorers were indeed interested in knowledge, but specifically knowledge that promised commercial or imperial value.

Inductive generalisations and theories of latitudinal determinism lifted the prospects of the eastern hemispheric portion of Terra Australis, but what made the region irresistible was the geographical lore telling of lands of plentiful gold. For two millennia the lost city of Ophir had taunted the minds

⁹ Berggren and Jones, *Ptolemy's Geography*, p. 69.

of men covetous of riches and glory. As of the sixteenth century, Ophir had yet to be identified, despite its existence having been known for millennia through the Bible's *Third Book of Kings*:

And King Solomon made a navy of ships in Eziongeber, which is beside Eloth, on the shore of the Red sea, in the land of Edom. And Hiram sent in the navy his servants, shipmen that had knowledge of the sea, with the servants of Solomon. And they came to Ophir, and fetched from thence gold, four hundred and twenty talents, and brought it to King Solomon.
(9:26)

Where were the Isles of King Solomon whence the king received his cargo of gold and other riches every three years? Could it be that Ophir was part of the Golden Chersonese (Golden Peninsula) tantalisingly mentioned by Ptolemy and other scholars and thought to exist somewhere in Southeast Asia? Could it be that Ophir and the Golden Chersonese were in fact different parts of, or different names for, Beach—the land of gold talked about by Marco Polo and located by Mercator south-east of Asia in a promontory of Terra Australis? In 1613 Godinho de Erédia mused on the possible locations of Ophir:

The situation of Ophir and Tharsis is still unsettled after much discussion.

Robertho Stephano (Francisco Botablo) places Ophir in Christovão Colon's island of Hespanhola, whence, from Cybao, 450 talents of very fine gold were taken to Solomon. Arias Montan places Ophir in Perû: others in various places, such as Sophala in Monomotapa.

More probable is the opinion of Josephus that it was a province of oriental India, founded by Ophir, son of Jectan, mentioned in Genesis, Chapter 19.

The scriptures, too, place Ophir and Tharsis in the far east.

Perhaps they were in the region of gold mentioned by Ptolemy in his Table 12 of Asia near Ganges, where in his time was one of the great trade-centres of the world; for along the Ganges came the gold-traffic

from the very high mountains of Negar Phirin. But I do not know if these were the high mountain called Sephar.¹⁰

And then there was the gold-producing island spoken of in the oral history of the Inca—said to lie somewhere in the Pacific.¹¹ Could it be that these four golden provinces were one and the same—or, better still, different provinces of an entire region abounding in gold?

Sure enough, there were regions in Southeast Asia which had been found to produce gold, but nothing which lived up to expectation. The Malay Peninsula was well-known to merchants in the sixteenth century, but it was not sufficiently gold-rich to be identified as the Golden Chersonese, even though Ptolemy's original reference was, in fact, to this region. As time went by without any of the various lands of gold being identified, expectations of the abundance of gold grew so unrealistic that, as Colin Jack-Hinton has remarked, no matter what gold-producing province explorers did come across, it could never be identified as Beach, Ophir, or the Golden Chersonese.¹² Expectation always outpaced reality, which meant that "as geographical knowledge extended eastwards and westwards without *Ophir* being recognised, its supposed position moved with that knowledge, always a little ahead of the latest discovery."¹³ As the Spanish expanded their domain west from the Americas, and the Portuguese expanded their domain across Southeast Asia, the putative location of these lands of plenty was pushed into the same area of unexplored space in which the southern continent was imagined. In this way Ophir, Beach, the Golden Chersonese and the islands spoken of by the Incas all coalesced in the one meta-geography of Terra Australis.¹⁴

10 Manuel Godinho de Eredia, *Eredia's Description of Malaca, Meridional India, and Cathay*, trans. J.V. Mills (Kuala Lumpur: Royal Asiatic Society, 1997), p. 80.

11 Jack-Hinton, *The Search for the Islands of Solomon*, p. 24.

12 Jack-Hinton, *The Search for the Islands of Solomon*, p. 13.

13 Jack-Hinton, *The Search for the Islands of Solomon*, p. 13.

14 Thomas Suarez, *Early Mapping of Southeast Asia: The Epic Story of Seafarers, Adventurers, and Cartographers Who First Mapped the Regions between China and India* (Singapore: Periplus Editions, 1999), pp. 85–86.

Mendaña

Within this context of geographical lore, Spain became the first nation to sponsor an expedition specifically in search of Terra Australis. It was commissioned thanks, in part, to the lobbying of Pedro Sarmiento, a man not averse to self-promotion. Like many of his time, he wrote from the third-person perspective:

In the year 1567 one Pedro Sarmiento gave to the Licentiate Castro, Governor of Peru, information concerning many islands and continents which he said existed in the Southern Ocean, and offered personally to discover them in the name of his majesty.¹⁵

Despite Sarmiento's offer to personally discover these lands, nepotism saw command of the expedition go to the Governor's nephew, Alvaro de Mendaña de Neira. Two ships with 150 men departed Callao in November 1567. They sailed with clear objectives:

The general wish of the people, the resolution of the soldiers, and the instructions that they carried were unanimous, that they should settle in the country that they discovered; and for that purpose they were furnished liberally with munitions of war, arms, clothing, seeds, and other things required by settlers.¹⁶

When after months at sea and numerous encounters with small Pacific islands the expedition finally discovered a large landmass, it was initially thought that it might be the sought-after southern continent. These hopes were quickly dashed as it became apparent that the land was in fact an island—that of Santa Isabel in the archipelago known today as the Solomon Islands. The malcontent Sarmiento, however, was unwilling to accept the expedition's failure to locate the southern continent. He advised the expedition's council that if only the ships would sail a little further to the south, the southern continent would

15 Lord Amherst of Hackney and Basil Thomson, *The Discovery of the Solomon Islands by Alvaro de Mendaña in 1568* (Nendeln: Kraus, 1967), p. 83.

16 Thomson, *The Discovery of the Solomon Islands*, p. 83.

be located as expected—exactly where Sarmiento had said the land would be found all along. He was ignored, wisely it might be judged in light of the subsequent privations of the voyage, and instead the ships worked their way about the archipelago. Each landfall was met, sooner or later, with hostility from the indigenous inhabitants, who were treated progressively worse as the months rolled by and dispositions darkened—there still being no sign of the great civilisations, the great continent, or the great store of gold and riches that had been promised. Eventually Mendaña conceded that there was no realistic chance of survival if he established a colony in one of these lands, and so he began the arduous journey back to the Americas.

The voyage was a failure, judged in the following terms by the Licentiate Juan de Orosco in a letter to the King of Spain of 20 March 1569:

In my opinion, according to the report that I have received, [the discovered islands] were of little importance, although they say that they heard of better lands; for in the course of these discoveries they found no specimens of spices, nor of gold and silver, nor of merchandise, nor of any other source of profit, and all the people were naked savages ... The advantage that might be derived from exploring these islands would be to make some slaves of the people, or to found settlement in some port in one of them, where provisions could be collected for the discovery of the mainland, where it is reported that there is gold and silver, and that the people are clothed ... Of the persons who sailed from the port of Lima, thirty-one or thirty-two were missing, including those who died of sickness, and those who were slain by the Indians in the said islands.¹⁷

Clearly, from an official perspective, the expedition was a disappointment. Yet, and perhaps surprisingly, there was no diminution of belief in either Terra Australis or the lands of gold spoken of by pagans and Christians alike. Even Orosco continued to discuss the existence of a mainland “where it is reported that there is gold and silver”. What is also interesting is that despite the dearth

17 Thomson, *The Discovery of the Solomon Islands*, p. lviii.

of riches found on the newly discovered islands, within a few years of their discovery they were being widely referred to (“vulgarly but incorrectly” in Sarmiento’s opinion) as the Solomon Islands.¹⁸ There is clearly an inconsistency here requiring explanation—and that explanation begins with the knowledge that preconceptions are just as powerful as sense perceptions in constructing images of places.

The members of Mendaña’s expedition were hyper-attuned to any sign of gold, to the point where they seem to have interpreted their communications with the natives to say exactly what they wanted to hear. Thus, Mendaña records that upon showing a native gold he responded “*yaro bocru,’ bocru* in his language signifying ‘much.’”¹⁹ And the “Indians of San Christoval say also that there is gold in the rivers of their country, and that the women of Aytoro wear it round their necks in large grains as they find it, but they do not know how to melt it.”²⁰ Though the human facility to communicate through signs and expressions should not be discounted, it is hard to take this at face value. So many explorers’ accounts of conversations with local inhabitants report that the explorer was able to extract the most precise and remarkable information about subjects of great curiosity (information which inevitably agrees with preconceptions), the explorer having apparently completely overcome the language barriers. Take Columbus, who in his conversations with natives of the West Indies divined that Cuba was “very large and of great commerce” with “gold and spices and great ships and merchants.” How did he know this? Columbus: “I believe that it is so according to the signs that all the Indians of these islands and those that I have with me make (because I do not understand them through speech).”²¹ To divine the extent of a land as well as the presence of riches, great ships, and merchants through gesticulation alone is extraordinary. Columbus had interpreted these communications to corroborate his preconceptions, preconceptions hopelessly at odds with reality. Similar can

18 Jack-Hinton, *The Search for the Islands of Solomon*, p. 81.

19 Thomson, *The Discovery of the Solomon Islands*, p. 172.

20 Thomson, *The Discovery of the Solomon Islands*, p. 181.

21 Fritze, *New Worlds*, p. 113.

be said of Mendaña, who no doubt was earnest in his efforts to communicate with indigenous inhabitants about the presence of gold in nearby islands. Misunderstanding, however, was inevitable. Sarmiento was another gold-seeker who made dubious attributions to indigenous inhabitants: “Here the interpreters, whom they brought from the other islands, escaped, and they took here five or six others whom they brought to Lima; and it was learned from them that there was much wealth in gold, and pearls and spices in those islands and in others near them.”²² Just the riches the expedition was seeking.

Where Mendaña and his charges differ from Columbus is that though they had interpreted their communications with locals to confirm their preconceptions, they were not so dogmatic as to ignore the geographical reality confronting them every day. So despite possessing dubious articles of information about the presence of gold, no one seemed at all convinced that the islands they had discovered were truly the golden isles spoken of in geographical lore. Thus, it is not Mendaña or any of his charges who fixed this archipelago with the label of “Solomon Islands”, but, as Basil Thomson explains, it was a folk label:

We take it that this, like so many other names, originated with the populace, the credulous frequenters of taverns and longshoremen of the quays in Santiago and Callao, listening open-mouthed to the tales of the Inca Yupanqui’s spoils ... The suggestion of a listener that this might be the Ophir of Scripture would be eagerly passed from mouth to mouth, firing the imagination of adventurers, and providing a text for the wildest fables of a new Dorado.²³

The mechanism at play here is evident in all early modern geographical knowledge. Preconceptions form the filter through which data is observed and interpreted in the first instance, after which that data, already mediated, is conveyed to the wider community of scholars, merchants, bureaucrats and the general populace where it is further interpreted according to geographical ideas, expectations and the latest geographical knowledge (itself a composite

22 Thomson, *The Discovery of the Solomon Islands*, p. 92.

23 Thomson, *The Discovery of the Solomon Islands*, pp. lix–lx.

of perception and interpretation). In this sense, pure, unadulterated empirical data simply does not exist, in which case neither does unmediated geographical knowledge.

It should come as no surprise, then, to find that the disappointments of the 1567 voyage were not enough to extinguish Mendaña's hopes of profitably settling either those lands he had discovered, or better lands beyond. After years of delay, Mendaña was given command of a second expedition outfitted to settle a colony in the southern Pacific on the best land that could be found. As such, in 1595 Mendaña sailed with four ships, among which there were a total of 378 people, including soldiers and sailors, as well as men, women and children who were intended to become South Sea settlers. His Chief Pilot was Pedro Fernández de Quirós, a devoutly Christian man and, importantly, a very fine navigator. The details of the voyage make compelling reading; set amidst an environment of conflicting personalities, the expedition was marked by violence, death, naval disaster and great privation from beginning to end. The expedition did not diverge much from the latitudes of the Pacific already broached in the 1567 voyage, and nothing of great geographical interest was discovered. Eventually the fleet—reduced from three ships to one—limped into port at Manilla; a mere hundred or so men, women and children—their captain not numbering among them—survived Mendaña's final tragic quest to settle the Solomon Islands.²⁴

Quirós

One might think that the sufferings of such a voyage would be sufficient to cure anyone of the wanderlust that animates an explorer's imagination, but it rarely is. Explorers are a hardy lot; it is often death or destitution which finally stops them in their tracks, and so it was for Quirós. Fresh from his travails in the Pacific, Quirós gave no thought to respite before requesting commission for a new voyage to discover all the lands he suspected existed

24 For the narrative of this expedition see Pedro Fernandez de Quiros, *The Voyages of Pedro Fernandez de Quiros, 1595 to 1606*, ed. Sir Clements Markham, 2 vols. (Nendeln: Kraus Reprint, 1967).

beyond the limits of his own and Mendaña's voyaging in the southern Pacific. With the Governor of Peru unable to grant him this concession—thus forcing respite upon him—Quirós, being a particularly devout Christian, took pilgrimage to Rome. Once there he managed to secure an audience with Pope Clement VIII where he spoke passionately of the “infinity of souls” just waiting to be saved under the grace of Christianity. For Quirós, the prospect of saving all those souls had been made more compelling by what he had seen during his last voyage—men and women who, physically, were not the strange and barely human savages explorers had been taught to expect, but fine specimens of humanity who could almost be European. One boy Quirós encountered in the Marquesas Islands had a startling effect on him:

He came rowing with two others. His eyes were fixed on the ship, and his countenance was like that of an angel, with an aspect and spirit that promised much, of a good colour, not fair but white; his locks like that of a lady who valued them much. He was all that has been said, so that I never in my life felt such pain as when I thought that so fair a creature should be left to go to perdition.²⁵

The Pope, of course, was in the business of souls, and with such powerful testimony before him he readily endorsed Quirós's proposal, providing him with letters of endorsement to be submitted to the King of Spain and other influential courtiers. From Rome, Quirós made his way to Spain to an audience with the king and other members of the royal court. Some were receptive, some were not, but what is notable is that for all the objections Quirós records against his proposal, no one seemed to object to the notion that greater lands and civilisations existed in the southern latitudes—only to the utility of voyaging to discover, settle and convert these lands and peoples. Indeed, in the commission authorising Quirós to undertake a new voyage, gained after years of dedicated lobbying, the existence of southern lands was treated as something of a formality:

25 Thomson, *The Discovery of the Solomon Islands*, pp. 16–17.

All were persuaded, by the proofs and reasonings he submitted to them, that there could not fail to be either a continental land or a number of islands from the Strait of Magellan to New Guinea and Java and the other islands of that great archipelago.²⁶

The whole affair of seeking a commission, being granted that commission, then preparing the men, stores and vessels for departure, took Quirós the better part of a decade. It was not until 21 December 1605 that Quirós set sail with three ships and roughly 150 soldiers and sailors, and a number of Franciscan friars. Quirós was conscious that his expedition should observe a higher order of Christian behaviour than was often the case on long sea voyages. He proclaimed a suite of rules: no cursing or blasphemy; prayer was to be taken every afternoon; there was to be no gambling (sailors having been known to gamble away their provision of water, only to then drink from the sea, go mad and die); and God's name was to be taken in vain at risk of forfeiture of rations, confinement to irons, or being "fined for the benefit of souls in purgatory".²⁷ There could be no mistake: Quirós was a Christian seeking souls, not isles of gold.²⁸

26 Thomson, *The Discovery of the Solomon Islands*, p. 167.

27 Thomson, *The Discovery of the Solomon Islands*, pp. 183–184.

28 There is sometimes a tendency to conceive of Spanish explorers under the stereotype of the conquistadores—their concerns predominantly material, their actions driven by motives of personal gain—whereas the reality is that men like Mendaña and Quirós were more a part of the Catholic Reformation than the Conquista. (Spate, *The Spanish Lake*, p. 132.) It needs to be kept in mind that Spanish operations in the western hemisphere came under the legal umbrella of the Treaty of Tordesillas (1494) and the Treaty of Saragasso (1529): papal bulls arbitrated by the Pope according to which Spain was granted rights to new lands in the western hemisphere, and Portugal rights in the eastern hemisphere, delineated from a meridian line 370 leagues west of the Cape Verde Islands. In granting these rights there also came obligations, specifically the obligation to spread the gospel. As Celsus Kelly notes, this helps explain the disjunction often seen between an expedition's official objectives—emphasis often being placed upon the discovery of lands with inhabitants who can be Christianised and where Spain can establish missionary outposts—as distinct from the subsequent conduct of individuals who, seeking profit above all else, conduct their affairs with wanton disregard for the lives and welfare of indigenous inhabitants. Of course, Mendaña was concerned with the presence of gold and other riches, and the same is true of Quirós. But for Quirós especially his interest in resources was pragmatic: he knew that it was only the presence of gold or other commodities that could make repeat expeditions or settlement of a colony in the Pacific viable. (Kelly (editor), *La Austrialia Del Espíritu Santo*, p. 20.)

Quirós struck out into the Pacific at 25°S, some 15° further south than the course charted in his last expedition with Mendaña, but some 5° less than the latitudes in which he had been instructed to sail. He intended to avoid the regions about the equatorial belt which had already been reconnoitred, in favour of plumbing the higher latitudes where there was every possibility—a certainty in the opinion of Quirós and many of his peers—that the southern continent would finally be revealed. However, knowing how quickly a crew could revolt against their command, Quirós decided the best way to ensure a minimum of dissension was to temporarily head north-west, making for the known island of Santa Cruz, from which point the ships could revictual and then launch their quest anew, “as if we were starting from Lima.”²⁹ But even this course of action did not completely assuage the sailors wrought with doubts about the likelihood of locating land in the Pacific—be it islands already discovered, or lands awaiting discoverers. Unlike cosmographers sitting contentedly in their armchairs back in Peru and Spain, these sailors were no longer so credulous about the fourth part of the world existing: what if it was just a dream; what if, as one sailor put it, Quirós “had deceived the Pope and the King with his stories”?³⁰

The men were only quieted upon the sighting of land in the Duff archipelago, north-east of the Santa Cruz Islands. There they were able to provision with food and water and thence set off afresh in search of the southern continent, as Quirós had intended. He set his course southwards and it was not long before new lands were sighted. Quirós could see no limit to the land’s densely wooded shores, and a mountain chain filled the horizon. Could it be the great South-land?

Without delay a party was landed at the port dubbed Bay of San Felipe y Santiago. With only minimal reconnaissance, a site was chosen and christened New Jerusalem. Possession was proclaimed. Though in reality the Spaniards had claimed a Vanuatuan island now known as Espiritu Santo, a fundamental

29 Thomson, *The Discovery of the Solomon Islands*, p. 209.

30 Markham (editor), *The Voyages of Quiros*, p. 218.

question suggests itself. Of what, exactly, did Quirós think he was taking possession: an island, or a continent? To look at the subject retrospectively and consult Quirós's memorials written years after the event, the impression given is that Quirós figured it to be the southern continent. But in his actual narrative of the expedition Quirós never quite declares: "this is a continent or mainland", or, "this is *the* southern continent". Though he discusses elements of the land's geography, noting, for instance, how impressed he is by the mountain chain he sees in the distance, the presence of so many natives, how strong the "River Jordan" is, and the abundance of food and resources, he never offers an explicit opinion as to whether the land is continental. In his proclamation he purports to take possession of all the lands from 15°S to the South Pole, but whether that is one continent or a series of archipelagos is not clear, his proclamation ever-so-slightly ambiguous: "I take possession ... of all the lands which I sighted and am going to sight, and of all this region of the south as far as the Pole, which from this time shall be called Australia del Espiritu Santo."³¹ Quirós wanted to believe the land he had discovered was continental, but it seems that he knew better than to make such an elaborate assumption before more fully reconnoitring its bounds.

Still, he was so impressed by the land that he thought it would be the perfect location for a new settlement. It was only after a month of continual conflict and difficulties that Quirós decided he had had enough of his New Jerusalem and was ready to continue exploring the coast. In this, however, his intentions were frustrated. Two attempts were made to reconnoitre the land to the south-east, both abandoned before they had begun: the first stricken by food poisoning, the second afflicted by contrary winds. In the end Quirós never did get to further explore Espiritu Santo. Blown out to sea in the middle of the night, Quirós had not the will nor, perhaps, the authority among his dissentious crew, to persist in efforts to return to Espiritu Santo to complete

31 Markham (editor), *The Voyages of Quiros*, p. 251. Quirós later decided to make a clever play on words, changing the name for this land from Australia which was a straightforward rendering of southern, to Australia del Espiritu Santo—thus denoting the land was southern while also giving tribute to the House of Habsburg, the royal dynasty descended from Austria which had married into numerous monarchies, and from which Spain's King Don Philip hailed.

their reconnoitring of its coast, or, more importantly, to reunite with the ship captained by Torres which had been abandoned without notice. Cutting their losses, Quirós and his crew made haste, sailing north before deciding to make for New Spain (Mexico), which they reached one year after the expedition had first departed Callao.

As for Torres, he waited patiently at Espiritu Santo for Quirós to return. After 15 days of waiting, Torres hauled anchor and proceeded to coast around Espiritu Santo's eastern shore, before sailing south-west to 21°S. In doing so Torres acquired important evidence that the land was an island, even though he was unable to reconnoitre its western littoral. By sailing south-west Torres continued to steadfastly pursue the main objective of the expedition: to locate the southern continent. But facing difficult weather and, as always, a crew filled with "ill-will" toward their enterprise, Torres gave up the search at 21°S and headed north-west, bound for Manila.³² This eventually brought him to the shores of New Guinea where, unable to round the land's eastern promontory due to contrary winds, he decided to coast its southern shore. In doing so Torres took a huge gamble, as the maps of his day varied between showing Nova Guinea (New Guinea) connected to the great continent of Terra Australis, or separated by a strait. Fortune favoured the brave, and Torres became the first European to cross the Torres Strait separating Australia from New Guinea. But did he touch on Australian shores, or at least sight the mainland? Perhaps, but if he did it seems he was unable to distinguish between a main and the endless islands scattered throughout the strait. In any case, his discovery was suppressed by the Spanish, though the existence of a strait leaked out on a handful of maps in subsequent years.

Geographical Delusions

For all the intrigue that surrounds Quirós's 1606 expedition—only a fraction of which has been mentioned here—it is what unfolds within the confines of Quirós's own mind that warrants further attention. The issue is one

32 Quiros, *The Voyages of Pedro Fernandez de Quiros*, p. 462.

of consistency in his assessment of Espiritu Santo. For example, at one stage in his diary Quirós rattles off a list of the many advantages of Espiritu Santo, concluding:

I am able to say, with good reason, that a land more delightful, healthy and fertile; a site better supplied with quarries, timber, clay for tiles, bricks for founding a great city on the sea, with a port and a good river on a plain, with level lands near the hills, ridges and ravines; nor better adapted to raise plants and all that Europe and the Indies produce, could not be found.³³

In the next entry in his narrative, Quirós records his hasty and unhappy departure from that very land.

Back in Spanish civilisation, Quirós regained his fortitude and promptly set about pressing his claims for his discoveries. Over the next seven years Quirós repeatedly petitioned the king with long and insistent memorials seeking commission for a further expedition to properly settle Espiritu Santo and all contiguous lands. But the question remained, was Espiritu Santo an island or a continent? Though he was not particularly bullish about the matter—notable because he was generally very forthright and emphatic—in several of his memorials to the King of Spain Quirós clearly indicated that he believed Espirtu Santo was a promontory of Terra Australis. Take, for example, a memorial written in 1609, in which Quirós suggests that Espiritu Santo (the Vanuatuan island) is a mainland, while nevertheless revealing that he does not know that for a fact:

The Captain Pedro Fernandez de Quirós has already stated to Your Majesty that in the part to the south is concealed another quarter of the world, and that the discovery he made in it consists of twenty-two islands, whose names are:—

...

Austrialia del Espiritu Santo.

33 Markham (editor), *The Voyages of Quiros*, p. 271.

Bahia de San Felipe y Santiago.

Puerto de la Vera Cruz.

We were anchored, with the three ships, in the port of Vera Cruz, for thirty-six days. The three last names appear to belong to a great land, while its double range of lofty mountains, and that River Jordan from its size appears to furnish evidence of the great extent of the land.³⁴

A less partial informant may have left the question open, but Quirós so desperately wanted to believe that he had discovered the southern continent that his judgement was no longer sound. In his eighth memorial Quirós writes:

The greatness of the land newly discovered, judging from what I saw, and from what the Captain Don Luis Vaez de Torres, the Admiral under my command, reported to Your Majesty, is well established. Its length is as much as all Europe and Asia Minor ... That hidden part is one-fourth of the world, and of such capacity that double the kingdoms and provinces of which Your majesty is at present the Lord could fit into it.³⁵

What is remarkable about this statement is that Quirós invokes Torres's observations as evidence of the continentality of Espiritu Santo. Yet in the very report which Quirós mentions, Torres was unequivocal in reporting that he had pursued the eastern littoral of Espiritu Santo and had then changed course south-west where they sailed to 21°S, with no sign of land. As Torres tells it:

It was proper to act in this manner, for these are not voyages performed every day, nor could Your Majesty otherwise be properly informed. Going into the said latitude on a SW course we had no signs of land that way.³⁶

The spectre of Quirós deceitfully ignoring or burying proof of the fact that Espiritu Santo was an island simply does not match up with what is known

34 Markham (editor), *The Voyages of Quiros*, p. 487.

35 Markham (editor), *The Voyages of Quiros*, p. 478.

36 Markham (editor), *The Voyages of Quiros*, pp. 462–463. While Torres was unable to reconnoitre the entire coast of Espiritu Santo, he did circumnavigate it in a much wider arc, proving it could not be a continent.

about the man. The various extant sources which help illuminate the character of Quirós make it clear that, although he was not immune to vainglory, mendacity was never considered by those who knew him to be a part of his constitution. There are no evidential grounds to think that Quirós would consciously deceive the King of Spain. What seems equally certain, however, is that Quirós was more than capable of self-deception. In regard to his missive relating to Torres, Jack-Hinton aptly put it: “It seems likely that Quirós had advanced to the state of enthusiasm where self-deception led him to regard the unfavourable as favourable.”³⁷

Looking at the weight of expectation Quirós carried with him, we see a man who began to lose clarity of judgement by dint of his burden. He had put himself under enormous pressure through his passionate and assured representations to figures no less eminent than the Pope and the King of Spain, as well as to all manner of other influential courtiers, regarding the existence of a great southern land and its millions of heathens. He also faced the burden of disappointing the even greater authority of the Almighty Lord, to whom Quirós had promised these millions of souls. Failure in what had become his life’s work must have been an intolerable prospect; anything less than discovering the southern continent and its innumerable inhabitants was unthinkable. Like his predecessors who were hyper-attuned to the prospect of golden isles, Quirós became hyper-attuned to the prospect of continental land. Clearly the man still had his senses, but his critical judgement was inexorably corrupted by his commitment to a cause that had come to define his life. In this sense it is unfair to castigate Quirós for intellectual dishonesty when it might more humbly be noted that he was, simply, human—his skills as a seaman, navigator, and geographer unequal to the weight of preconception and expectation which he carried into the Pacific and then back to Spain. As a member of Quirós’s crew put it, “there is little doubt that God blinded his understanding so that he should achieve nothing because of his great pride.”³⁸

37 Jack-Hinton, *The Search for the Islands of Solomon*, p. 160.

38 Celsus Kelly (editor), *La Austrialia Del Espíritu Santo: The Journal of Fray Martín de Munilla O.F.M. and Other Documents Relating to the Voyage of Pedro Fernández de Quirós to the South*

Quirós's Disciples

Quirós saw himself as something of a latter-day Columbus, having invoked this comparison in his eighth memorial. He was right in a way—not because he had discovered a new world, but because his life became consumed by self-delusion, and the fact he would go to the grave a great navigator, but would be remembered as a false prophet. But even false prophets have their disciples, and so Quirós his. When Quirós died in 1615, his cause was taken up by the erstwhile friar, Fray Juan de Silva. De Silva had been influenced by Quirós's notion that there were millions of heathens in the yet undiscovered islands and continents of the Pacific. Based on the Treaty of Tordesillas, Spain had an obligation to bring Christ to these people. It was an urgent duty which could brook no delay. In a 1621 memorial to the king, de Silva wrote:

He solicits, for the First and Third Orders of our Father St. Francis the conquest and conversion to the Holy Gospel of all the Austral Realms and Provinces, which Captain Pedro de Quirós sought to win by means of force and arms and at great expense, in order that in an evangelical way and at no cost whatever to the Royal Treasury they may be brought into the fold of the Holy Gospel and to the obedience and dominion of the Crown of Castile.³⁹

De Silva's ambition was worthy in the context of his time, but his cause was a fruitless one. Though the good friar was willing to work cheap—asking for half the funds Quirós had requested—Spain was in dire financial straits. The state could ill afford to raid her dwindling coffers for yet another expedition into the Pacific in search of lands which, on the basis of the last three disastrous expeditions, could not be expected to yield any immediately exploitable riches. Nevertheless, in the spirit of Quirós, de Silva did not give up. He pressed into service Dr Juan Luis Arias, who wrote a lengthy memorial

Sea (1605–1606) and the Franciscan Missionary Plan (1617–1627), 2 vols., vol. 2 (Cambridge: Cambridge University Press, 1966), p. 357.

39 Celsus Kelly, "The Franciscan Missionary Plan for the Conversion to Christianity of the Natives of the Austral Lands as Proposed in the Memorials of Fray Juan De Silva, O.F.M.," *The Americas* 17, no. 3 (1961), p. 282.

(circa 1623) focusing on the importance of evangelising and the value of the lands to be brought under Spanish control. Arias argues for the presence of a wealth of metals, precious stones, pearls, fruits and animals on the basis of latitudinal determinism, invoking the zonal theory of climate formulated by the ancients:

Now it is consequently manifest that this part of the earth is as fertile and habitable as the northern hemisphere, for the south has of necessity the same distribution of zones as the north ... And if particular consideration be given to the influences produced on temperature by the constellations belonging to the southern hemisphere, it will be found that there are lands in it, not only as habitable, but much more so than in the other hemisphere.⁴⁰

Perhaps chastened by earlier forays into the Pacific which did not find the southern continent as imagined by cosmographers, Arias also spent considerable time arguing for the more fundamental proposition that there was in fact a southern continent to be discovered. To do so Arias drew upon the theory of equipoisure elaborated by Mercator, concluding: “there is proportionably as great a surface of land uncovered in the southern hemisphere as in the northern.”⁴¹ However, like Mercator, Arias gave a confused and confusing explanation of his reasoning, due in large part to his reliance on Aristotelian physics and Mercatorian cosmology, neither of which are sound, and neither of which Arias fully comprehended.

Ultimately, though, whether Arias’s arguments on equipoisure made sense or not was of no great relevance to the subject at hand. Petitions to launch a further expedition into the Pacific were rejected not because there was doubt about the existence of a southern continent, but because Spain could not

40 Dr Juan Luis Arias, “A Memorial Addressed to His Catholic Majesty Philip the Third, King of Spain, by Dr Juan Luis Arias, Respecting the Exploration, Colonization, and Conversion of the Southern Land,” in *Early Voyages to Terra Australis, Now Called Australia: A Collection of Documents, and Extracts from Early Manuscript Maps, Illustrative of the History of Discovery on the Coasts of That Vast Island, from the Beginning of the Sixteenth Century to the Time of Captain Cook*, ed. R.H. Major (London: Hakluyt Society, 1859), p. 15.

41 Arias, “A Memorial,” p. 11.

afford the expense. Terra Australis was still thought to exist, but it would have to be discovered by some other nation of explorers. Arias had alerted the king to the great danger of another nation less holy than the Spanish conquering the region ahead of Spain, warning:

Dutch heretics, whom the devil unites for this purpose by every means in his power, most diligently continue the exploration, discovery, and colonization of the principal ports of this large part of the world in the Pacific Ocean, and sow in it the most pernicious poisons of their apostasy, which they put forth with the most pressing anxiety in advance of us, who should put forth the sovereign light of the gospel.⁴²

Well Arias might worry, for the Dutch were indeed on the move, and if the Netherlands was to claim Terra Australis as her own then the life work of Quirós—whose name became synonymous with the southern continent in the early seventeenth century—would be lost to a nation more interested in commerce than Christ. The great irony is that while Arias was absolutely right about the Dutch threat to Spanish interests in the Pacific, it was in fact Quirós's compelling eighth memorial which helped inspire certain Dutch merchants and adventurers in their search for Terre de Quir—the fabled continent of Terra Australis.

42 Arias, "A Memorial," p. 2.

DUTCH DISCOVERY

Neither discovery nor exploration can be examined outside the context of the cultural and intellectual milieu of the discoverers and explorers. Major discoveries—whether they be geographical or not—are made by people who recognize data that do not conform to their preexisting world view.

*John Allen*¹

The epigraph from John Allen prompts the question: can one discover that which is already known? If an explorer encounters a land, and that land is reconciled with pre-existing cosmographic conceptions of the world, then there is no revelation, no new cognition. Knowledge is bolstered and expanded, but not changed. An act might rightly be considered one of exploration, but the product must be new knowledge for it to be the stuff of discovery. Words are, of course, our servants—not our masters—so discovery can mean whatever we want it to mean. But keeping this distinction in mind will help illuminate the story of the Dutch—a story, it turns out, of both exploration and discovery.

The Dutch, by accident and by design, explored parts of the Australian coastline through the first half of the seventeenth century. Their exploits were initially seen to confirm pre-existing knowledge of Terra Australis. They had not discovered anything new—rather, merely confirmed existing knowledge

¹ John L. Allen, “New World Encounters: Exploring the Great Plains of North America,” *Great Plains Quarterly* no. 13 (1993), p. 69.

and added important geographical detail. Eventually, however, those acts of exploration became acts of discovery, for it was realised that the coasts encountered could not belong to the austral lands that sacred writ and expert opinion had divined. Indeed, Dutch discoveries would fundamentally alter the story of austral lands. But which story is that, one may well ask: the story of Australia, or the story of Terra Australis? It is a tricky question, not least of all because the answer is both, and yet the coming chapters articulate the seemingly incompatible argument that Terra Australis and Australia are separate geographical entities which ought not be conflated by the historian.

During the first half of the seventeenth century the Dutch pursued two objectives. The first was the exploration and better discovery of the Southland which they had come upon largely by accident to the south of Java. This was the geographical entity of Australia, though for around a decade the Dutch believed that this was the land of Beach, promontory of the much sought-after southern continent. The second objective was to discover the South-land which the Dutch believed filled the southern hemisphere in the higher latitudes, and which, as their geographical knowledge expanded, they realised must be a separate entity to the lands they had already discovered south of Java. This was the geographical entity known as Terra Australis. The stories of these two geographical entities cannot be separated, but as the Dutch soon established, the entities themselves can be.

Economic Imperialism

For much of the sixteenth century the Portuguese enjoyed a near monopoly in Southeast Asian trade. The beginning of the end to Portuguese ascendancy can be dated to 1595 when a company of Dutch merchants decided to flout the Portuguese monopoly, sending a fleet to Southeast Asia to buy spice. They returned two years later, having lost one of four ships and 160 men. But it was the modest cargo of pepper with which they returned that mattered most to the company. When sold, the return was sufficient to cover the costs of the expedition and turn a small profit on the initial investment—even with the

expedition's heavy material and personnel losses. News of this conditional success spread quickly, sparking a spice rush. Within a year 22 Dutch ships had set sail for the Spice Islands. Over a dozen different trading companies were formed, and competition flourished.²

All too predictably, however, the Dutch spice rush led to commercial inefficiencies that damaged the trade for all merchants. Competition meant higher expenditures and lower revenues. The solution to this was an obvious one, already shown to be effective by the Portuguese: the formation of a monopoly. The Dutch merchants and the Netherlands States-General agreed that the merchant companies would merge into a single company, with the States-General protecting their trade in spices with Letters Patent giving the new company a monopoly on all trade with Southeast Asia prosecuted via the Cape of Good Hope and the Straits of Magellan. So was born the *Verenigde Oost-Indische Compagnie*: the Dutch East India Company, or VOC. That in securing their monopoly the VOC only sought exclusive use of the Straits of Magellan reveals how orthodox the notion that *Tierra del Fuego* was a promontory to *Terra Australis* had become. Had the VOC or States-General suspected *Tierra del Fuego* could be anything but a part of a southern continent, then almost certainly the VOC's Letters Patent would have been widened to ensure their monopoly was protected.

The VOC had enough capital to allow them to establish their position in the Southeast Asian spice trade, rather than just exploiting the trade for short-term gain. By 1608 the company's directors were boasting that they had 160 ships operating throughout the East Indies, the West Indies and off the coast of Guinea—a veritable mercantile armada.³ Supported by a charter issued by the Netherlands States-General granting the VOC broad powers, the company began to act like a state in their creation and enforcement of a VOC monopoly in the trading of spice. As the Englishman Matthew Duke wrote from India in 1619: “Theis buterboxes are groanne so insolent that yf they be

2 C.R. Boxer, *The Dutch Seaborne Empire 1600–1800* (London: Hutchinson, 1965), pp. 22, 23.

3 Boxer, *The Dutch Seaborne Empire 1600–1800*, p. 69.

suffrd but a whit longer, thye will make claims to the whole Indies, so that no man shall trade but themselves or by thear leave; but I hoope to see ther pride take a falle.”⁴

The assessment given to the VOC Directors in 1614 by Jan Pietersz Coen, soon to become one of the Dutch East Indies’ most influential early Governor-Generals, paints both an accurate picture of the VOC’s history till that point, as well as pointing to the nature of VOC economic imperialism to come:

Your Honours should know by experience that trade in Asia must be driven and maintained under the protection and favour of Your Honours’ own weapons, and that the weapons must be paid for by the profits from the trade; so that we cannot carry on trade without war nor war without trade.⁵

There was more to Coen’s comments about trade and war than just recognition of the realities of mercantilism in the East Indies. Spain and the Netherlands had been at war since 1568, and would remain in a state of war till 1646, a period of ongoing hostility known as the Eighty Years War. A truce on domestic hostilities stood for 12 years between 1609 and 1621, but conflict continued outside European waters. Relations between the two states proved intractable because it was not only the sovereignty of the Netherlands at stake, but the wealth and power of two great mercantile nations. While the war involved traditional military skirmishes, the real battle was not between soldiers on land, but merchants on the seas; it was control of trade through the key European ports, control of the spice and other Southeast Asian trades, and control of the American commodities being brought back to Europe that determined the strength of the respective states, and would determine the course of the war. In this context, the VOC and later the Dutch West India Company (WIC) were seen as integral elements of the war effort because of the economic losses these companies could inflict on Spain and Portugal

4 Holden Furber, *Rival Empires of Trade in the Orient 1600–1800* (Minneapolis: University of Minnesota Press, 1976), p. 42.

5 Boxer, *The Dutch Seaborne Empire 1600–1800*, p. 96.

(at that time Portugal was a part of the Iberian Union, under the rule of the Spanish Habsburg monarchs). Targets were sought which could simultaneously increase Dutch revenues and damage Spanish revenues. This context of economic imperialism is important to this history because it informs the decisions the VOC and WIC made across the first half of the seventeenth century, including decisions about the pursuit of Terra Australis.

VOC

In the first few years of its existence the VOC could lay claim to no territory within Asia. In the first decade of the seventeenth century the Portuguese and the Spanish were still entrenched in the region. The VOC's first conquest was the Portuguese fort on Amboina [Ambon], a Moluccan spice island, in 1605. It is against this background that in 1606 the VOC sent an expedition to reconnoitre the lands in the vicinity of the known island of New Guinea. 1606 is, of course, a key year in the stories of both Australia and Terra Australis. It was the year when Quirós made his voyage to Australia del Espiritu Santo, a land which he proclaimed to be the mainland of Terra Australis. Among Quirós's fleet was Luis de Torres; he would continue the voyage of discovery after Quirós had abandoned the expedition, in doing so discovering Torres Strait and perhaps sighting the Australian mainland. What is remarkable is that just a few months earlier the VOC ship *Duyfken* (or *Little Dove*) had preceded Torres, landing on the western coast of Cape York Peninsula, barely 100 miles from Torres Strait. Captaining that ship was Willem Janszoon.

Though most of the documents relating to this expedition have been lost, most crucially Janszoon's journal, the few extant traces of this voyage give the impression that Janszoon was tasked with exploring the coasts of New Guinea and any contiguous lands, where he would have been on the lookout for new trading markets or exploitable commodities.⁶ One may also surmise that rumours of gold in New Guinea and adjacent lands was a chief motivation

⁶ The extant charts, drawings and other documents of the VOC are reproduced in Günter Schilder et al. (editors), *Comprehensive Atlas of the Dutch United East India Company*, 7 vols. (Utrecht: KNAG, 2006–2010).

in launching this expedition at a time when the VOC was still just a fledgling company; if goldfields were found, any capital expenditure would be justified.

In the course of this voyage, Jantszoon coasted the southern shores of New Guinea; as he pushed east he encountered innumerable shoals and small islands, presenting too great a danger of bottoming out or shipwreck to continue. Jantszoon assumed he had encountered the shallows to a bight—in reality the entrance to the yet-to-be-discovered Torres Strait—but unable to confirm this Jantszoon turned south, making his next landfall on the western coast of what is now Cape York Peninsula. He proceeded to chart a small section of the Australian mainland (still thinking he was coasting land connected to New Guinea) before heading home.⁷

Jantszoon returned with some significant new data, but it was far from what the VOC had hoped for. His encounter with Australia demonstrated that land existed coextensive with the legendary lands of Terra Australis, but it also demonstrated that this region held no immediately evident value to a merchant company. As the VOC had no interest in knowledge for its own sake, during the decade following Jantszoon's fruitless voyage the prospect of further discovering southern lands had to give way to more pressing concerns—namely developing and consolidating the VOC's monopoly in regions where they already held commercial interests.

And so it was that the VOC's next encounter with southern lands came about as a direct result of their trading activities. In 1611 Hendrik Brouwer pioneered a new passage to Southeast Asia. Rather than rounding the tip of Africa and heading north-east to the Indies, Brouwer figured that the constant westerlies of the southern latitudes could be ridden for 1000 miles before the ships veered north for Java.⁸ Brouwer's theory proved spectacularly successful, and from 1616 the VOC had standing instructions for all vessels

7 Günter Schilder, "From Secret to Common Knowledge—the Dutch Discoveries," in *Studies from Terra Australis to Australia*, ed. John Hardy and Alan Frost (Canberra: Australian Academy of the Humanities, 1989), p. 72; Evan McHugh, *1606: An Epic Adventure* (Sydney: University of New South Wales Press, 2006), pp. 4–9.

8 Bantam, situated on the western end of the island of Java, was the VOC's headquarters in the East Indies until August 1618 when headquarters were moved to Batavia.

to pursue the Roaring Forties for at least 1000 miles from the Cape of Good Hope, before turning north.⁹ This new route could be quicker by a matter of months, which made it of considerable commercial value to the VOC. However, like all routes, it possessed its dangers, in this case attendant on a navigator's ability to estimate their rate of progress, given that instruments to accurately calculate longitude had not yet been invented.

The consequences of exceeding the recommended traverse of 1000 miles were highlighted in 1616 when Dirk Hartog, aboard the ship *Eendracht*, underestimated his easting, a mistake only realised when land was sighted. It turned out to be an island (now known as Dirk Hartog Island) situated off the westernmost point of Australia. The island revealed nothing of value, and so the real import of Hartog's accidental discovery was in knowing that land existed thereabouts, lest a ship end in wreck.¹⁰ This is precisely what happened to the *Tryall* in 1622, an English ship which underestimated its longitude, subsequently wrecking on rocks (now known as the Tryal Rocks) off the western coast of Australia. During this period a number of VOC ships stumbled across the western Australian coast, though until the bloody episode of the *Batavia* in 1629 the VOC had avoided shipwreck. It became increasingly clear, however, that there was a significant landmass (or series of islands) which imperilled all VOC shipping using the Roaring Forties seaway. It occurred to the Dutch that these lands could well be part of Terra Australis, though, if they were, first impressions suggested that this region of the southern continent was a land much less profitable than legend and lore told.

Yet as early as 1622 the VOC also contemplated the possibility that the lands encountered south of New Guinea and Java might prove to be part of an insular mainland separate from the larger continent of Terra Australis. In that year Governor-General Coen commissioned a new voyage of discovery (ultimately never embarked) that was to take in these lands and probe further

9 O.H.K. Spate, *The Pacific since Magellan, Volume 2: Monopolists and Freebooters*, 3 vols. (Canberra: Australian National University Press, 1983), p. 42.

10 Hartog's ship was named *Eendracht*, memorialised in the name given on VOC maps to land in the vicinity of his discovery as Eendracht's Land.

south and east. In doing so he envisaged the possibility that the explorers might “sail round the whole land and emerge to southward.”¹¹ Interestingly, while Governor-General Coen contemplated the notion that this particular South-land might not be Terra Australis, he also made explicit mention of the lore tied to Terra Australis: “According to the written statements of Jan Huygen, and the opinion of sundry other persons, certain parts of this South-land are likely to yield gold, a point into which you will inquire as carefully as possible.”¹²

Jan Carstensz was issued a more modest commission in 1623. He had three main goals: to better chart the coasts of northern Australia already known and gather additional details from contiguous coasts; to better determine whether those lands held valuable commodities, particularly precious metals; and, having somehow come into possession of knowledge of Luis Torres’ voyage through Torres Strait, to check whether there was in fact a passage between New Guinea and the land encountered by Jantszoon (see Figure 6.1). Carstensz was unable to conclusively determine the latter question, but he was able to be more decisive in his assessment of whether the land encountered by Jantszoon was of any promise. And by his assessment it was not just unpromising—it was downright wretched:

The land between 13° and 17° 8’ is a barren and arid tract, without any fruit-trees, and producing nothing fit for the use of man ... The natives are in general utter barbarians, ... they are utterly unacquainted with gold, silver, tin, iron, lead and copper, nor do they know anything about nutmegs, cloves and pepper, all of which spices we repeatedly showed them without their evincing any signs of recognising or valuing the same.¹³

Thus condemned, there could be no justification to further explore the northern reaches of this South-land, and, accordingly, no further expeditions were commissioned over the following 13 years.

11 Jan Ernst Heeres, *The Part Borne by the Dutch in the Discovery of Australia 1606–1765* (London: Luzac and Co., 1899), p. 19.

12 Heeres, *The Part Borne by the Dutch in the Discovery of Australia*, p. 20.

13 Heeres, *The Part Borne by the Dutch in the Discovery of Australia*, pp. 41–42.

It was inevitable, however, that accidental encounters with the western coast of Australia would continue so long as the VOC utilised the Roaring Forties. The most significant of these encounters occurred in 1627 when a fleet led by François Thijssen overshot its easting and sighted the western coast of Australia. What makes the voyage remarkable is that rather than correcting course and heading north for Batavia, it was determined (for reasons unknown, as no contemporary records of the voyage have survived) to pursue the encountered coast to the south/east—possibly with the objectives Governor-General Coen had outlined in 1622 in mind: “you will follow its eastern extension for some time, and finding no further extension to southward, you will not proceed farther east, but turn back.”¹⁴ Just how far the coast was pursued is what makes the voyage remarkable: Thijssen and the fleet explored 1000 miles of Australia’s southern coast, reaching as far east as the St Francis Isles (near modern day Ceduna), before retreating for Batavia with 30 fewer men than they had set out with.¹⁵ Aboard Thijssen’s ship was Pieter Nuyts, a VOC Councillor, and it was Nuyts’ name memorialised on maps depicting this southern coast with the toponym, Nuyts’ Land (see Figure 6.2).

With part of Australia’s southern coast now revealed to the VOC, it became clear for the first time that the land of Beach normally shown attached to Terra Australis must, in fact, be a separate landmass—either that, or it was a Terra Australis vastly different to how Mercator and fellow cartographers had imagined the southern continent. Either way, this information had significant implications. If Eendracht’s Land and Nuyts’ Land did in fact comprise a separate mainland, as suggested by Thijssen’s voyage, then it meant that there might exist a potentially valuable passage into the southern Pacific utilising the trade winds of the Roaring Forties. But if the land was connected to Terra Australis beyond the easternmost extent of Nuyts’ Land, then the riches of the legendary Terra Australis might yet exist in those latitudes. Either way, the new discoveries warranted further inquiry.

14 Heeres, *The Part Borne by the Dutch in the Discovery of Australia*, p. 19.

15 Günter Schilder, *Australia Unveiled: The Share of the Dutch Navigators in the Discovery of Australia* (Amsterdam: Theatrum Orbis Terrarum, 1976), p. 106.

Dutch Competition for Terra Australis

Though the VOC was the company best equipped and best situated to launch expeditions for the still elusive Terra Australis, from early in the century other commercial interests attempted to capitalise on the unclaimed potential of putative lands in the south. In 1614 the Dutch merchant Isaac le Maire incorporated the Australian Company (Australische of Zuid Compagnie). That same year le Maire won from the Netherlands States-General a decree that anyone who found new “passages, harbours, or lands” would have the right to the first four voyages exploiting them, and he also secured a special charter authorising his Australian Company to visit “Tartary, China, Japan, East India, Terra Australis, and the islands of the South Sea”.¹⁶ As the VOC held Letters Patent for exclusive trade in the East Indies prosecuted via the Cape of Good Hope or through the Straits of Magellan, rights to a new passage were at the core of le Maire’s new enterprise, for it was only by pioneering a new route into the Pacific that le Maire could circumvent the VOC monopoly. The 1578 voyage of Francis Drake who sighted open seas to the south of Tierra del Fuego was discussed in earlier chapters. Into the early seventeenth century most people remained ignorant to the significance of this discovery, but almost certainly le Maire became aware of it through maps like Jodocus Hondius’s 1595 world map showing an islandic Tierra del Fuego separated from Terra Australis. Le Maire saw his opportunity to break the VOC monopoly, and seized it.

An expedition was embarked in 1615, led by Willem Schouten along with Jacob le Maire—Isaac’s son. The entire voyage hinged on their discovering a new passage into the Pacific to the south of Tierra del Fuego. If successful, they were then to turn their efforts toward the discovery of two coveted regions of Terra Australis. First were the lands of Terra Australis which Quirós had sought, and apparently discovered, in the southern Pacific. They expected to find in these lands new trading grounds, as well as valuable

16 Jacob le Maire, *Mirror of the Australian Navigation: A Facsimile of the “Speigel Der Australische Navigatie ...”*, ed. Edward Duyker (Sydney: Hordern House, 1999), p. 19.

natural commodities, of which gold was the most prized. After this they were to sail to the East Indies, where they would turn south and make for the provinces of Beach and Maletur—provinces cartographers had been depicting as a part of Terra Australis for generations. For both Isaac and his son Jacob, Terra Australis was no mere hypothesis; Terra Australis was the land already discovered by Pedro Fernández de Quirós. As le Maire recounts in his journal, it was not before reaching the mid-Atlantic and as the spirits of the crew were dimming that he finally announced that their destination was Terra Australis (till that point a secret). For good measure, he read a rousing passage from Quirós's eighth memorial expounding upon the virtues of the southern continent.

The entrance to the Straits of Magellan was passed and the Fuegian coast skirted till a break in the land was found on 24 January 1616. At that point, the easternmost tip of Tierra del Fuego could be seen to the south-west; separated from that land by a short stretch of ocean was another land visible to the south-east. Like Tierra del Fuego, the land to the east was mountainous and rugged, with no end in sight. It was given the name Staten Landt—not Staten Island as it is known today—as le Maire and Schouten wondered if the land they had just discovered was in fact the true southern promontory to Terra Australis. Whether it was or not made little difference to their objective of discovering Terra Australis. It was the Terra Australis of the temperate South Pacific—the Terra Australis of legend and of more recent times the propaganda of supposed discoverers—which le Maire and Schouten sought.

Once in the Pacific, le Maire and Schouten struck out in the latitudes in which Mendaña and Quirós had discovered land. The days passed—the sea air pregnant with the expectation of discovery—but nothing. Le Maire held his faith, but, like the sailors under their joint command, Schouten began to wonder whether the southern continent existed. If it did, it was not in the manner after which it had been described—“wee were at the least one thousand five hundred leagues ... from the coast of *Peru*, and *Chili*, and had not discovered any part of *Terra Australis*”—and so he figured it more practical to

turn north-west so as to sail around New Guinea and proceed to the Moluccas to pursue their secondary objectives.¹⁷ Schouten prevailed, but it is clear that Terra Australis nevertheless remained a touchstone for le Maire.

Sailing north, the expedition came to the Hoorn Islands (north-east of Fiji) where a rousing reception was afforded by the islanders. Writing in the third person, le Maire comments in his entry for 22 May 1616: “This adventure so much pleased the patron of the ship, that he said here was the true *Terra Australis*; seeing that here was found a river of fresh water, many hogs seen ashore, and plenty of other things.”¹⁸ The passage is significant because “Terra Australis” is used here not merely as a title, but as a geographical metaphor, in the same way as El Dorado might be invoked. Used thus it is clear that in Jacob le Maire’s imagination Terra Australis was no mere label for undiscovered lands; it was, rather, the rubric under which a whole suite of ideas associated with the prospect of southern lands came together: natural riches, biological fecundity, climatic temperance, great civilisations, valuable trading grounds, and so on. This is a reminder that the idea of Terra Australis was an altogether richer, fuller concept than the earlier concept of Antipodes which when used figuratively conveyed merely a meaning of oppositeness or inversion.

Le Maire’s scheme ultimately failed to yield the expected bounty from southern lands, but some years later it was judged a good enough prospect for the newly formed Dutch West India Company (WIC) to take up the scheme. Seeing an opportunity to profit where the VOC had failed to capitalise, in 1629 the WIC commissioned an expedition under the command of Maerten Valck and Johannes van Walbeeck, with instructions to harass Spanish shipping, establish a settlement along the Chilean coast, and, on their return, discover the southern continent in the Pacific. They were to sail by way of le Maire Strait, making sure to avoid the Straits of Magellan so as not to infringe the VOC’s exclusive rights to trade via those straits. Both objectives offered

17 Willem Schouten, *A Wonderful Voyage Round About the World* (London: Da Capo Press, 1968), p. 46.

18 Alexander Dalrymple, *An Historical Collection of the Several Voyages and Discoveries in the South Pacific Ocean, Volume II* (London: J. Nourse, T. Payne, and P. Elmsly, 1771), p. 39.

great potential value to the WIC: looted riches of the Spanish silver ships and a Dutch foothold in the lucrative Chilean silver industry, and the whole gamut of untapped riches imagined for Terra Australis. However, concerned that they were over-stretching their resources, the WIC administrators of Dutch Brazil cancelled the expedition. Van Walbeeck complained to the WIC Directors:

Concerning the voyage to the South, the reconnaissance of Chile and the discovery of Terra Australis, to which Your Honours were favourably inclined, I wish passionately to be able to complete that voyage, not doubting that the fruits of such an expedition would very much exceed expectations. However, due to the extraordinary scarcity of funds, a few days ago the voyage was voted off the program for this year.¹⁹

This, however, was not the end of the matter. In 1641 the expedition to Chile and Terra Australis was revived by the WIC, this time to be led by the redoubtable Hendrik Brouwer. Departing from Brazil in late 1642, it meant that at the same time Abel Tasman was making his assault on Terra Australis from the west in the name of the VOC, Brouwer was making an assault on Terra Australis from the east in the name of the WIC. Of course, Tasman's expedition would be hugely more significant in this regard than Brouwer's, though the old sea dog did make one final contribution to the story of the southern continent. Possibly suspecting all along that Staten Land was an island, Brouwer followed the prevailing north-westerly winds which pushed his ships to the south-east, forcing him beyond and subsequently around the shores of Staten Land—in doing so proving that the land thought to be a promontory of Terra Australis was actually a minor island. Naturally, revision of the shores of the prospective southern continent ensued—though such a minor transgression did little to dent a cosmography that could still be imagined as existing just over the horizon.

19 Dalrymple, *An Historical Collection of the Several Voyages and Discoveries in the South Pacific Ocean*, p. 173.

VAN DIEMEN'S LANDS

... up to this time no Christian kings, princes or commonwealths have seriously endeavoured to make timely discovery of the remaining unknown part of the terrestrial globe (situated in the south, and presumably almost as large as the Old or New World), although there are good reasons to suppose that it contains many excellent and fertile regions, seeing that it lies in the frigid, the temperate and the torrid zones, so that it must needs comprise well-populated districts in favourable climates and under propitious skies. And seeing that in many countries north of the line Equinoctial (in from 15 to 40 degrees Latitude), there are found many rich mines of precious and other metals, and other treasures, there must be similar fertile and rich regions situated south of the Equator, of which matter we have conspicuous examples and clear proofs in the gold- and silver-bearing provinces of Peru, Chile, Monomotapa or Sofala (all of them situated south of the Equator), so that it may be confidently expected that the expense and trouble that must be bestowed in the eventual discovery of so large a portion of the world, will be rewarded with certain fruits of material profit and immortal fame.

*Instructions to Tasman's 1642 voyage*¹

1 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, p. 131.

Against the background of Dutch enterprise within the cut-throat environment of early seventeenth-century mercantilism, one of the most important actors in this story can now be introduced. The individual in question is Anthonie Van Diemen, Governor-General of the Dutch East Indies from 1636 to 1645. Van Diemen was one of the most intelligent, capable and level-headed men to ever pursue the southern continent, which he did with singular resolve. One of Van Diemen's first orders of business upon assuming the Governor-Generalship was the commissioning of a voyage for the South-land under the command of Gerrit Pool, and one of the last major decisions he made before his death was to commission Tasman to undertake his second voyage for the South-land.

Humble Beginnings

When Van Diemen first signed with the VOC, he did so as an ordinary soldier; any improvements to his lot would have to come by dint of hard work and merit. Yet from the outset Van Diemen was at a disadvantage, for when he enlisted he was a declared bankrupt, the result of a failed business venture that had, 18 months earlier, left him with significant debts that he was incapable of servicing. With his prospects in the Netherlands seriously curtailed as a result, and wanting to regain his good standing in society, Van Diemen sought to earn a wage with the VOC so as to begin repaying his creditors. The VOC, however, refused to employ bankrupts, for bankruptcy was considered proof of both commercial and moral delinquency. That is why Van Diemen enlisted with the company under the assumed name of Thonisz Meeuwisz van Utrecht.²

Successful in his deception, the young Van Diemen—a man of 25 years—embarked on a merchant vessel, and as of January 1618 was bound for the East Indies. It was during this voyage that Van Diemen got his first glimpse of the geographical unknown, when his ship unexpectedly encountered the

2 Alfons Van der Kraan, "Anthony van Diemen: From Bankrupt to Governor-General, 1593–1636," *The Great Circle: Journal of the Australian Association of Maritime History* 26, no. 2 (2004), p. 9.

Western Australian coast near what is now the township of Exmouth. It was Van Diemen's first encounter with the South-land. What is more, as a young man and newly recruited soldier, it may well have been the first time Van Diemen became aware of the extent of Dutch discoveries south of Java (at this stage the VOC had not proclaimed their discoveries to the wider public). From this piece of information, Alfons van der Kraan draws a plausible conclusion:

And it is not at all improbable, indeed, it is likely, that this chance encounter with an unknown land so impressed Van Diemen that in later years, when he had the power to enforce his will, he felt compelled to do all he could to promote the cause of discovery and exploration.³

The encounter with the Western Australian coast was without incident, and in due course Van Diemen arrived safely in Batavia. By this stage the administrators in the Netherlands had become aware of his deception. They acted by sending a stern letter to the Governor-General of the East Indies, warning:

that amongst the soldiers who have been sent out to the Indies ... there may be some debauched characters, bankrupts, and/or people who have grossly forgotten themselves in other respects ...

We consider it urgently necessary that Your Excellency employ such people only as soldiers and that, without our specific foreknowledge and consent, no such person is advanced to a position of influence in commerce. Under no circumstances are they to be entrusted with our effects, cash and merchandise, lest they deal with our property in the Indies in the same way they have dealt with their own property and that of their parents and friends. One such person is a certain Anthony van Diemen ...⁴

The matter, however, had already been decided. Soon after arriving, Van Diemen disclosed his true identity and the reason for his deception to

3 Van der Kraan, "Anthony van Diemen," p. 9.

4 Van der Kraan, "Anthony Van Diemen," pp. 10–11.

Governor-General Coen, who was impressed enough by the young soldier to draft him into service in his offices of administration. Van Diemen quickly proved his worth. When the letter from the Directors arrived, Coen gave it short shrift. He had no intention of ceding to the judgement of businessmen thousands of miles removed from the reality of the East Indies, especially when it came to practical matters that affected the day-to-day running of his administration. Short of good men, Coen elected to let Van Diemen's merit in the East Indies determine his fate.⁵

It was merit that saw him rise through the ranks at a remarkable pace; in 1636 he assumed the highest office of Governor-General, responsible for the activities of the VOC throughout Southeast Asia. From his time as a lowly soldier through his appointment as Governor-General, Van Diemen was the VOC's most dedicated and incorruptible servant. He did everything possible to improve and expand the VOC's business in the East Indies, which meant capitalising on undeveloped markets and industries. Potentially the largest undeveloped market and the most significant new source of valuable commodities was the South-land. If Van Diemen could find the much sought-after lands of gold thought to be present in the South-land, or if he could find new commodities and new people with whom to trade, or even if he could find a passage through or around the South-land affording expedient passage to Chile, then he would have won for the VOC a valuable prize. Moreover, being remembered as the man who commissioned some of the most important voyages of discovery in history must have seemed an eminently more desirable legacy than being remembered for his failings as an entrepreneur.

Gold, Silver, and Seaways to Gold and Silver

In two voyages of discovery preceding Tasman's 1642 expedition, the intentions of the new Governor-General, Anthonie Van Diemen, became clear. One was a rather disappointing voyage of 1636 for the South-land led by Gerrit

5 Van der Kraan, "Anthony Van Diemen," pp. 6–11.

Thomaszoon Pool, and subsequently Pieter Pieterszoon after Pool was killed in West Papua. Though the expedition was abandoned well before they were able to achieve anything of significance, it remains of considerable interest for what Van Diemen set out to achieve. His detailed instructions to Pool and Pieterszoon cover the usual explorer's checklist: they are to be on the lookout for valuable commodities and are to do their best to establish relations with the local inhabitants while ascertaining if there is any trade to be done with them. They are to maintain a scrupulous record of all geographical and meteorological features and conditions. Van Diemen also had in mind a different sort of commercial vantage, in terms of finding a watering and revictualling station on the coast of the South-land for ships bound for Batavia. Where Van Diemen deviates from the usual script is in his specific injunctions concerning the prospect of a seaway into the Pacific:

In sailing along the coast you will have all bays and inlets you may meet with, diligently examined, and keep a sharp look-out for the discovery of channels or openings that might afford a passage into the South Sea, since we surmise that such passage must be looked for to northward than to southward, considering the breadth of the South-land between 28 and 32 or 33 degrees.

In case you should discover channels leading to the South Sea, or should find the South-land to consist of islands, you will endeavour to pass through or between the same, diligently observing the mouths and outlets, and then returning again through the same passage in order to proceed with your discovery along the north-side.⁶

Van Diemen is on the lookout for a strait that cuts through the discovered coasts of the South-land. Given that a continuous coastline was already believed to exist from the region of the Houtman Abrolhos islands all the way to the St Francis Isles, any opening to a strait would have to be on the northern or north-western coast, and its debouchure into the southern Pacific

6 Heeres, *The Part Borne by the Dutch in the Discovery of Australia*, p. 65.

somewhere further east or further north than François Thijssen had reached in 1627. Such a passage between Java and Chile was an enticing prospect, for the VOC continued to entertain the possibility of establishing itself in silver-rich Chile, or, failing the establishment of a Chilean outpost, the VOC was not above privateering in American waters.

In his instructions to Pool, Van Diemen also outlined his belief that the lands discovered in the south were not a part of a larger southern continent, though he did believe that the lands were connected to New Guinea. If it turned out that, contrary to expectation, Cape York was not connected to New Guinea (which the Iberian Torres had already proved, unbeknownst to Van Diemen), Pool was to test Van Diemen's hypothesis about the configuration of the South-land/s:

we are convinced that the west coast of Nova Guinea ... forms one whole with the South-land ... if you should find the contrary to be the case, a matter of which we will by no means deny the possibility, and if the South-land should by you be found to be an island, you will sail southward along the coast of Nova Guinea, as far as the 32nd degree S.L., and thence on a westerly course touch at the eastern extremity of the South-land, which in January 1627 was discovered by the ship t'Zeepaart. When you shall have made the South-land on this course, you will run one degree more to southward near the islands of St Pieter and François, that by so doing you may obtain full certainty that from that point the coast-line trends to westward.⁷

Thus, these instructions (viewed alongside those issued for Tasman's 1642 and 1644 voyages) reveal that Van Diemen expected that the lands the VOC refer to as the South-land would be found to be insular and of limited extent—that is, an island or series of islands separated by straits, neither stretching far into the Pacific or Southern Oceans. What Van Diemen imagined here was, more or less, the parameters of Australia as it is known today.

7 Heeres, *The Part Borne by the Dutch in the Discovery of Australia*, p. 66.

The expeditions of Matthijs Hendricksz Quast in 1639 and Maerten Gerritsz Vries in 1643 reveal Van Diemen's other white whale: isles of silver and gold. These two expeditions were instructed to sail to the latitude of Japan, from which point they were to criss-cross the ocean eastwards in pursuit of islands rumoured to contain gold and silver in fabulous quantities.⁸ It is a familiar motif, these lands of gold always being pushed into yet-unexplored territories: the Incan islands of gold in the Pacific, the Golden Chersonese of Southeast Asia, Polo's golden land of Beach south of Java, the Ophir of the Old Testament, and now the "Gold- and Silver-Rich Islands East of Japan".⁹

So it was that in 1642 Van Diemen decided to send out another expedition in search of the southern continent. In a Resolution of 1 August 1642 Van Diemen and the East Indies Councillors determined:

Since our predecessors the Lords Governors-General Jan Pietersen Coen deceased, Pieter de Carpentier, Henrick Brouwer and ourselves, pending their administration and ours, have been greatly inclined to forward the navigation to the partly known and still unexplored South- and East-land, in order to the direct discovery of the same, and to the consequent opening up of important countries or leastwise of convenient routes to well-known opulent markets, in such fashion that the same might in due

8 Alfons Van der Kraan, "Anthony van Diemen: Patron of Discovery and Exploration, 1636–45," *The Great Circle: Journal of the Australian Association of Maritime History* 27, no. 1 (2005), pp. 9–11, 17–22.

9 The published journal of Cornelis Janszoon Coen, first mate aboard one of the ships of the 1643 expedition, was titled *Voyage to Cathay, Tartary, and the Gold- and Silver-Rich Islands East of Japan, 1643*. The rumour of golden isles crops up regularly across both the Americas and the Far East. For instance, on 9 September 1622 the Governor of Amboyna, Herman van Speult, wrote to Governor-General Coen: "Some months ago we heard from a moorish priest of lebee that about fifty miles north of Quey and Aroe an island might be found, where gold is ... [We] demanded a small chart from him, a copy of which is enclosed". Governor-General Jan Coen responded to van Speult in a letter of 28 October 1622: "Touching the island situated east of Aroe where according to a certain morish priest gold might be found, it is possible but give only little credence to him; on the proposal of governor Martin Sonck would agree, if it is convenient to dispatch to Quey, Aroe and tenimber ... during this voyage it should be possible, better than done by the Duifken, to investigate what lands are in these areas and what might be done." (Willem C.H. Roberts, *The Dutch Explorations, 1605–1756, of the North and Northwest Coast of Australia* (Amsterdam: Philo Press, 1973), p. 93.)

time be used for the improvement and increase of the Company's general prosperity ...¹⁰

Based on the advice of François Visscher in his "Memoir touching the discovery of the South-land", Van Diemen commissioned Abel Tasman with Visscher as his pilot-major to sail with two ships to the Dutch settlement on Mauritius, where after taking on water and provisions they were to

set sail from the Mauritius, shaping your course with the trade-wind nearly southward ... until about the Southern latitude of 36 or 38 degrees, when you have got out of the eastern trade-wind, you shall fall in with the variable winds, with which you shall always put about on the best tack for getting to the southward, until you get into the western trade-wind, with which you will sail nearly southward until you come upon the unknown South-land, or as far as South Lat. 52 or 54 degr. inclusive; and if in this latitude you should not discover any land, you will set your course due east, and sail on until you get into the longitude of the eastern point of Nova Guinea, or of the Salomonis islands, situated in about 220 degr. longitude, or until you should meet with land; and when this is the case, whether in the beginning or afterwards when you have sailed more to eastward, you will sail eastward (as before mentioned) along the coasts or islands discovered, following the direction of the same.¹¹

So, Tasman was instructed to sail south from Mauritius, in the course of which it was considered possible that he would encounter Terra Australis. If, however, he reached the latitude of 52°–54°S without doing so, he was to turn east. Sailing at this latitude Tasman would be well clear of the known southerly limit of Australian lands in 35°S. The object was to discover the *unknown* South-land of Terra Australis, rather than reconnoitre the *known* South-land comprising fragments of the Australian coastline. Thus, it was envisaged that sailing at this latitude should at some stage bring Tasman to the coast of Terra

10 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, pp. 129–130.

11 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, p. 132.

Australis, at which point they were to follow this land's coast, presumed to run eastward or northward. If it turned out that no land existed in this latitude, they would head north once they reached the longitude of the Solomon Islands. Whether or not Terra Australis was discovered, it was considered that such a voyage could not fail to yield one of two beneficial outcomes: either Terra Australis and its cornucopia of potential natural resources would be discovered, or, failing that, they would at least have proved that there existed a viable seaway to Chile that utilised the Roaring Forties.

Which South-Land?

Documents authored by Van Diemen reveal three different labels—not always used consistently—applied to southern lands: the “unknown South-land”, the “known South-land”, and the “East-land”. The question is, do they refer to three different lands?

Not quite. In Van Diemen's missives, the ubiquitous “known South-land” is a reference to the coasts of Australia that the VOC had already discovered, and which Van Diemen reckoned to be the connected coasts of one large island, or possibly a series of islands. But if the “known South-land” was confirmed as being limited in this sense, and given it had been found to be mostly “barren”, it could not be entertained that this was Terra Australis.

By Van Diemen's estimation, Terra Australis must yet be found further to the east in the vast unexplored regions of the Pacific, as well as occupying the higher southern latitudes across the breadth of the globe. It is this land which Van Diemen refers to in general as the “unknown South-land”, and the south Pacific region of which he specifically refers to as the “East-land”. As for why Van Diemen chose to employ the toponym “East-land” or “Eastern Lands” (“Oost-landen” and “Oosterlanden”) in combination with “South-land”, it is as straightforward as the name itself: the VOC referred to Terra Australis as the South-land (“Suyder landen”, “Zuidlandt” and variant spellings), so, desiring to refer to a specific section of that South-land, Van Diemen coined the name, East-land.

Preconceptions

There was, of course, no certainty attendant to any voyage of discovery, even when the object was a geographical entity as richly imagined as Terra Australis. Cosmographers, cartographers, sailors and administrators may all have believed the continent existed, but conjectural imaginings of the continent's coastlines could never stand for empirical knowledge of a specific littoral. When Van Diemen sent Tasman to discover Terra Australis, the Mercator-derived images of that entity could serve as a rough guide to expectations, but the only information Tasman and Visscher would rely on was the information sourced first-hand from the records of explorers—and there was a dearth of that when it came to Terra Australis. Thus, when Tasman set out he did so with instructions which made contingencies for the southern continent not being found: “if in this latitude you should not discover any land, you will set your course...”¹² Indeed, Visscher—author of the instructions ultimately issued by Van Diemen—expressly acknowledged that this was a voyage of discovery, not reconnaissance: “one will be enabled to discover the southern portion of the world all round the globe, and find out what it consists of, whether land, sea or icebergs, all that God has ordained there; excepting only the north side of the South-land already known”¹³

Nevertheless, the value of preconceptions—even when they are acknowledged as drawing on pure conjecture—is that they can be used as a framework in which to formulate an exploratory strategy. In Tasman's 1642 expedition this meant that, rather than criss-crossing the Southern Ocean in search of land (the strategy employed when Tasman accompanied Matthijs Hendricksz Quast on a 1639 expedition into the northern Pacific), the latitude of 50°S was settled upon as the basic course after which Terra Australis should be pursued. Indeed, in Visscher's “Memoir touching the discovery of the South-land”, the pilot-major discussed four options that would achieve the goal of discovering the South-land and finding a passage to Chile. Two of

12 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, p. 132.

13 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, p. 142.

those options carried the recommendation that, should land not be earlier encountered, the expedition sail to a southern latitude of 54°S, before proceeding eastwards, be it by open seas or following a coastline. A third option set a limit of 50°S. Twenty years earlier Coen's instructions for the *Haringh* and *Hasewint* yachts under Jan Vos prescribed a similar southernmost limit: "as far as Latitude 50°."¹⁴

Just why Coen, Van Diemen and Visscher settled on 50–54°S is explained by a number of factors. The most obvious point is that this latitude corresponded to the region where the cosmographically conceived southern continent—as manifested and particularised in the imaginative geography of most contemporary world maps—could be located. Of course, it would make fools of these men to suggest that they pursued the exact coastline of Terra Australis as imagined on maps: as influential as conjectural cartography was, they were well aware that it was educated guesswork. Accordingly, they did not uncritically believe theorised geographies existed in the exact form and location in which maps depicted them merely because they carried a cartographic imprimatur. At the same time, they certainly were not above using the cartographic orthodoxy as a heuristic device—an assumed position that provided the structure required for a voyage of exploration. There is no more telling evidence of this than the list of "Names and places in the East, possessed and frequented by the Portuguese and the Netherlanders" (1642), a product of the Ten Year Truce between the Netherlands and Portugal concluded in 1641 (a year after Portugal split from the Iberian union with Spain). This document purports to inform:

The whole of the newly discovered South-Land, situated under the longitude from 55 to 220 degrees inclusive, *i.e.* between the meridians of Cabo Bona Spei and of the easternmost of the Salomonis islands, from the Equinoctial Line to the Antarctic Pole, or between the farthest coasts and islands of the whole Southland on both sides, has lately been first

14 Heeres, *The Part Borne by the Dutch in the Discovery of Australia*, p. 19.

discovered by the Netherlanders, and the whole of it legally taken possession of. No Portuguese ship ever visited that part of the world.¹⁵

Penned before Tasman had returned from his 1642 voyage, this proclamation was pure bluster, anticipating that Tasman would discover the continent of Terra Australis. It is why the region delineated, “from 55 to 220 degrees inclusive”, corresponds with the region that Tasman was sent to explore.

Two other factors fortified this southern limit of 50–54°S. The first was the knowledge that Staten Land had been found in 54°S latitude, and at the time of these voyages Staten Land was believed to be a promontory to Terra Australis. The second was an entirely practical consideration. Under no circumstances was it foreseen that any land discovered beyond 50–54°S would possess the climates or the natural resources expected to prove profitable to the VOC. Finding land beyond this latitude was a prospect considered almost as valueless to the VOC as the prospect of finding no land at all, hence Van Diemen’s resolution explaining that the expedition is to “discover and survey in an easterly direction such lands as they shall meet ... without, however, running farther south than the 54th degree, even in case they should not find any land there.”¹⁶ The objective of Tasman’s expedition was not exploration for its own sake, but to win the VOC value. Moreover, once a ship broached such southerly latitudes, they were getting into dangerously frigid climes with notoriously volatile seas, as experience about the Cape of Good Hope and Cape Horn had shown.

Searching for Terra Australis

Tasman and Visscher set out with a plan of action based on their collective knowledge of climate, meteorology, winds, seas, geographies, and so on. There is a point in a voyage of discovery, however, where newly acquired first-hand knowledge supplements or overtakes more general knowledge and geographical lore, as John Allen explains:

15 Tasman and Heeres, *Abel Janszoon Tasman’s Journal*, p. 111.

16 Tasman and Heeres, *Abel Janszoon Tasman’s Journal*, p. 130.

At the outset, the explorer has certain notions about the accuracy of his information, and on them he bases his early field operations. As exploration progresses, he may change his views about the quality of his knowledge and may accordingly alter his field behavior. Such behavior generally reflects the explorer's recognition of discrepancies between zones of actual and perceived knowledge.¹⁷

It did not take long for Tasman and Visscher to reach this point. From Mauritius the fleet sailed south-east until on 6 November 1642 they reached 49°S latitude. By this stage, however, all of the officers, including Tasman and Visscher, had become concerned by the multitude of adverse conditions faced. There was the recurrent fog and haze (which made the sighting of unknown lands difficult), constant high seas, periodic storms, plus squalls of hail and snow, coupled with extremely cold temperatures.¹⁸ Tasman consulted his council of officers, and all agreed that conditions made it hazardous to continue in such latitudes. It was agreed that they were likely to encounter land in their current latitude, which in the prevailing conditions meant an unacceptably high likelihood of shipwreck. On 7 November 1642 Visscher provided Tasman with written advice:

we should stick to the 44th degree S. Latitude, until we shall have passed the 150th degree of Longitude, and then run north as far as the 40th degree S. Latitude, remaining there with an easterly course, until we shall have reached the 220th degree Longitude ...¹⁹

What is interesting about this is that for cosmographers and entrepreneurs Terra Australis was a lustrous geography of inestimable value; it was to them real, but remote. To Tasman and his crew Terra Australis was also real, but it was no longer remote. As a mariner and explorer, it was not the promise of Terra Australis that exercised Tasman's mind, but its menace. This is what

17 Allen, "An Analysis of the Exploratory Process," p. 16.

18 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, pp. 7–8.

19 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, p. 9.

impresses when reading Tasman's journal: there is little discussion of Terra Australis as a commercial prospect, but extensive discussion of the potential hazards of new lands.

Conditions improved considerably upon gaining the lower latitudes, and though they were no longer in the most propitious range for finding Terra Australis, the possibility of encountering land was yet a real one. Sailors had a finely honed aptitude for recognising certain conditions or debris as evidence of nearby land, the likes of which might include the presence of birds, absence of swell, drifts of seaweed, or presence of terrestrial biological material like coconuts and driftwood. In or about the 44th parallel it was the presence of large quantities of rock weed which suggested that land of some kind must be nearby. Yet powerful seas continued to swell from the south-east and south-west—considered compelling evidence that no sizeable landmass could be present in the near south. On 17 November 1642 Tasman makes this clear: “Though we observe rock-weed every day, still it is not likely that there should be any great mainland to the southward, on account of the high seas that are still running from the south.”²⁰ This explains why, on the one hand, Tasman expressed little expectation of finding a continental landmass along their current heading, but, on the other hand, anticipated encountering islands.

The southern coasts of a hitherto unknown land were encountered on 24 November. Cartographers and their ilk subsequently assumed the land (now known as Tasmania) was a part of the “known South-land”. Whether or not it was a part of the “known South-land”, the fact the fleet skirted its southern coast meant it certainly could not be a part of Terra Australis. It was not the land which Tasman had been tasked to find, and its discovery raised little enthusiasm from Tasman or his crew. It is worth pausing to consider the latter fact, for it illuminates something about the sixteenth-century explorer's perspective. In the modern era, anything resembling a discovery—of an unknown plant or animal, unknown planet, unknown molecule, unknown tribe, unknown subterranean river—is cause for considerable excitement in

20 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, p. 11.

the discoverer, and is not uncommonly received with some fanfare. Moderns have come to associate discovery as an act of momentousness and just cause for celebration. It has not always been so.

Were Tasman and his crew pleased to discover the land dubbed Van Diemen's Land? Well, they had been at sea a long time, so they were certainly glad to have come across *terra firma*. But as for seeing the discovery as of any particular import, the sort of thing worth celebrating: no. Van Diemen had sent Tasman on an expedition into unknown waters. Every day that they sailed further, new empirical data was acquired: post-Mauritius, the expedition was making discoveries—adding to the store of knowledge—every inch of ocean they crossed. But discovery was, in and of itself, meaningless. The perspectives of Van Diemen and Tasman, of cosmographers and geographers, of kings and queens, merchants and statesmen, were skewed by the focus on value. Whereas moderns often see value in a discovery for the simple fact that our stocks of knowledge have been augmented, early moderns of the sixteenth and seventeenth centuries who were involved in the search for southern lands were driven by commercial imperatives. The point is this: Terra Australis proved such an important and enduring entity not merely because it offered the prospect of something new, but because it was an entity not yet possessed which offered value: climatic value, geographical value, strategic value, resource value, trading value. Van Diemen's Land—as Tasman saw it—was characterised by the following: a difficult climate, formidable forests, giant black men who fled at the sight of the Dutch, no evident abundance of precious metals or gems, and it was probably part of the barren lands discovered further north and west. It was good to see land, but was Tasman excited by the discovery? No—nor was Van Diemen when he received Tasman's report.

Tasman continued east. 12 November 1642, Tasman wrote: "The heavy swells still continuing from the south-west, there is no mainland to be expected here to southward."²¹ Yet the following day the shores of New Zealand came into view. This loomed as a much more propitious discovery

21 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, p. 17.

than the encounter with Van Diemen's Land, for two reasons. One, it was in the southern Pacific, the region considered most likely to produce climates and lands of value. Two, they had discovered the western/northern coastline of this land, so, unlike the southern coast of Tasmania, it could conceivably be part of a larger landmass stretching to the south and east. For the discovery to be of value it was not essential that it be proved a profitable trading ground or source of commodities; what mattered was whether it marked the discovery of a promontory of Terra Australis—for if it was confirmed that Terra Australis did exist in the southern Pacific then the desired benefits could be sought and presumably discovered further afield.

Tasman's initial assessment was that the coasts were probably part of the "unknown South-land":

we gave to this land the name of Staten Landt, since we deemed it quite possible that this land is part of the great Staten Landt, though this is not certain. This land seems to be a very fine country, and we trust that this is the mainland coast of the unknown South-land.²²

Over the following days, Tasman's judgement vacillated. Upon entering a large bay, Tasman expected to "find a passage to the open South Sea" proving the lands were islandic; but the passage (which does in fact exist) was not pursued.²³ He reinstated his initial assessment, but upon observing the tide running from the south-east, he recorded that "there was likely to be a passage through, so that perhaps it would be best, as soon as wind and weather should permit, to investigate this point ..."²⁴ For reasons not articulated in the surviving documents of this voyage—perhaps due to the threat of Maoris, perhaps because of shortage of victuals, or perhaps because of the difficult conditions that New Zealand waters present—Tasman did not settle the question, pursuing the western coast of New Zealand's north island rather than

22 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, p. 21.

23 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, p. 21.

24 Tasman and Heeres, *Abel Janszoon Tasman's Journal*, p. 22.

persist in the attempt to locate a passage that would take them into more southern waters.

When Van Diemen received news of this, he was incensed by what he considered to be a lack of diligence on Tasman's part. Not discovering any trading grounds or commodities was one thing, but failing to conclusively determine whether the land was islandic or continental meant, in effect, that the status quo remained unchanged. The existence of Terra Australis in the southern Pacific had been neither proved nor disproved. Looking back on the actions of Tasman from a modern perspective, it is apparent that this was yet another key junction in the narrative of Terra Australis. Had Tasman resolved the question as to whether New Zealand was a mainland—in reality, of course, it is comprised of two large islands—it would have been difficult to persist with the imagined continent of Terra Australis. But he did not. This meant that cosmographers and cartographers could appropriate the coasts of New Zealand into the geography of the southern continent.

In the narrative of Terra Australis, then, Tasman's 1642 expedition was a landmark for two reasons. One, it proved that the "known South-land" was indeed a land of limited extent, Tasman's route delineating a region within which the land's borders must exist. Concomitantly, by sailing across a vast stretch of the Southern Ocean from Mauritius to New Zealand at a latitude of 49°S before retreating to around 40°S, it had been shown where Terra Australis did not exist—thus shattering core elements of the vestigial Mercatorian image of the southern continent. The flip side to this was that for all that Tasman's expedition took away from the imaginary southern continent, it also offered up a new and tantalising empirical fragment: proof positive of a significant body of land in the southern Pacific.

Conclusion

For all of the resources that the search for Terra Australis had consumed, the VOC and the other Dutch companies had nothing to show for it—or at least nothing of concrete value. Yet if it had been up to Van Diemen there would

have been no suspension of exploration; he declared his intention to persist until Terra Australis was discovered, or it was conclusively proved that no such land exists. As it was, Van Diemen died in office in April of 1645, leaving a rich legacy as a patron of exploration. Mercifully, it was after he died that a missive from the Netherlands-based VOC directors reached Batavia. The directors explained that they no longer saw value in the expensive expeditions in search of Terra Australis, nor in voyages pursuing more detailed knowledge of the southern lands already discovered. Their letter instructed Van Diemen to discard all future expeditions with southern lands in mind: the company did “not expect great things from the continuation of such explorations, which more and more burden the Company’s resources”.²⁵ Van Diemen would never read this letter, but it would serve as an absolute injunction for his successors, who refocused the VOC’s attention on East Indies trade, and abandoned all thoughts of further exploring either known or unknown southern lands. Little matter: over the course of the first half of the seventeenth century the Dutch had added an enormous store of new data to geographical knowledge. The question was, how would this empirical knowledge—knowledge incompatible with the contemporary visions of Terra Australis—affect belief in the southern continent?

With each article of empirical data appropriated as a part of the southern continent, Terra Australis gained verisimilitude, tangibility and ultimately validation. But when that same data was denied Terra Australis, shown to belong to another geography that was not the sought-after southern continent, Terra Australis may have temporarily lost a little of its verisimilitude—perhaps, even, a measure of what made it seem attainable—but it did not automatically lose validity. To be sure, repeated disappointments made map-makers increasingly wary of the cartographic embarrassment of having a continent sailed through, but what the continent had previously gained from appropriated data could not be stripped from the geographical entity nearly so easily as it had been added. Hence, when Magellan discovered Tierra del

25 Van der Kraan, “Anthony van Diemen,” p. 25.

Fuego, the gains to the idea of a southern continent were enormous; it was the turning point where what had been a cosmographic conjecture became a part of the known world. It made the southern continent real. In time, Tierra del Fuego was shown to be just an island, as was Staten Island—the land which replaced Tierra del Fuego as a promontory of the southern continent. But neither revelation could nullify the belief that had come to be stored in Terra Australis. Coastlines could be revised, expectations dampened, but once given life an imaginative geography like Terra Australis becomes a pliable, reflexive idea that transcends the fragments of information which help make such an entity seem real in the first place. Merely eroding shores or banishing an entity to beyond the horizon is rarely enough to invalidate the very notion of the geographical entity existing. Only great violence done to the substance of an imaginative geography—to the characteristics that define the entity and make it worth believing in—will test the validity of conceptualisations and test the strength of belief in that idea.

And, indeed, great violence was done to the substance of Terra Australis in the wake of the VOC voyages touching on the shores of Australia, culminating in Tasman's 1642 expedition. Traversing the 40th parallel south of Australia, Tasman sailed right through the continent so many cartographers depicted on their maps, finding open seas where land was expected. Knowledge of Tasman's expedition eventually circulated—the implications enormous. In one fell swoop any prospective promontory of Terra Australis south of Java and New Guinea was excised. Where other voyages had merely eroded the imagined coasts of Terra Australis and forced cartographers to depict that land beyond the horizon of knowledge—the essentials of the geography intact—Tasman's discoveries necessitated a comprehensive remodelling, as cartographers had little choice but to amputate the equivalent of at least ten million square kilometres from the archetypical Mercatorian continent. It was very nearly the death knell for Terra Australis, but advocates refused to let this cosmographic postulate wither away as a hopeless fantasy. Despite the increasing ranks of doubters, despite the overwhelming evidence of non-existence, and

despite the cosmographic gymnastics remodelling required, tradition proved more potent than ugly fact. It was no longer the same lustrous continent bequeathed by Finé and Mercator, and it was no longer as fervently lusted after in the imaginations of sundry men; but Terra Australis was a fundament of cartography and cosmography, and it would rebound time and again from acts of empirical falsification until explorers could prove—outright—that a southern continent could not exist in any meaningful fashion. Terra Australis ailed, but endured.

TERRA AUSTRALIS ADRIFT

The difficulty of assimilating exploratory accounts into the general store of knowledge results from problems fitting the new information into recognized geographical frameworks. If an explorer returns with information that contradicts or subverts strong and generally accepted concepts, his data may have little immediate effect in creating more accurate regional images. For example, despite the failure of mariners to discover a sea-level passage through the poleward margins of the North American land mass, late sixteenth- and early seventeenth-century theoretical geographers and mathematicians continued to hold to the concept of what Peter Martyr called “indrawing seas ... great straits which provide a passage for the waters flowing from east to west,” and persisted in using astronomical computations to prove that such a passage existed between the Atlantic and Pacific oceans. And despite “increasingly convincing evidence” about the true character of the Arctic Ocean provided by explorers during the nineteenth century, many reputable and intelligent scholars remained obdurate in their belief in an “open polar sea.” In both instances geographical theories delayed acceptance of knowledge

resulting from exploration; these theories, although inconsistent with new exploratory information, were too prevalent in geographical thought to be drastically or rapidly changed.

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At the beginning of this history of the southern continent the distinctive geography of Terra Australis was, literally, ages from being realised; what was found in its ancient and medieval precursors was a nebulous, mutable concept of a southern continent in the form of the Antipodes. It was only once the Antipodes were manifested in the verisimilitudinous guise of Terra Australis that the southern continent became a core belief within the canon of cosmography. Maps like Jodocus Hondius senior's striking world map of 1602 (see Figure 8.1) in which the southern continent is depicted in arch-Mercatorian style ensured the diffusion of knowledge of this geographical entity. Indeed, the southern continent was no mere idea, broadly understood; Terra Australis was considered a geographical entity in its own right, attracting generations of advocates—some of whom eventually set out to discover that land. It was, of course, not there, a fact that cartographers and scholars reconciled with a mix of pragmatism, obscurantism, and sheer confusion.

Advocates and Sceptics

Of those who did have their doubts about Terra Australis in the first half of the seventeenth century, many lacked the resolve to banish the entity from the pages of their books or maps. It was, simply, too valuable and well-established an artifact; if omitted from a map or an account of cosmography, an author was left with a void, be it an intellectual void marring the completeness of a cosmography, or an aesthetic void on maps sold to the rich, powerful and

1 John L. Allen, "Lands of Myth, Waters of Wonder: The Place of the Imagination in the History of Geographical Exploration," in David Lowenthal and Martyn J. Bowden (editors), *Geographies of the Mind: Essays in Historical Geosophy* (New York: Oxford University Press, 1976), pp. 52–53.

curious. Even before the dilemma of Tasman's voyage, there were doubters. Englishman William Greent was one, describing in a textual accompaniment to his world map of 1625 the world as a composite of four parts—Africa, Asia, Europe and America—without any mention of Terra Australis.² He did discuss Terra Australis in a cartouche on his map, but he made clear his scepticism:

This South Land undiscovered commonly knowne by the name of Terra Australis incognita or Magellanica cannot certainly be affirmed continent or Ilands only some few coasts thereof have appeared to Seamen driven thereupon by extremity of weather whose names are set downe, the rest must remaine clouded in obscuritie till future times and further discoveries produce them to light.³

Still, Greent could not do without the facility of Terra Australis, which had become for map-makers an aesthetic and intellectual crutch. Thus, Greent has provided a full and detailed depiction of the coast of Terra Australis, including numerous annotations where he offers vignettes of information to support the prospective mapping. For instance, the recognised landfall of Tierra del Fuego is retained as a part of the southern continent, shifted west of the actual Fuegian islands. The inscription reads: "Terra del Foga, or the Land of smoake was so called from the frequent flashes of fire, a[n]d abundance of smoake, appearing to the first discoverers: heerof." Other inscriptions along the coast of Terra Australis provide enough information to fill out the spaces of the map, while giving the impression of knowledge.

At the same time as Greent was begrudgingly depicting the familiar coastlines of Terra Australis, the image of Terra Australis was being modified or removed from the southern hemisphere on the maps of certain of his Dutch counterparts. Jodocus Hondius senior died in 1611, but his work was

2 Shirley, *Mapping of the World*, p. 337.

3 William Greent, *A New and Accurate Map of the World, Drawne According to the Truest Descriptions, Latest Discoveries, and Best Observations that Have Been Made by English or Strangers* (London, 1625).

continued by his sons Henricus and Jodocus junior. As information about the VOC's encounters with Australia began to filter into mainstream discourse in the mid to late 1620s, the two brothers—up-and-coming map-makers of growing prominence—chose different tacks when it came to revising the cartography of the southern continent. Virtually all of the VOC information then available leaked via maps, which, as discussed in earlier chapters, were relied upon by geographers and cartographers as a chief source of empirical data. In the case of the VOC discoveries, it was the maps produced by the official cartographers to the VOC, Hessel Gerritsz and his successor from 1632, Willem Blaeu, which were the wider cartographic and geographic communities' chief sources of information about the new discoveries in Australia.⁴

Jodocus junior, the elder brother by two or three years, responded to the data concerning the discovery of land in the region where the province of Beach was normally depicted, by erasing the southern continent in its entirety, to be replaced with the meagre outline of actual discoveries on Australia's western coast—the first printed world map to do so.⁵ As is evident in Figure 8.2, the southern continent normally filled a huge amount of space in world maps, making its absence in Jodocus's 1625 map as striking as its presence in his earlier efforts.

Jodocus's response was unusual for the time. Henricus opted for the more judicious approach favoured by most cartographers, gradually revising his geography of the southern continent, rather than banishing all conjectural geography from his maps. In *Polus Antarcticus*, a map that would be reproduced in numerous states and by numerous cartographers across the seventeenth century (see Figure 8.3), Henricus provides an up-to-date rendering of the VOC's discoveries along the western and southern shores of Australia,

4 Günter Schilder, "The Dutch Conception of New Holland in the Seventeenth and Early Eighteenth Centuries," *Technical Papers of the 12th Conference of the International Cartographic Association 2* (1984), pp. 252–253. Also see Günter Schilder, *Australia Unveiled: The Share of the Dutch Navigators in the Discovery of Australia* (Amsterdam: Theatrum Orbis Terrarum, 1976), pp. 252–253.

5 J. Keuning, "Jodocus Hondius Jr.," *Imago Mundi* 5 (1948), p. 63; Günter Schilder, "New Holland: The Dutch Discoveries," in Glyndwr Williams and Alan Frost (editors), *Terra Australis to Australia* (Melbourne: Oxford University Press, 1988), p. 86.

but he opts to also include a fractured rendering of Terra Australis: a second, larger land that does not seem to be connected to New Holland.

Examining *Polus Antarcticus*, it is evident that the coastline of Terra Australis fractures at longitudes to both the west and east of Australia; Henricus has not attempted to connect the empirical data with the southern continent, thus establishing a clear delineation between the empirical and the conjectural. To the east of Australia (on the left of the map) it is also clear that the coastline of Terra Australis is, in fact, comprised of an island chain, rather than an unbroken littoral. The impetus for this island chain came directly from Henricus's father, who pioneered such a feature on his 1602 world map (see Figure 8.1). Henricus's adoption of the island chain is especially interesting because this new geography still conforms to the old: Henricus has conflated the notion of an island chain with the South-land coastline—so while there is no actual mainland coast, the island chain exactly conforms to the layout of the former South-land coastline as depicted in his own maps and those of Abraham Ortelius. The island chain is, then, a fragmenting and islandification of what was the South-land littoral. A close examination of *Polus Antarcticus* reveals that Henricus has also turned the South-land coastline beneath Africa into a second extensive island chain. This is a technique employed to convey doubt. Island chains, coastal fragmentation, unbounded landmasses and shadowed or faded coastlines were all employed as cartographic indicators of geographical uncertainty, the equivalent of the literary question mark or ellipsis. Henricus's map is, then, a compromise: between empiricism and aesthetics, between knowledge and expectation. Henricus perpetuates Terra Australis, but he is no advocate.⁶

As Dutchmen, the Hondius brothers and their fellow cartographers had an advantage over cartographers from other states when it came to sourcing the latest empirical data concerning the southern hemisphere—thanks, of course, to the Netherlands-based VOC. But maps and books circulated widely throughout Europe, and so it was not long before cartographers in other states

6 See Stallard, "Navigating Tasman's 1642 Voyage," pp. 33–36.

started to draw on the VOC data. In João Teixeira's atlas of 1630 the discoveries of the Dutch are combined with the fantastical writings on the southern continent of Teixeira's Spanish countryman, Manuel Godinho de Erédia. In a number of maps and manuscripts, Erédia details the supposed existence of a land south of Java, which he calls Lucaantara: "Lucaantara should be the general name for the peninsula on which were situated the ports in the Kingdoms of Beach and Maletur"⁷ Thus Teixeira's southern continent includes two notable inscriptions (see Figure 8.4). The first reports the discovery by the Dutch of Eendracht's Land. The other—at the northern-most promontory to Teixeira's southern continent—designates that region (in translation) "Nuca Antara, discovered by Manoel Godinho de Eredia in the year 1601." Teixeira seems to have no qualms about conflating the Dutch discoveries with established belief in a southern continent, though the bold cartography of his atlas may belie the very same doubts entertained by many of his counterparts who were uncertain about the relationship between the emerging geographies of Australia with the long-standing conceptions of Terra Australis.

In Melchior Tavernier's world map of 1628 (see Figure F) there is found both a good rendering of the results of Carstensz's survey of the Gulf of Carpentaria in 1623, and a conventional rendering of Terra Australis. The coastlines very nearly meet, but Tavernier has left a small gap separating the two coasts—the coastlines left hanging in expectation until the obvious assumption that they are one and the same littoral can be put to proof. This was the very question that had vexed the Dutch explorers who had won the information now filtering out and finding its way onto maps. When Frederik de Houtman—discoverer of the Abrolhos islands on Australia's western coast—detailed his discoveries to Prince Maurice in a letter of 7 October 1619, he described

7 Manuel Godinho de Erédia, *Eredia's Description of Malaca, Meridional India, and Cathay*, trans. J.V. Mills (1997), p. 62. For more information on Eredia's delusions about India Meridional, see W.A.R. Richardson, "A Cartographical Nightmare—Manuel Godinho De Erédia's Search for India Meridional," in Francis A. Dutra and Joao Camilo dos Santos (editors), *Proceedings of the International Colloquium on The Portuguese and the Pacific* (Santa Barbara: University of California, 1993).

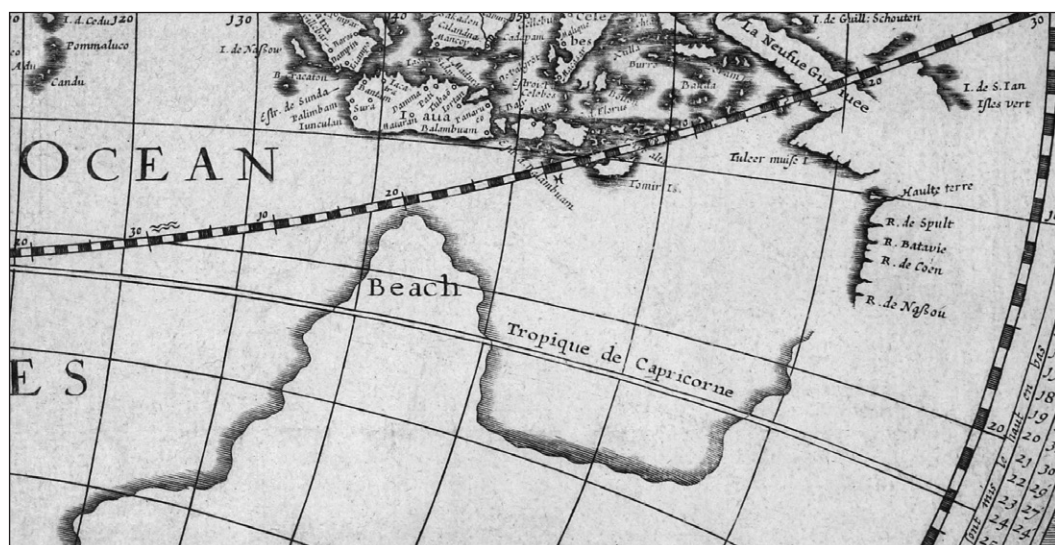


Figure F. Melchior Tavernier, *Charte Universelle de Tout le Monde*, 1628, western hemisphere, detail. Image courtesy of the British Library (Copyright © The British Library Board).

how he “suddenly came upon the Southland of Beach.”⁸ Twenty-three years later the idea of Beach continued to frame ideas of geographies south of Java, François Visscher contemplating how “one might easily sail eastward along Staten landt, and in this way come to a perfect knowledge how far the said Staten landt extends; sailing on the said easterly course as far as the longitude of the Salomonis islands, in which way one would become acquainted with all the utterly unknown provinces of Beach.”⁹ Thus map-makers like Tavernier and his fellow cosmographers and geographers waited for more and better particulars that would shed light on the abiding question of the relationship of the VOC discoveries with Terra Australis. Those better particulars finally came with the 1642 voyage of Tasman.

More and Better Particulars, More Confused Cartography

The VOC had no intentions of publicising the results of Tasman’s expedition, and so his journal was locked away for decades. However, Joan Blaeu—having

8 Heeres, *The Part Borne by the Dutch in the Discovery of Australia*, p. 14.

9 Tasman and Heeres, *Abel Janszoon Tasman’s Journal*, p. 142.

inherited his father's role as official cartographer to the VOC—had access to the data gathered by VOC expeditions: charts, surveys, logs, and so on. So while the VOC may have suppressed Tasman's journal, they did let news of his discoveries leak out to the international community through the maps Blaeu produced and sold on the consumer market. One map in particular helped circulate news of Tasman's discoveries: Blaeu's *Nova Totius Terrarum Orbis Tabula*, 1648. There is no reference to Terra Australis on this map, but it does include the coastlines of two interesting new geographies: Tasmania and New Zealand. With Tasman's information about Van Diemen's Land (Tasmania) at his disposal, Blaeu was encouraged to give the emerging outline of Australia a proper designate as a land in its own right. Hitherto just annotated with names applicable to the various landfalls on Australia's shores—Eendracht's Land on the mid-west coast, Nuyt's Land to the south, Arnhem's Land to the north—Blaeu now stamped the continent with a single designate, in doing so declaring the landfalls all a part of the one insular mainland: *Hollandia Novia*—or New Holland.¹⁰

This information was, therefore, available to those enterprising enough and curious enough to piece together a cosmography of the southern latitudes. However, it was some time before Blaeu's depiction of New Holland started regularly appearing on other cartographers' maps. It seemed that many were simply uninterested in refining or expanding their knowledge of this area of the globe, and their maps reflect that indifference. That the information was accessible is without doubt, as representations of Tasmania and New Zealand are found on a select few maps, such as Joseph Moxon's 1655 world map (in the style of Edward Wright's map of 1599) where an accomplished rendering of the VOC discoveries to 1644 is evident (see Figure 8.5).

But it was the better part of two decades before Tasman's discoveries became standard features on maps of the southern hemisphere. Even then some cartographers were cavalier in their approach to the geography of New

10 Günter Schilder, "New Cartographical Contributions to the Coastal Exploration of Australia in the Course of the Seventeenth Century," *Imago Mundi* 26 (1972), p. 42.

Holland. Numerous cartographers continued to copy Nicolas Sanson's 1651 map of the world (see Figure 8.6), following his unusual depiction of the VOC discoveries. Nicolas Sanson is widely recognised as the father of the new movement in "scientific cartography" that emerged around the middle of the seventeenth century. This movement saw many map-makers forsake much of the ornamentation and embellishment which made earlier maps so beautiful and so peculiar, in preference for more restrained representations which were self-consciously plain. The geographies were to speak for themselves. Sanson's world map of 1651 is an early archetype of this cartographic vogue; it contains no border decorations whatsoever, and within the two hemispheres there are no cartouches, nor any narrative or symbolic figures—no ships, no sea monsters, no waves, just geographies surrounded by unembellished space.

Yet amidst all the self-conscious plainness, there is Terra Australis, dominating the southern latitudes, even if modestly presented as a coastline and nothing more. There is, as yet, no sign of Tasman's discoveries, though some of the earlier VOC landfalls on Australia's western and southern shores are represented in an oddly-shaped landmass that stands apart from the larger southern continent. Sanson seems to have been unaware of the Dutch knowledge of Arnhem Land or Cape York in Australia's north, though he was certainly aware of the stories of Beach, the northern promontory of his Australian land thus labelled. When Giovanni Battista Nicolosi copied Sanson's map in 1660 (see Figure 8.7), he reproduced without alteration Sanson's southern geographies. He did, however, update the map by including Tasman's discoveries in Tasmania and New Zealand, as well as information about Arnhem's Land in Australia's north.

As can be seen in the detail of Nicolosi's map (see Figure G), the product of his scavenging traces from other maps is his reproduction of a hopeless *mélange* of geographies—a series of fragments conforming to no overarching logic. There is the coastline of Terra Australis, marked both in the east and the west. There is the coastline of New Zealand, a land which is in such proximity to the stretch of Terra Australis labelled Terra d. Quir that it seems they must

ANTIPODES: IN SEARCH OF THE SOUTHERN CONTINENT

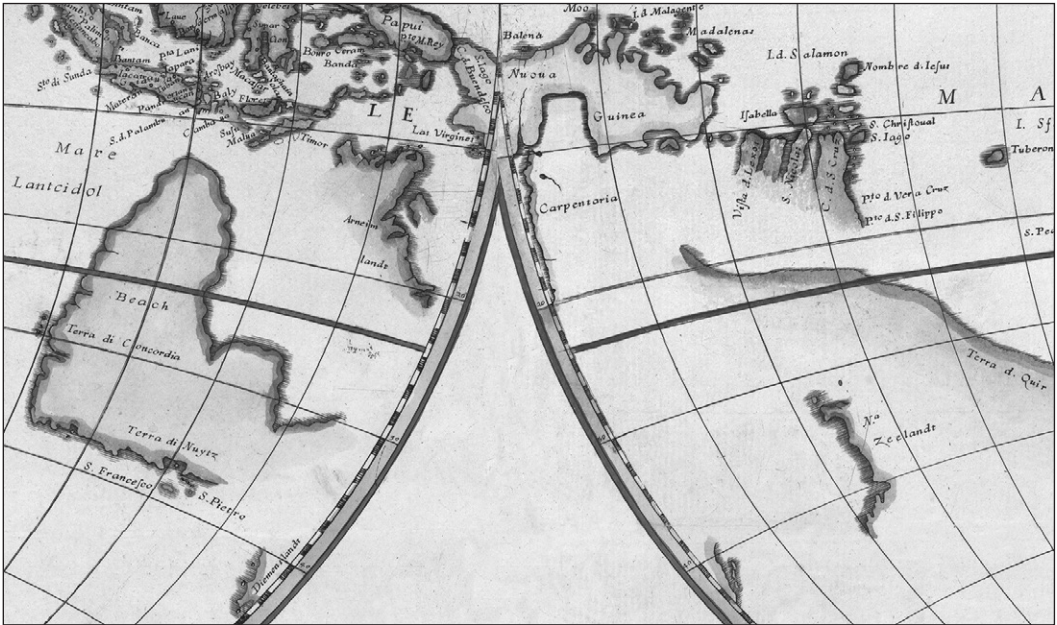


Figure G. Giovanni Battista Nicolosi, world map, 1660, detail. Image courtesy of the National Library of Australia.

enjoy some relationship, but what? Then there is Arnhem's Land, a fragment connected to neither Beach in the west nor Terra Australis in the east. The result is a confused montage of knowledge new and old. It brings to mind Frank Lestringant's description of Renaissance maps:

The map did not reveal the state of the world at a given moment, but a mosaic of data whose chronology might extend over several centuries, the whole being assembled in a floating space. These driftings, at the same time spatial and temporal, conferred a dynamism and a perspective value on the map. On it were depicted not only lands actually known, but also those remaining to be discovered.¹¹

Reconciling all of this data could be a difficult task. Allain Mallet attempted it on a map in 1683 (see Figure 8.8), making a prospective connection between the coast of New Zealand and the Solomon Islands, for good measure

11 Lestringant, *Mapping the Renaissance World*, p. 113.

labelling the entity Terre de Quir. This made poor geographical sense—given the Solomon Islands had always been considered islands—but it satisfied the cosmographic urge to order fragments of geographical knowledge into a holistic understanding of the whole earth. This process showed no sign of abating in the seventeenth century, nor, for that matter, in the eighteenth. So long as knowledge of the southern latitudes was incomplete, the idea of Terra Australis helped people order and visualise the globe.

As for the southern continent supposedly discovered by Quirós—Terre de Quir—it remained a touchstone for many of the cosmographic attempts to reconcile Tasman’s discoveries with the idea of a southern continent. Because New Zealand was proximate to the region of Terra Australis which Quirós had supposedly visited, it remained an open question whether or not New Zealand was in fact a part of the larger southern continent. In 1694 Sir John Narbrough put the issue thus:

Ann. Dom. 1609, 1610. Pedro Fernandez Giros a Portuguese, and Captain Ferdinand de Quir a Spaniard, do both affirm, That they sailed at several times above 800 Leagues together on the Coast of a Southern Continent, until they came to the height of 15 degrees of South Latitude, where they found a very fruitful, pleasant, and populous Country ... This vast Tract of Land perhaps may be one side of, or may belong to, Jansen Tasmen’s Land, Van Diemen’s Land, Zelandia Nova, Hollandia Nova, Carpentaria, and New Guiney ...¹²

Even though Tasman had proved that the mainland now known as New Holland was insular and could not be connected to New Zealand or Terre de Quir, geographical confusion, ignorance and incompetence meant some writers remained unsure as to the relationship between these lands. As readers are told in a tract of 1699: “By *Terra Antarctica*, we understand all those unknown and slenderly discover’d Countries towards the Southern Parts of the Globe; the chief of which do bear the Names of *New Guinea*, *New Zealand*, *New*

12 John Narbrough, *An Account of Several Late Voyages & Discoveries to the South and North* (London: 1694), p. x.

Holland, and (which may comprehend these and all the rest) *Terra Australis incognita*.”¹³ It may have been stripped of a share of its lustre, but the southern continent never lost its cosmographical relevance. The desire to order the chaos of geographical fragments is palpable, with *Terra Australis* the rubric most easily employed to achieve this—though as already indicated, applying a cosmographical logic to the confusion of fragments often failed to make good geographical sense.

Take the map of Australia published by Melchisedech Thevenot in 1663 in his book, *Relations de Divers Voyages Curieux* (see Figure 8.9). Thevenot has copied the details from Blaeu’s 1648 map, including partial coastlines of Tasmania and New Zealand. He has also adopted Blaeu’s label of *Hollandia Nova*, with which he labels what today would be recognised as Western Australia. Further east—amidst a canvas of blank space between the coastlines of Tasmania, New Zealand, and New Guinea—Thevenot has embellished his map with an additional label: “*Terre Australe découverte l’an 1644*”. Just what is intended here is something of a mystery. The explanation that would make the best sense is that Thevenot was labelling the as yet unknown eastern portion of Australia as *Terre Australe*—which would also accommodate the inscription stating *Terre Australe* was discovered in 1644. However, it is all too possible that Thevenot—thoroughly muddled as to the cosmographical possibilities of this jigsaw of coastlines—had no real understanding of Tasman’s expeditions, and figured that New Holland, Tasmania, New Zealand and *Terre de Quir* further east were all connected. If such a scenario seems improbable, then consider Emanuel Bowen’s copy of Thevenot’s map (see Figure 8.10), published in a book by John Campbell in 1744. The inscription above the label of *Terra Australis* states:

The Reader is desired to observe that nothing is marked here but what has been Actually discovered which is the reason of the white Space between

13 Pat Gordon, *Geography Anatomiz’d: Or, the Compleat Geographical Grammar. Being a Short and Exact Analysis of the Whole Body of Modern Geography, after a New and Curious Method* (Cornhill: Robert Morden and Thomas Cockerill, 1699), p. 375.

New Holland and New Zealand, and again between New Zeland and New Guinea which make the South and East sides of *Terra Australis*; It is also requisite to observe that the Country discovered by *Ferdinand de Quiros* lies according to his description on the East side of this Continent directly Opposite to *Carpentaria* which if Attentively considered will add no small weight to the Credit of what he has written about that Country and which has been very rashly as well as very unjustly treated by some Critical Writers as a Fiction; whereas it Appears from this Map of Actual Discoveries, that there is a Country where *Ferdinand de Quiros* says he found one: And if so why not that Country be such a one as he describes?

Still: even with such an explicit geographical account, it is not certain what Bowen had in mind when he inscribed this map. Could it be that Bowen—and, indeed, Thevenot before him—haphazardly applied the label of *Terra Australis* to multiple entities considered insular from one another? Certainly other cartographers and cosmographers did this, as, for example, on *Guillame Del'isle's* maps. Or was Bowen truly confused, believing that all those geographies were somehow connected? If so, then it is ironic that in the text of *John Campbell's* book in which Bowen's map appears, *Campbell* is very clear-minded about the relationship of these different geographies:

On the Whole, therefore, it appears, there are three Continents already tolerably discovered, which point towards the South Pole [Africa, Australia, and South America]; and therefore 'tis very probable there is a fourth, which if there be, it must lie between the Country of *New Zeland*, discovered by *Captain Tasman*, and that Country which was seen by *Captain Sharpe* and *Mr. Wafer* in the South Seas; to which Land therefore, and no other, the Title of *Terra Australis Incognita* properly belongs.¹⁴

14 *John Harris and John Campbell, Navigantium Atque Itinerantium Bibliotheca, or, a Complete Collection of Voyages and Travels ...*, 2 vols., vol. 1 (London: T. Woodward et al., 1744), p. 331.

Hiatus

Campbell's notion that New Zealand may form part of the southern continent—a continent whose best prospects still lay in the South Pacific—made fair geographical sense, and in the eighteenth century there are a number of maps and cosmographies which forward this conception of Terra Australis. But as the seventeenth century drew to a close, and as the discipline of cartography became more and more geared toward visual austerity as well as empirical verifiability, Terra Australis became a much rarer sight on maps. As Denis Cosgrove has explained:

Extraneous spatial calculations and navigational or topographic information might surround the map or occupy open oceanic spaces, but they are not allowed to interfere with the accurate delineation of coasts and islands, while unknown or unexplored spaces are acknowledged as such and left blank rather than exploited for iconographic elaboration. Representations of geographical distributions of phenomena across cartographic space are similarly sober, in the style known to historians of cartography as “plain representation.”¹⁵

It was, ironically, French cartographers (pioneers and leaders in the new style of “plain representation” or “scientific cartography”) who remained most likely to depict conjectural geographies alongside empirical constructs, but for the most part map-makers avoided the embellishment intrinsic to conjectural geography, in line with the new milieu. By the close of the seventeenth century, Terra Australis was no longer an essential artifact of cartographies. What is more, Terra Australis all but disappears from the itineraries of explorers, a rare breed in their own right in the latter half of the seventeenth century. After Tasman's voyages, the Dutch abandoned their quest to further discover the known and unknown South-lands, and there was no other company or nation willing to take up their mantle. So while to the retrospective

15 Denis Cosgrove, *Apollo's Eye: A Cartographic Genealogy of the Earth in the Western Imagination* (Baltimore: Johns Hopkins University Press, 2003), pp. 191–192.

observer it is obvious that the riddle of the Antipodes was on the verge of being answered—requiring perhaps one or two voyages of discovery to probe the eastern coast of Australia, fully reconnoitre the extent of New Zealand, and traverse the 50th parallel—in the wake of Tasman’s voyages exploration languished in a torpor lasting over 100 years. Had interest in Terra Australis run its course? Was Terra Australis no longer the dynamic, vibrant entity that had transfixed generations of interested minds? Had the southern continent become irrelevant?

Not quite. Despite the growing number of sceptics, Terra Australis always had advocates who continued to see value in the prospect of discovery, and cosmography seemed fuller and more comprehensible with the southern continent occupying the south. The real problem was not interest or relevance, but rather the pragmatics of exploration.

The simple reality of the Age of Discovery was that exploration, though undoubtedly the product of curious minds, was inexorably constrained by the fiscal obligations of commercialism; the promise of immediate or future gain was a principal rationalisation for any voyage, thus an exploratory commission depended on expectations of profit. Van Diemen had gotten away with his schedule of expeditions on the auspices of profit-seeking—be it a passage to Chile, or southern lands rich with minerals and tradeable goods, and people with whom to trade. But for all the hype and rumour, no voyage in search of Terra Australis, nor any accidental encounter with the coasts of New Holland, had yielded anything of commercial or even strategic value—while at the same time they had cost dearly in both lives and money. So it was bitter experience that proved there was no profit to be had in the short term, which is why the VOC Directors resolved to forbid any further exploratory expeditions in the wake of Tasman’s efforts.

Thus, as much as people still hoped to find lands of plenty in *Australia del Espiritu Santo* or *Terra Australis*, pursuing established ventures made much better commercial sense. Charles de Brosses—one of the most prominent intellectuals of the late eighteenth century—echoed this understanding in

his comments on the decline in southern voyaging, while also presaging the means by which this torpor would be lifted:

Merchants have nothing in view but a quick return of profit. It is not to be expected from them, that they should engage in great and extensive attempts, where the success is uncertain and the profits at a distance. The first expenses (if not immediately reimbursed) generally check their ardour, and send them back in despair to the ordinary commercial channels of their accustomed trade ...

But, to succeed fully in the design we are now proposing, means more powerful must be employed than those of any private adventurer, or trading company. Some potent Sovereign, who has himself enlarged views, who has able ministers to assist him, whose people are powerful at sea, and who possesses extensive and solid establishments near to the Line, is the only proper person to finish this great undertaking.¹⁶

In the subsequent chapter it will be shown how it did indeed take “some potent Sovereign” (though not necessarily the French sovereign de Brosse had envisaged) to sustain the multiple voyages of discovery needed to discover the truth of Terra Australis. That, however, was still the better part of a century distant. For the meanwhile, it was the Spanish and the Dutch who were best positioned to prosecute any further expeditions for southern lands, with the Dutch entrenched in the East Indies, and the Spanish in South America.¹⁷ These were the two nations who had done the most to discover Terra Australis, but in the late seventeenth and early eighteenth centuries Spain was in political and financial decline, and the Netherlands-based VOC had a sprawling empire to consolidate, while at the same time facing stiff competition from other powers, and declining revenues in the East Indies.

16 Charles de Brosse, *Terra Australis Cognita: Or, Voyages to the Terra Australis, or Southern Hemisphere, During the Sixteenth, Seventeenth, and Eighteenth Centuries ...*, ed. John Callander, 3 vols., vol. 1 (Edinburgh: printed for John Callander, 1768), pp. 7–8.

17 Daniel A. Baugh, “Seapower and Science: The Motives for Pacific Exploration,” in Derek Howse (editor), *Background to Discovery: Pacific Exploration from Dampier to Cook* (Berkeley: University of California Press, 1990), pp. 14–17.

The only other exploratory voyage commissioned by the VOC in this period was more a salvage mission than a voyage of discovery, in 1699. It was led by William de Vlamingh, tasked with touching upon the western coast of Australia to see if they could find any survivors from the *Ridderschap van Holland*, a VOC ship that had gone missing somewhere in the Indian Ocean in 1694, with no further sight of the ship or her crew of some 350.¹⁸

In general, the European powers were too busy waging economic and imperial warfare to bother with voyages of discovery to conjectural lands that had already evaded generations of explorers.¹⁹ As Daniel Baugh argues, South Seas exploration was constrained by:

the conservatism which enveloped Spanish and Dutch policy, concentration of English and French resources on colonial development in North America and the West Indies, and the task of improving trading opportunities in India. Perhaps the most important diversion of all was the peculiarly unsettled condition of seventeenth-century European politics, marked by an intensive yet highly unstable process of state building in the two emerging maritime powers, England and France; for this reason those countries were strongly inclined toward short-term goals. Furthermore, throughout the first half of the eighteenth century all European governments tended to concentrate on the immediate requirements of European rivalry and the balance of power.²⁰

The hiatus in austral exploration did not mean, however, that belief or interest in Terra Australis completely evaporated. In particular, the idea of a southern continent continued to offer cosmographers the promise of cosmographical completeness, a role which was gradually reinforced by the understanding

18 Günter Schilder, *Voyage to the Great South Land: William De Vlamingh 1696–1697*, trans. C. De Heer (Sydney: Royal Australian Historical Society, 1985), pp. 1–3, 166.

19 Glyndwr Williams, *The Expansion of Europe in the Eighteenth Century: Overseas Rivalry, Discovery and Exploitation* (London: Blandford Press, 1966), pp. 5–25; Els M. Jacobs, *Merchant in Asia: The Trade of the Dutch East India Company During the Eighteenth Century* (Leiden: CNWS Publications, 2006), p. 8.

20 Baugh, “Seapower and Science: The Motives for Pacific Exploration,” p. 13.

that there ought to be an equality of land in the two hemispheres, a distant relic of an idea that originated with Mercator. As John Ray wrote in 1692:

In the present terraqueous Globe, the *New World* which lye between the two great Seas, and almost opposite to our Continent, doth in some measure counterpoise the Old, and take off a great part of the advantage, which by reason of its preponderancy, it might other wise have. Moreover, I am of Mr *Brierwood's* Opinion, that there may be, and is a vast Continent toward the Southern Pole opposite to *Europe* and *Asia*, to counterpoise them on that side; nay, I do verily believe, that the Continents and Islands are so proportionably scattered and disposed all the World over, as if not perfectly and exactly, yet very nearly to counterballance one another; so that the Globe cannot falter or reel towards any side ...²¹

Nevertheless, in the late seventeenth century the discourse on Terra Australis was considerably different to the discourse of the past two centuries. The urgency, the excitement and the passion that had characterised the books, petitions and maps of earlier advocates for a southern continent had been replaced, for the most part, by apathy. Terra Australis was no longer lusted after by explorers; it disappeared from many maps, and on those where it did appear it was no longer the arresting central geography of Mercator and his ilk, but more a subsidiary geography—fragmented, faint, often only implied: present with a question mark attached. And in books concerned with history, geography or exploration it was often given short shrift, sometimes dispensed with in a list of geographies, sometimes completely absent. To be sure, Terra Australis did not disappear from the discussions of cosmographers, geographers, explorers and idle fanciers; but it became context rather than focus: it was cosmographical and historical background, it was common knowledge, but it was not the prominent geography of the early seventeenth century.

21 John Ray, *Miscellaneous Discourses Concerning the Dissolution and Changes of the World* (London: Samuel Smith, 1692), pp. 13, 72.

There were, simply, more interesting and more important things going on: the colonisation of the Americas, the fascination with the prospect of a North-West Passage (another equally grand imaginative geography, but one that still seemed attainable), and, above all else, the mercantile contest among the European nations. Sidelined within cosmographical discourse, Terra Australis is ever-present, but not prominent. William Dampier's fabulously popular travelogues produced around the turn of the century are a case in point. Dampier began his maritime wanderings around the globe in 1679. His first book is an account of his adventures aboard the ship, *Cygnnet*, from 1686 till his return to England in 1691. His writings are perhaps best remembered for the interesting detail he provides concerning his time spent on the western coast of Australia. At a couple of points he contextualises his narrative with reference to Terra Australis. For example, Dampier argues for the utility of a sea route round the tip of South America and then utilising the "Easterly Trade Wind" to cross the Pacific, in order to access the Spice Islands. He then digresses:

And to speak my thoughts freely, I believe 'tis owing to the neglect of this easy way that all that vast Tract of *Terra Australis* which bounds the *South Sea* is yet undiscovered: those that cross that Sea seeming to design some business on the *Peruvian* or *Mexican* Coast, and so leaving that at a distance. To confirm which, I shall add what Captain *Davis* told me lately, that after his departure from us at the Haven of *Ria Lexa* ... he went, after several Traverses, to the *Gallapagoes*, and that standing thence Southward for Wind, to bring him about *Terra del Fuego*, in the Lat. of 27 South, about 500 leagues from *Copayapo*, on the Coast of *Chili*, he saw a small sandy Island just by him; and that they saw to the Westward of it a long tract of pretty high Land, tending away toward the North West out of sight. This might probably be the Coast of *Terra Australis Incognita*.²²

22 William Dampier, *A New Voyage Round the World* ... (London: James Knapton et al., 1697), p. 352.

The southern continent remains for Dampier—and consequently his audience—a useful cosmographic tool to help order fragmented geographies. It allows him to contextualise his comments, though the subject of the southern continent is not a focus of Dampier’s attention in its own right. In fact, as Glyndwr Williams argues, had Dampier been asked to explain and make sense of his cosmographic understanding of the southern hemisphere, he most likely could not (what is more, like many of his peers, Dampier was ignorant to the details of Tasman’s 1642 voyage proving New Holland could not be joined to a larger southern continent).²³ His loose understanding and application of the notion of Terra Australis to southern geographies belied a commonplace uncertainty about the relationship of various real and imagined southern geographies. That hardly mattered, though, as order was not dependent upon truth.

Later, Dampier discusses his impending arrival on Australian shores:

Being now clear of all the Islands, we stood off South, intending to touch at *New Holland*, a part of *Terra Australis Incognita*, to see what that Country would afford us.

New Holland is a very large tract of Land. It is not yet determined whether it is an Island or a main Continent; but I am certain that it joyns neither to *Asia*, *Africa*, nor *America* ...²⁴

As a travelogue, Dampier’s work is part geography and part narrative in which the cosmography of Terra Australis plays a fleeting role. He did not talk up the prospects of discovering the still unknown southern continent, but what he did do was make New Holland real by giving his readers detail, colour, story—all the things lacking from the dry cartographic representations of the VOC discoveries.²⁵ By presenting New Holland as a place rather than just an

23 Glyndwr Williams, “New Holland to New South Wales: The English Approaches,” in Glyndwr Williams and Alan Frost (editors), *Terra Australis to Australia* (Melbourne: Oxford University Press, 1988), p. 129.

24 Dampier, *A New Voyage Round the World*, pp. 461, 463.

25 Williams, *The Great South Sea*, p. 131.

abstract concept, he helped restore interest in the Pacific: he made southern geographies seem real again—attainable, even.

So in Dampier's travelogues Terra Australis is present, but not prominent. The same is true of a multitude of novels set in a fictional southern continent, published by English, Dutch and French authors throughout the late seventeenth and eighteenth centuries. Nearly all of these novels are thinly disguised political polemics. Terra Australis proves the perfect setting because it captures both the real and the fantastic: it is a geography unknown but certainly within the realm of possibility, which means that a story of shipwreck and adventure on its shores provides the requisite dose of realism, with the latitude to send the stories' protagonists on fantastic adventures.²⁶ Aping the vogue for travelogues, many of these novels profess that they are true accounts of maritime mishaps. Denis Vairasse d'Allais wrote in his *History of the Sevarites* (1675):

Among all remote Countries, there is none so vast, and so little known, as the third Continent, commonly called, *Terra Australis*. It is true, Geographers give some small and unperfect descriptions of it, but it is with little knowledge and certainty; and most of their draughts may be suspected, and look'd upon, as imaginary and fictitious. Sure it is, that there is such a Continent; many have seen it, and even landed there, but few durst venture far in it, if any there were; and I do not think that any body hath made any true description of it ... This History will supply that defect.²⁷

“This History” is, of course, fiction. Thus it prompts the question raised by Oskar Spate: “What have all these wild romancings to do with Pacific History?” Simply, they reinforce interest in the unknown and little-known regions of the southern latitudes. As Spate notes,

26 See David Fausett, *Images of the Antipodes in the Eighteenth Century: A Study in Stereotyping* (Amsterdam: Rodopi, 1995); David Fausett, *Writing the New World: Imaginary Voyages and Utopias of the Great Southern Land* (New York: Syracuse University Press, 1993); Neil Rennie, *Far-Fetched Facts: The Literature of Travel and the Idea of the South Seas* (Oxford: Clarendon Press, 1995); Geoffroy Atkinson, *The Extraordinary Voyage in French Literature: Before 1700*, 2 vols., vol. 1 (New York: Burt Franklin, 1920).

27 Denis Vairasse d' Allais, *The History of the Sevarites or Sevarambi: A Nation Inhabiting Part of the Third Continent Commonly Called Terrae Australes Incognitae* (London: Henry Brome, 1675), pp. ii–vi.

they were part of the critical thinking of the century which in so many fields—science, economics, industry, politics—laid the foundations of our modern world. Side by side with more sober geographical speculations, they were a part of what Terra Australis, the South Sea, the Pacific meant in the minds of men ill-informed indeed, but eager to grasp its reality or to make of it an ideality.²⁸

While Terra Australis was very much a diminished version of the Mercatorian archetype, and while interest would never again reach the fever pitch of the preceding century of activity, the Pacific generally and Terra Australis in particular continued to exercise the imaginations of not just novelists, but scholars, entrepreneurs and mariners.

For instance, Woodes Rogers was a privateer who never quite reached the fame of his contemporary, William Dampier. He wrote an account of a privateering voyage that saw him circumnavigate the globe between 1708 and 1711. It seemed logical to Rogers that the great expanse of the Pacific was broken up by more land than had yet been discovered:

I have often admir'd that no considerable Discoveries have yet been made in South Latitude from *America* to the *East Indies* ... I give this Hint to encourage our *South Sea Company*, or others, to go upon some Discovery that way, where for ought we know they may find a better Country than any yet discover'd, there being a vast surface of the Sea from the Equinox to the South Pole of at least 2000 Leagues in Longitude that has hitherto been little regarded, tho' it be agreeable to Reason, that there must be a Body of Land about the South Pole, to counterpoise those vast Countries about the North Pole. This I suppose to be the Reason why our antient Geographers mention'd a *Terra Australis Incognita*, tho' very little of it has been seen by anybody.²⁹

28 O.H.K. Spate, *The Pacific since Magellan, Volume III: Paradise Found and Lost* (London: Routledge, 1988), p. 85.

29 Woodes Rogers, *A Cruising Voyage Round the World: First to the South-Seas, Thence to the East-Indies, and Homewards by the Cape of Good Hope. Begun in 1708, and Finished in 1711* (London: A. Bell, 1726), pp. 324–325.

However, a general interest in the still mysterious, still largely unknown Pacific did not translate into a renewed flurry of activity. The romance of unexplored regions and undiscovered geographies was no match for cold pragmatism. Exploration for the southern continent just did not meet the commercial imperatives driving the decision-making of companies and states alike. Though the Age of Discovery had not yet run its course, this period—the late seventeenth and early eighteenth centuries—was the nadir for maritime exploration.³⁰

But though commercial pragmatism was the order of the day, there are still a few glimpses of the interest which Terra Australis could generate. The Dutch made one last attempt on the fabled continent. This time, however, it was an expedition sponsored by the WIC whose last voyage with Terra Australis in mind had been launched in 1642 under Hendrik Brouwer, 79 years earlier. There had been at least one Dutchman with his sights set on Terra Australis since then. Arend Roggeveen had been ambitious enough to gain a charter in 1675 that authorised exploration and trade in the unknown regions of the South Seas, but his ambition had not been matched by investor dollars, and his scheme was abandoned, though not forgotten. In 1722, with the financial support of the WIC, an expedition inspired by Arend Roggeveen finally did set out to discover the unknown lands of the South Seas—led by Arend's son, Jacob.

The plan for Jacob Roggeveen's expedition was elemental. Instead of hugging the American coast after rounding South America and making for the equatorial latitudes, he would strike out into the Pacific after making the Chilean coast. If there was a southern continent in the temperate latitudes of the South Pacific, he would find it. And Roggeveen expected that find it he would, based on reports of land or indicators of land contained in accounts of expeditions by Willem Schouten, William Dampier, and Lionel Wafer. Roggeveen takes up the story as he approaches the never-before-seen Easter Island [Paasch meaning Easter in the original Dutch]:

30 Baugh, "Seapower and Science: The Motives for Pacific Exploration," pp. 1–2.

But when we had approached this land to a small distance off, we saw clearly that the description of the sandy and low island (both by Capn. William Dampier, following the account and testimony of Capn. Davis, and by the diarist Lionel Wafer, whose journal of this and other discoveries the said Dampier by printing has made world-renowned, and included as a distinguished adornment in his own book, comprising all his land and sea journeys) was not in the least similar to our observation, further, that it likewise could not be that land that the said discoverers testify had been seen 14 to 16 miles from them, and stretched beyond their sight, being a succession of high land, and concerning which the said Dampier judges and deems it to be the point of the unknown Southland ... Therefore it is to be concluded easily from the above that this discovered Paaschland will be another land, which lies further east than that land which is one of the reasons for our expedition, or else the discoverers in their descriptions, both verbal and written, could very easily have been convinced by falsehood.³¹

Roggeveen seems to have had absolute faith in the accounts of his predecessors. When he departed Easter Island he was quite resolute that the southern continent (or at least a land that presented the aspect of a mainland) would shortly be found, as described: “Therefore gave signal to our consorts to change course and steer west, deciding that our hope would shortly be satisfied by a good discovery with a high and widely extending region of land.”³²

Reading Roggeveen’s journal, the impression of earnestness is striking. He approaches the information provided by Schouten and Davis (through Dampier and Wafer) with unquestioning good faith; when his expectations turn to disappointment he feels betrayed by his predecessors. After a week of westing with no sign of Terra Australis and no sign of land that could have been so mistaken, Roggeveen is incensed:

31 Jacob Roggeveen, *The Journal of Jacob Roggeveen*, ed. Andrew Sharp (Oxford: Clarendon Press, 1970), pp. 91–93.

32 Roggeveen, *The Journal of Jacob Roggeveen*, p. 106.

After the dispersal of the meeting, at noon the course was set north-west, being then clear, fresh water, and the content of which resolution contains the following. But before coming to this, I must in a few words observe that one must be greatly astonished at finding people who contrive to become famous through the general publication of their writings in which they seek to establish embellished lies as clear truth ...; for since we have discovered no land from Copayapo [a settlement in Chile] westward for a distance of 658 miles, where we are today, except the Paasch Island, it accordingly follows that this is the coast of the unknown Southland according to the opinion of the said Dampier, depending on the witness of Davis its discoverer, and stretched north-west out of sight, which however the aforesaid Wafer limits to 14 to 16 miles, but both testifying that it was high land. Now when the narration is compared with our observation, nothing else remains to be said but that these three (for they were English) were as much robbers of the truth as of the goods of the Spaniards.³³

Having put to proof Davis's Land and found it wanting, Roggeveen continued his voyage, subsequently dispatching another evidential trace which had been held as a possible indicator of a mainland in the southern Pacific:

For as our voyage in this sea comes to an end through the discovery of the reason which had moved Capn. Willem Cornelissen Schouten to conclude that land must be to the south, because he sailed in level and smooth water without hollow swells from the south as on the previous days, which reason lies in the meeting of all these islands or reefs which we to our great danger and harm have discovered ...³⁴

So yet another expedition for Terra Australis had ended in failure, Roggeveen indignant that the deception of a southern continent had lured him into a fruitless voyage. Yet, perversely, Roggeveen's own expedition would become

33 Roggeveen, *The Journal of Jacob Roggeveen*, p. 108.

34 Roggeveen, *The Journal of Jacob Roggeveen*, pp. 140–141.

grist to the mill for advocates of Terra Australis. With his original journal lost until 1836, it allowed second-hand accounts to make of the voyage what they would. The best known account was by Carl Friederich Behren (first published in Dutch in 1732). Though Roggeveen had completely given up on Terra Australis, his discovery of the Tuamotu islands was soon bastardised to fit a familiar mould, as seen here in the account by Charles de Brosses:

They soon after saw two other islands of very large extent, one of which they called *Tienhoven*, and the other *Groninguen*; which last, many of their officers were clearly of opinion, was no island, but the great south continent they were sent to discover; with respect to which, however, our author suspends his judgment, because the proofs on either side seemed to him convincing. As for the island of *Tienhoven*, it appeared to be a rich and beautiful country, moderately high, the meadows exceedingly green, and within-land adorned with trees. They coasted along the shore for a whole day, without coming to the end of it. They observed, however, that it extended in the form of a semicircle towards the island of *Groninguen*; so that after all, it is very probable, that these two countries, that were at first taken for islands, may, in reality, be lands contiguous to each other, and both of them part of the *Terra Australis incognita* ...³⁵

Passed through the filter of knowledge, data all too often becomes amenable to expectation. The truth, it seems, was not nearly so easily attained as empiricists like Roggeveen would have it.

Conclusion

Terra Australis was but a mirage on the receding horizon, but there was no doubting the geographical entity had life in it yet. Though Tasman's voyage permanently retired the southern continent in its Mercatorian guise, changes to its prospective bounds did not determine the more fundamental ontological question: the question of existence. It was not just that Terra Australis was an

35 De Brosses and Callander, *Terra Australis Incognita*, vol. 1, pp. 614–615.

interesting or a valuable geography, or simply a historical artifact that people had become accustomed to, though it was all those things. It was that Terra Australis remained a palimpsest: a dynamic vehicle that was malleable to the needs and expectations of each succeeding generation, whatever their whim or need. So as the stocks of Terra Australis shrank, most authorities pushed the southern continent to the sidelines of their cosmographies, where it added context, but did not impose upon the new empiricism. When a backdrop for fantasies was needed, Terra Australis was, again, the context to another subject's story. But then, as interest in the South Seas began to revive, Terra Australis could be expanded into the void of knowledge which still dominated the southern Pacific. The southern continent persisted because it was still useful.

Still useful—and still elusive. The riddle of the Antipodes is on the verge of being answered, and yet the final few voyages of discovery required to unravel the cosmographic puzzle of the southern latitudes are delayed by a century-long lull in exploration. In a way, it was the very Dutch expeditions that had nearly pursued Terra Australis to its confutation which also led to a stay of execution for this most enduring of geographical fictions. For, though Terra Australis remained a geography of some promise—interesting, valuable, desirable, and so still well worth believing in—the question was, did it make good sense to fund any further commercial or state expeditions to discover Terra Australis, when so many voyages had ended in disappointment? Fortunes had been spent, and many lives lost, pursuing the yet-elusive Terra Australis. It was that perpetual elusiveness which ensured that this geography was able to prosper, for a while, at least, predominantly in the minds of the geographically curious, free from the continual encroachments of new empirical data.

Chapter Nine

AN ICY END

It is very certain that the discovery of Terra Australis Incognita is considered, by many wise and knowing people, as a kind of philosopher's stone, perpetual motion, or, in plain English, as a chimera, fit only to take up the empty brains of wild projectors. Yet there seems to be no sufficient reason, why such as are competent judges of the matter in dispute, should decide, peremptorily, that there is no such country: or, if there be, that it is not worth the finding. These sort of hasty conclusions are extremely fatal to science in general and to the art of navigation in particular.

*Charles de Brosse*¹

If I have failed in discovering a Continent it is because it does not exist ...

*James Cook, letter, 22 March 1775*²

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- 1 Charles de Brosse, *Terra Australis Cognita: Or, Voyages to the Terra Australis, or Southern Hemisphere, During the Sixteenth, Seventeenth, and Eighteenth Centuries ...*, ed. John Callander, 3 vols., vol. 3 (Edinburgh: printed for Charles de Brosse, 1768), p. 611.
 - 2 James Cook, *The Journal of Captain James Cook on His Voyages of Discovery, Volume 2: The Voyage of the Resolution and Adventure, 1772–1775*, ed. J.C. Beaglehole, 4 vols., vol. 2 (Cambridge: Hakluyt Society, 1961), p. 691.

It is pliable fragments of empirical data—incomplete surveys of a coast, charts of a geography set amidst the unknown, rumours of lands seen and places visited—that vivify imaginative geographies. But when surveys are made complete, new charts are contextualised amidst known coasts, and rumours are replaced by verifiable reports, those fragments of empirical data become part of a matrix of geographical knowledge that has ever less place and use for geographical entities carved from the imagination. And, so, all imaginative geographies eventually wither from a thousand empirical cuts. By the end of this chapter Terra Australis will prove to be no exception, cut down to, at best, a frigid and seemingly worthless Antarctic island by James Cook, who proved that no land worthy of the name, Terra Australis, could exist. Cook's exploits are, of course, well-worn territory, his voyages universally recognised as exploratory marvels. But there is more to dwell on than just Cook and his competence as a navigator and commander; there is the fact that there was still a conception of a southern continent of sufficient currency to compel a man of Cook's abilities to set out to test its existence. Indeed, perhaps the greater marvel is the story of how the stocks of an ailing Terra Australis were revived in the eighteenth century, to the point where more voyages with designs on the southern continent were launched between 1764 and 1772 than had been launched in the entire preceding century. Having the means to pursue these voyages was, of course, one thing, but having the desire to seek out a geographical entity that had brought nothing but disappointment to its would-be discoverers was another thing entirely. Just how the southern continent regained authority and with that authority traction in the minds of the ambitious and curious is explained by the intersection of multiple events and developments. There was one factor, however, that played a singularly important role: the evidence of ice. Over the years, explorers may not have found the land they expected, but more than a few did discover icebergs in the southern latitudes. To your average sailor, as to your average geographer, this could only mean one thing: land, and lots of it.

Gonneville's Land and Bouvet's Islands of Ice

In 1503 a fleet of two ships led by the Frenchman Binot Paulmier de Gonneville was blown off course by storms, somewhere along the route to the Cape of Good Hope. Whether he was blown west, east, south, or even north around the cape into the Indian Ocean, no one really knows, though most writers think Gonneville ended up on the shores of Brazil. Wherever it was he washed up, six months were spent in friendly relations with the local inhabitants—so friendly, in fact, that Essomeric, son of the region's king, chose to accompany the men on their return to France. In a stroke of good luck for seventeenth- and eighteenth-century cosmographers, but appallingly bad luck for Gonneville, the expedition's records were lost along with Gonneville's flagship when attacked by pirates in the English Channel. Geographers had no way of knowing what land—what continent, even—Gonneville had stumbled across. Thus Gonneville's Land was thrown in with the cache of evidential traces available to enterprising cosmographers and cartographers in thrall of the southern continent. For the better part of two centuries, it was a piece of evidence little valued. Then in 1663 Jean Paulmier de Courtonne, a distant descendant of Essomeric and Gonneville, published an account of Gonneville's voyage. Lacking any coordinates to help identify Gonneville's (or more rightly, Essomeric's) Land, Paulmier's account perpetuated the conception that Gonneville had landed on the shores of the southern continent.³ That meant that somewhere south of Africa there was a potentially valuable land—the “third world” coveted by French speculators since the late sixteenth century—that the French, as original discoverers, could claim as their own.

The problem was that there was no data that could help identify the region of this discovery—the records were so ambiguous as to be useless. Naturally, this was no impediment to speculation. Coupled with the growing body of French novels set in *terres australes*, the lure of Gonneville's Land was enough to keep the idea of southern lands fresh in the geographical imagination,

3 John Dunmore, *French Explorers in the Pacific* (Oxford: Clarendon Press, 1965), pp. 4–6.

and eventually inspire a new generation of explorers. Oskar Spate records a number of proposals by Frenchmen with Gonneville's Land in mind, but the first explorer to receive a commission and sail into the waters of the southern hemisphere in search of the lost continent was Lozier de Bouvet. Though his original proposals had been rejected, in 1738 Bouvet was commissioned by the French India Company to seek out Gonneville's Land, a land identified with the southern continent. Lagging pitifully behind her mercantile and imperial rivals, France was sorely in need of a way station along the route to the Indian and Pacific spheres of commerce, and a base in the southern Indian Ocean would provide just that. Bouvet was to sail in latitudes as low as 55°S, traversing the seas where the waters of the Atlantic and Indian Oceans meet, south of Africa.⁴

It can be considered something of a miracle that Bouvet did in fact discover land, on 1 January 1739 chancing upon an islandic mote that happens to be the most remote place on earth, a cool 1000 miles from its closest terrestrial neighbour. In discovering this island Bouvet had to deal with pack ice and the continual threat of icebergs, as well as an almost perpetual fog. The conditions made an approach—let alone a landing—impossible, and so when Bouvet departed the waters off the land dubbed Cape Circumcision (and now Bouvet Island) he did so ill-informed, but nevertheless believing he had encountered a promontory of the southern continent (see Figure 9.1 for a depiction of the routes sailed by Bouvet and other explorers discussed in this chapter). His evidence was a combination of the sighting of the cape, and the presence of vast quantities of floating ice—ice, it was believed, that could only form from great rivers or estuaries of frozen freshwater (more on that in a moment). However, Bouvet's superiors were not sufficiently optimistic to authorise another expedition to prosecute the reconnaissance of the coasts believed to lie beyond the fog and ice that shrouded Cape Circumcision.

4 O.H.K. Spate, "De Lozier Bouvet and Mercantilist Expansion in the Pacific in 1740," in John Parker (editor), *Merchants and Scholars: Essays in the History of Exploration and Trade* (Minneapolis: University of Minnesota Press, 1965), pp. 224–225; John Dunmore, *Visions and Realities: France in the Pacific 1695–1995* (Waikanae: Heritage Press, 1997), p. 60.

Indeed, after Bouvet's 1738 voyage of discovery, the better part of three decades passed without another exploratory venture to the unknown southern latitudes. Imperial rivalries, mercantile contest, and the struggle for survival between the various commercial companies plying the Indian, Pacific and Atlantic waters meant that voyages of exploration were assessed as risk—the sort of risk that could not be indulged. Even if a commercial venture for the *terres australes* had been able to secure financial backing, in the 1740s and 50s the prospects for receiving state approval for such a voyage narrowed from slim to none, with authorities careful to avoid escalating imperial tensions between France, England and Spain by intruding into another nation's claimed sovereign waters. In 1756 those frictions flamed into the Seven Years War; France and Spain were pitted against Britain and Portugal, with various other nations dragged into the mess.

Thus, explorers could but bide their time. Yet despite the hiatus in exploration, with the passage of time interest in southern lands grew. Fictional travelogues to austral utopias and dystopias continued to find a market, as did their non-fiction counterparts. George Anson's account of his 1743 privateering voyage into the Pacific, *A Voyage Round the World*, became a best-seller. While Anson added nothing of significance to geographical knowledge, books and tales like his helped maintain interest in the Pacific. So too did the occasional map which provided a speculative glimpse of the southern continent, like John Bowles' 1740 world map, *A Map of the World or Terrestrial Globe in Two Planispheres* (see Figure 9.2).⁵

On Bowles' map the familiar sight of a coastline in the southern Pacific is evident, well south of the unmarked routes of explorers who had found no signs of a southern continent in the latitudes near the equator. In the southern Atlantic and Indian Oceans there is a second fragment of a southern coastline, reminiscent of Mercator's sixteenth-century archetype. One last detail—an annotation—completes the representation:

5 In the eighteenth century most world maps did not depict a southern continent, but many did contribute to the continued belief in such an entity through their annotation of the Antarctic latitudes with the label "Terres Australes" or "Terres Antarctiques", or similar.

Because of the much greater Cold and the Seas being more Frozen towards y^c South than y^c North Pole, discoveries have not been made so far to y^c Southward as to y^c Northward, but open Seas are never known to be Frozen only y^c Borders near y^c Land, thro' y^c great quantity of fresh water brought from the Land whence it may Reasonably be concluded that there lies much more land tho' less Discover'd about the South Pole than the North Pole that more Discoveries have been made to y^c Northward proceeds likewise from y^c Discoverers Living nearest that Pole.

This annotation is drawn directly, almost word for word, from John Senex's earlier world map of 1725, *A Map of the World*. Yet as had become the norm for world maps—with cartography increasingly concerned with plain representation and empirically verifiable geographies—there is no southern continent depicted in Senex's map. Depiction was dependent upon discovery, which was yet to happen. However, it seemed a sure thing that land would be found to exist, for, by Senex's logic, encounters with ice in the southern latitudes constituted proof that a major landmass must be nearby. By that reckoning, Bouvet's extensive encounters with icebergs in the southern Atlantic Ocean might have added to an emerging picture of Antarctic frigidity, but by the science of the day they also loomed as proof positive that a southern continent must exist.

The More Ice, the More Land

The equation is this: the more land the more ice, hence the more ice the more land. This seemingly straightforward proposition is best known through the work of the eighteenth-century French intellectual, Charles de Brosses:

the greater extent of coast there is, the more ice there will be; and, on the other hand, the more ice we find at sea, the more land we may expect to discover. The sea never freezes but in bays, and along the coasts, but our best navigators assure us that it does not freeze far out at sea, even in the neighbourhood of the Poles. The agitation, depth, and saltness of the water preserves it from this concretion, which takes hold of it

near the shores, where it is mixed with a great quantity of fresh water, the produce of the inland rivers. Now the existence of these large rivers necessarily supposes a continent through which they pass, and where they are formed.⁶

This understanding of the way in which ice forms held sway for much of the eighteenth century. Georges le Clerc explained that even if “against all probability” it was cold enough at the Pole to freeze over the surface of the sea—and observations had already shown that seawater could remain liquid at sub-zero temperatures—“it is still not conceivable how these enormous floating mountains of ice could be formed, if they did not find a fixed point against land, from whence afterwards they were loosened by the heat of the sun.”⁷

Thus, when theoretical geographer Philippe Buache turned his attention to the question of southern lands, it was ice which dominated his understanding of the southern latitudes. As Buache explains in a 1763 essay reflecting on his vision of the southern hemisphere, he was struck by

those great floating islands of ice, which were found near lat. 52. by *Sharpe* and *Davis*, and in near 300 degrees of longitude; by Mr *Halley* in near 345 degrees; and by *Bouvet*, tween the 7th and 53rd degree of longitude, in the month of *June*, in that climate; phænomena which there was then no reason to expect: The description which *Halley* has given of the floating islands, that he discovered before him, no less than three hundred feet high, and three leagues in circumference ...⁸

Given the quantity of ice encountered by Bouvet in particular (see Figure H), Buache was confident in two things. First:

6 De Brosses and Callander, *Terra Australis Incognita*, pp. 35–38.

7 Georges Louis LeClerc and Comte de Buffon, *Barr's Buffon. Buffon's Natural History, Containing a Theory of the Earth, a General History of Man, or the Brute Creation, and of Vegetables, Minerals, &c.*, 10 vols., vol. 1 (London: J.S. Barr, 1792 [original 1749]), p. 167.

8 Philippe Buache, “Geographical and Physical Observations, Including a Theory of the Antarctic Regions, and the Frozen Sea which They Are Supposed to Contain, According to the Hypothesis of the Celebrated M. Buache,” *Gentleman's Magazine*, January 1763, p. 33.

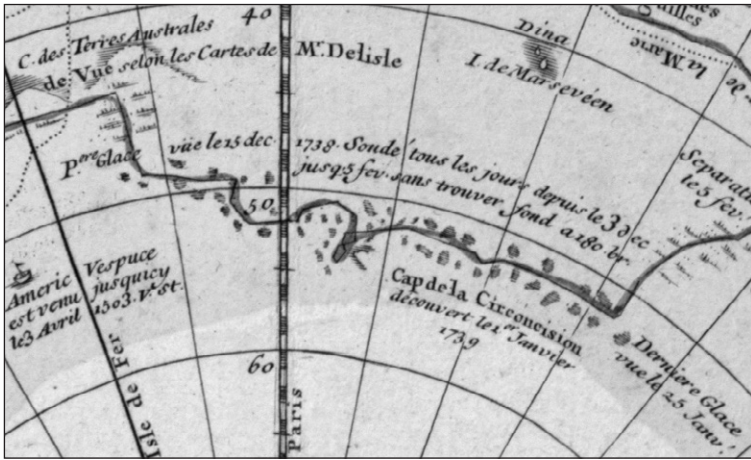


Figure H. Philippe Buache, *Carte des Terres Australes*, 1739, detail. To the east and the west of “Cap de la Circoncision” Buache has charted what looks like an island chain, which is in fact a chain of icebergs, based on the reports of Bouvet. Image courtesy of the National Library of Australia.

the promontories of ice just mentioned, can be produced only by rivers which have a long course, at least 400 leagues, like those of *Siberia*.

To produce such rivers, sufficiently copious to form the number and magnitude of the islands of ice which have been found in latitude 52, there must necessarily be, as there is to the North, a vast tract, which serves as the basin of such rivers; from which I infer, that the Antarctic regions are not less extensive than I have represented them, and that I can be mistaken only in the bearings of the coast.⁹

Second, Buache figured that if great volumes of ice had been seen by Bouvet, and smaller quantities had been seen by Sharpe and Davis on the other side of the Antarctic Pole, there must be a huge estuary of ice in the middle of the Antarctic lands that opened out toward Africa on one side and America on the other. This meant that the prospective southern continent must be divided in two, separated by a huge frozen Antarctic sea fed by enormous rivers flowing from high mountain chains in the Antarctic lands (see Figure 9.3). Yet though ice dominates Buache’s conception of southern lands, there was still

⁹ Buache, “Geographical and Physical Observations,” p. 33.

sufficient room for sanguine hopes of fine and fertile country and climate, and Buache discusses various traces of empirical data that convinces him that this must be so. Buache was singular in his specific vision of the southern continent, but though often mocked for his hypothetical geography in modern times, he articulated the fundamental belief of his time: there was too much ice in the southern hemisphere for there not to exist land—and probably a continent.

Eighteenth-century science was wrong about ice being unable to form from seawater. However, it was right about icebergs, which calve either from glaciers—frozen rivers or rivers of ice—or from an ice shelf. Ice shelves may protrude many kilometres into the ocean, but they are fed by an ice sheet formed from compacted snow which flows down from solid land and into the ocean. An ice shelf can be up to one kilometre thick. So, icebergs did indicate the presence of land, though Buache was wrong about the quantity of land it necessarily implied. Because he figured that it was rivers feeding the glaciers and frozen estuaries, given the quantity of ice encountered he figured there must be many rivers calving ice, which implied a huge expanse of land forming the catchment to the rivers. Moreover, the latitudes at which Buache envisioned the southern continent, 50–60°S, were the same latitudes in the North as one would find Britain, Germany, and Newfoundland in the Americas. The imagined continent was a hopeless fiction, but given the evidence of ice, the theory of equipoisure (discussed below), various empirical fragments, and a two-thousand-year history, the conjecture of Buache and others was not as outlandish as a brief glance at a map might suggest.

Reviving Equipoisure

As the last vestiges of medieval cosmology were repudiated in the eighteenth century, advocates of a southern continent could also draw upon a purely theoretical argument to support their conjectures. The following is a translation of Buache on his 1746 map, *Carte du Globe Terrestre*:

One can still observe in the Planisphere that the Great Continents are all found on the same side of the globe, they occupy about $2/3^{\text{rds}}$ of the space ... Scientists must explain why this apparent inequality of the solid parts of our globe does not produce any movement ... in the rotation of the Earth on our axis.

With these words, Buache becomes one of the first thinkers to articulate a theory of equipoise explicitly in the context of a rotating earth. It is interesting stuff, all the more so when read in its proper context as an annotation to Buache's hemispheric map. The unique quirk of that map was that it superimposed the lands of the southern hemisphere upon a map of the northern hemisphere (see Figure 9.4). The result was a veritable pictorial essay: in just a glance it is plain to see that there is a region as large as all of Asia and Europe which has no known equivalent in the southern hemisphere. If the earth was to maintain its balance as it rotated about its axis, then surely a counterpoise to these northern lands—a great southern continent—must exist in the unknown latitudes of the south. In this iteration equipoise was set to become yet another scholarly justification for belief in southern lands, though it would never become the central tenet underlying belief, as has long been mistakenly assumed.

Without doubt the most influential advocate of the theory of equipoise was Charles de Brosses. In 1756 de Brosses published his *Histoire des Navigations aux Terres Australes*—the *Principia Mathematica* of southern hemispheric exploration history.¹⁰ It was an authoritative, scholarly treatise that began with a compelling plea to his countrymen to rally behind the pursuit of the undiscovered southern lands, whether one continent or a multitude of mainlands and islands, both for the benefit of France and science in general. That such lands existed, he could prove by reason and logic: “in this vast tract, it is impossible but there must be, to the South of *Asia*, some immense continent to keep our globe in equilibrio during its

10 Charles de Brosses, *Histoire Des Navigations Aux Terres Australes* ... (Paris: 1756).

rotation, by serving as a counterpoise to the map of Northern *Asia*.¹¹ He then elaborated:

Whoever examines the two hemispheres of the globe divided horizontally, that is, by the Equator (as they should always be) and not by the Meridian, must be struck in observing so much land in the one hemisphere, and so little in the other; especially, as he knows that the weight of earth is, to that of sea-water, nearly as five to three; the weight of the cubic-foot of sea-water being 73 pounds and an half, while the medium of different earths is about 120 ... In fact, of twenty-five millions of square leagues on the surface of the whole globe, the ancient continent occupies but five, or one fifth of the whole. It is unequally balanced from E. to W. by the map of the two *Americas*, making but one twelfth of the whole. But these two masses of earth lie so far to the *Artick* side, that perhaps not one tenth of the heaviest, and about one third of the least lies to the South of the Line. Thus the inequality of weight from S. to N. must be very great ... Hence the careful observation of the known parts of the earth tends much to confirm the hypothesis of some great counterpoise placed towards the South, especially under the first meridian; that is, betwixt 180 and 230 degrees of longitude ...¹²

If de Broses was right, then lands of unappreciated strategic and commercial opportunity awaited discovery by whichever “potent Sovereign” possessed the necessary vision to grasp this opportunity.¹³ There were but two viable candidates: France and Britain.

The Resumption of Exploration

The scientific arguments about ice, and to a lesser extent those concerning balance, aligned with the centuries-old traditions of geographical lore, ensuring that the conjecture of southern lands retained enough credibility to once

11 de Broses and Callander, *Terra Australis Incognita*, p. 8.

12 de Broses and Callander, *Terra Australis Incognita*, pp. 8–10.

13 de Broses and Callander, *Terra Australis Incognita*, p. 7.

again exercise the imaginations of adventurers and statesmen. It is tempting to suggest that some sort of noble Enlightenment ethos of knowledge-seeking also played a part in the resurgence of interest in Terra Australis, especially given how prominently science and scientists feature in the activities and the accounts of the famous expeditions of the 1760s and 1770s. But no matter how serious the actual scientists, and no matter how significant and valued the knowledge they gathered on the voyages, the agendas of naturalists, astronomers and other scientists were almost always secondary to imperial and commercial motives. Science was respected as a legitimate pursuit, but it also offered a pretext to less disinterested objectives. Indeed, when France and Britain once again took up the pursuit of southern lands upon the cessation of the Seven Years War, the various expeditions launched were, at least in part, state sponsored rather than purely commercial ventures commissioned with a clear eye on strategic advantages to be gained from discovering and claiming lands in southern waters.

The Earl of Egmont was one man convinced of the existence of a southern continent. Seeing an opportunity to upstage Britain's imperial rivals, the Earl, as First Lord of the Admiralty, resumed British exploration in 1764 with an expedition to be led by John Byron. His instructions outline three potential objectives: the strategically important Falkland Islands, the still undiscovered North-West Passage across northern America, and Terra Australis in the southern Atlantic. Addressing the latter, Byron's instructions state:

Whereas there is reason to believe that Lands and Islands of great extent hitherto unvisited by any European Power may be found in the Atlantick Ocean between the Cape of Good Hope and the Magellanick Streight, within Latitudes convenient for Navigation ...¹⁴

Unusually, Byron's instructions contemplate the southern Atlantic region of the putative southern continent that had historically garnered the least attention of geographers, entrepreneurs, and, consequently, explorers. It is no surprise

14 John Byron, *Byron's Journal of His Circumnavigation 1764–1766*, ed. Robert E. Gallagher (Cambridge: Hakluyt Society, 1964), p. 3.

that Byron did not bother to prosecute the search, deciding his time was better spent in the Pacific.

Indeed, it seems that Byron's own expectations for southern lands were focused on the southern Pacific, born out in comments made in his journal after discovering the northern islands of the Tuamotu archipelago in the South Pacific:

Sunday June 16th. Wind East with a mountainous Swell from the S^oward. For a day or two before we made the Islands of Disappointment till this day we had entirely lost that great Swell & for some time before we first made the Land we saw vast Flocks of Birds which we observed towards Evening always flew away to the S^oward. This is a convincing proof to me that there is Land that way, & had not the Winds failed me in the higher Latitudes as mentioned before, I make no doubt but I should have fell in with it, & in all probability made the discovery of the S^o Continent; Indeed if it had not been for the Sickness in both Ships, I would still have attempted it by hauling away to the S^oward immediately from those Islands. I remarked before that all the Islands we have seen are well peopled; Now if there are not a Chain of Islands reaching to the Continent how can we account for these Peoples being here, situated we may say in the middle of this vast Southern Ocean.¹⁵

If Byron really believed he was on the lee of Terra Australi it also means he was willing to forsake what loomed as the greatest discovery since 1492 because the winds were indifferent and he counted a number of sick men among his crew. It may be that, having largely ignored his instructions and ultimately made no discoveries of any great significance, it seemed more politic to report portents of future discovery, than to report outright failure. Whether by design or by coincidence, he told the Earl of Egmont what the Earl wanted to hear. Throughout these pages there have been many cases of data being filtered through the understandings of geographical expectation, and perhaps Byron is yet another example of this.

15 Byron and Gallagher, *Byron's Journal*, pp. 104–105.

Whatever the case, Byron's comments were enough to spur on the Admiralty. After the better part of a century with minimal exploration, there was, it seemed, no time to waste, especially in forbearance of the knowledge that the French had similar designs on strategically valuable lands—among which was the southern continent.¹⁶ Thus, Byron returned in May of 1766; by June his flagship had been recommissioned under the command of Samuel Wallis, and another voyage of discovery was underway. Wallis's orders now reflected Byron's wishful reading of the swell and the birdlife as evidence that the southern continent was within Britain's grasp, and, crucially, would be found within the temperate latitudes of the Pacific:

there is reason to believe that Lands or Islands of Great Extent, hitherto unvisited by any European Power may be found in the Southern Hemisphere between Cape Horn and New Zeeland, in Latitudes convenient for Navigation, and in Climates adapted to the produce of Commodities useful in Commerce ...¹⁷

Wallis's ensuing expedition is normally remembered for its discovery of Tahiti. Yet in terms of what it meant to exploration history, an equally important discovery was of further signs of a southern continent. Those signs led directly to the commissioning of Cook's second voyage, which saw Cook hound the southern continent into oblivion. So what was it that was seen on the Wallis expedition? On 19 June 1767 George Robertson, master of the *Dolphin* under Wallis, recorded in his journal:

At 2 P.M. we made sail and steered WSW $\frac{1}{2}$ W. our greatest hopes at this *time was the prospect of high Land* which we all supposed we saw the day before, this was the only Comfort we had for the departing so soon from Osnaburg Island and thanks be to the Almighty we was not disappointed in our hopes—At 3 P.M. we saw the Land bearing W $\frac{1}{2}$ S.

16 Philip Carteret and Helen Wallis, *Carteret's Voyage Round the World, 1766–1769*, 2 vols., vol. 1 (Cambridge: Hakluyt Society, 1965), p. 12.

17 George Robertson, *The Discovery of Tahiti: A Journal of the Second Voyage of HMS Dolphin Round the World, under the Command of Captain Wallis, R.N., in the Years 1766, 1767, and 1768*, ed. Hugh Carrington (London: Hakluyt Society, 1948), p. xxii.

It appeared to be a great high mountain covered with clouds on the top; at 6 A.M. the Extreme of this Land bore from W $\frac{1}{2}$ S to W.B.N. $\frac{1}{2}$ N distance about 14 Leag^s at same time we saw the tops of several mountains the Extreems bearing from South to S.W. upwards of twenty Leag^s. This made us all rejoice and fill us with the greatest hopes Imaginable, we now lookt upon our selves as reliev'd from all our distresses as we was almost Certain of finding all sorts of refreshments on this great Body of Land, *Especially* as there was so great plenty on Osnabrug Island, which was only a small detached spot in comparison with what we saw this evening at Sun Set, *we now suposed* we saw the long wishd for Southern Continent, which has been often talkd of, but neaver before seen by any Europeans.¹⁸

The continent Wallis supposedly had in view was almost certainly a distant cloud bank which had initially been interpreted as the caps of mountains. They had, however, discovered Tahiti, and though the original sighting of “high land” had been further south, Robertson reconciled this by positing Tahiti as a peninsula of the southern continent: “*we was now fully persuaded* that this was a part of the southern continent, we theirfor Determined to work to windward all night for fear of being Imbayd between this north shore and the High Mountains which we saw last night to the southward of us.”¹⁹ Whereas his counterparts were soon disabused of this notion, especially with the Tahitians communicating the insularity of their land, Robertson held fast to the illusion. When Wallis decided to depart Tahiti and head west—uninterested in chasing mirages on the horizon—Robertson was dismayed; he believed the southern continent was indeed just over the horizon, and the thought of all his “pains and troubles” having been in vain was a source of bitter disappointment. In the long run, however, Robertson prevailed.

18 Robertson, *The Discovery of Tahiti*, p. 135.

19 Robertson, *The Discovery of Tahiti*, p. 140.

Of the 18 different journals kept by various crew on the expedition, only Robertson's mentions signs of a southern continent.²⁰ And yet, ultimately, the assessments of this one sailor were considered more telling than the judgements of the sum of his fellow crewmen, including his commander—Robertson's impressions judged the relevant ones when sending Cook after the southern continent. The only way this scenario makes sense is if the Admiralty was strongly swayed by preconceived expectations. Indeed, in a handwritten note thought to have been authored by the man who had commissioned the Wallis expedition—former First Lord of the Admiralty, the Earl of Egmont—Lord Egmont is so consumed with the prospect of a southern continent that he would rather indulge a conspiracy theory than the more obvious conclusion: “But Capt Wallis and his First Lieutenant ... [judged] it was too hazardous under these circumstances, to coast the Continent (which they had then actually in view) and afterwards thought most prudent on their return, not to take notice that they had ever seen it at all.”²¹

Yet if the southern continent was believed to be just over the horizon, it is unclear how the results of Philip Carteret's voyage across the Pacific were sensibly reconciled. In his ship, the *Swallow*, Carteret had accompanied Wallis and the *Dolphin* until the two ships passed through the Straits of Magellan, when they were separated. Subsequently, Carteret's passage across the Pacific was in higher latitudes than Wallis; thus, while Wallis went on to encounter Tahiti, Carteret made his passage a few degrees further south (see Figure 9.5). This proved that Tahiti could not be part of the southern continent, and nor could there have been another headland on the horizon—the headland supposedly seen by Robertson. What is more, Carteret recorded heavy seas at 146° W, concluding: “from the great Swell or Billows we had here there could be no land near us to the Southward.”²² But if his audience was primed for news of southern lands, then this absence of swell could be quickly forgotten.

20 Robertson, *The Discovery of Tahiti*, p. xxviii.

21 Robertson, *The Discovery of Tahiti*, p. xxviii. This note was appended to another journal written during that voyage, that of Robert Molyneux, master's mate.

22 Carteret and Wallis, *Carteret's Voyage Round the World, 1766–1769*, p. 153.

A little further west, between 147° and 149°, Carteret indicates that he “lost the Southerly billows swell”, though a day’s passage later and he again records the presence of “the great Southern Swell”.²³ As he took stock of his passage across the Pacific, which he rightly notes to be the most southerly course yet pursued in those latitudes, he concludes: “we have not seen any land or Island of any consequence, nor have we had any kind of indication of any Continent.”²⁴

France Australe

In the same year as Carteret and Wallis made their voyages, the French had resumed austral exploration with a voyage planned and led by Louis-Antoine de Bougainville, spanning 1766–1769. A second voyage was launched in 1767, led by Jean-François-Marie de Surville. Both Bougainville and de Surville carried hopes of discovering some unknown land in the southern Pacific, whether a continent, or merely rich islands.²⁵ Their respective expeditions boast many achievements—circumnavigating the globe, visiting the shores of New Zealand, discovering the Great Barrier Reef and various islands—but the discovery of *terres australes* did not count among them. Bougainville reflected on this disappointment, with the sting of chastisement reserved for armchair geographers:

If any considerable land existed hereabouts, we could not fail meeting with it; as the least latitude we were hitherto arrived at, was 17° 40’ S. which is the same that Quiros observed on this very coast, whereof the geographers have been pleased to make a great continent.

I agree, that it is difficult to conceive such a number of low islands, and almost drowned lands, without supposing a continent near it. But Geography is a science of facts; in studying it, authors must by no means give way to any system, formed in their studies, unless they would run the

23 Carteret and Wallis, *Carteret’s Voyage Round the World, 1766–1769*, p. 154.

24 Carteret and Wallis, *Carteret’s Voyage Round the World, 1766–1769*, p. 154.

25 See John Dunmore (editor), *The Pacific Journal of Louis-Antoine de Bougainville, 1767–1768* (London: Hakluyt Society, 2002); Dunmore, *French Explorers in the Pacific*.

risk of being subject to very great errors, which can be rectified only at the expence of navigators.²⁶

Having dallied with the prospect of discovering unknown southern lands in Bougainville and de Surville's voyages, in 1771 the French turned their full attention to the undertaking, launching two expeditions, both to the southern Indian Ocean, charged with the principle objective of discovering what, with any luck, would become known as France Australe.

The first to depart was the expedition led by Marion du Fresne. Officially, the voyage was concerned with returning to his Pacific homeland an indigenous Tahitian brought to France by Bougainville. This was a noble auspice under which to launch an expedition, but there was, of course, more at stake. On the way to Tahiti via the Cape of Good Hope, du Fresne was to plumb the southern latitudes south-east of the cape, discovering, if it existed, the southern continent. As du Fresne's second in command, Julien Crozet, explained:

It was proposed he should advance sufficiently to the south in order to try and discover the islands, or the continent, which it was supposed were to be found in this southern portion of our globe, the Governor of the Isles of France and Bourbon being particularly anxious that the most northerly portions of this supposed land should be discovered, as they would be nearer to the colonies and under a more temperate climate than the more southern portions.²⁷

When their Tahitian consul died just as they reached anchorage in Madagascar, the expedition's focus became purely exploratory. They reprovisioned at the Cape of Good Hope, then struck south in search of southern lands, with the 1503 encounter by Gonneville and the 1738 encounter by Bouvet foremost in their thoughts. As soon as the ships crossed the Antarctic Convergence, a

26 Louis-Antoine de Bougainville, *A Voyage Round the World. Performed by Order of His Most Christian Majesty, in the Years 1766, 1767, 1768, and 1769*, trans. Johann Reinhold Forster (London: J. Nourse, 1772), pp. 9–10.

27 Julien Crozet, *Crozet's Voyage to Tasmania, New Zealand, the Ladrone Islands, and the Philippines in the Years 1771–1772*, trans. H. Ling Roth (London: Truslove & Shirley, 1891), pp. 6–7.

dramatic change in temperature was observed, confounding their expectations for what should have been, according to the theory of climate, temperate latitudes. It did not matter. On 13 January 1772 the two ships emerged from the mists that beleaguer these waters to the heartening sight of land (to be later known as the Prince Edward Islands). According to Crozet, who would eventually assume command of the expedition after du Fresne was killed by Maoris at New Zealand: “M. Marion named it *Terre d’Esperance* (Land of Hope), because its discovery flattered us with the hope of finding the southern continent we were in search of.”²⁸

With the weather against them and both ships ailing after a collision, the land could not be explored to the south, so speculation that it was in fact a narrow headland to the southern continent could be neither confirmed nor denied. Needing to make haste in search of a port for repairs, the fleet continued east. Familiar signs of land were sources for encouragement: “I was surprised to see a white pigeon, which had no doubt strayed from some neighbouring land, and it seemed to me one might well argue that we were not far off from a big country which produces the proper seed-food for this bird.”²⁹ The sighting of penguins and seals reinforced this impression, as did the sighting of a huge iceberg. On 22 January two more islands were encountered—the Crozet Islands. Taken together—animals, ice, and chains of islands (long associated with the presence of a mainland)—these traces seemed to confirm that the southern continent, or at least a land of considerable extent, lay to the nearby south. In the end the fleet’s inability to locate the southern continent was explained away by damned misfortune: “Our position was now favourable for the discovery of the southern continent if only we could have advanced in a south-easterly direction; but unfortunately the state of the *Castries* since she was dismantled did not allow M. Marion to follow out his otherwise well-matured plans.”³⁰

28 Crozet, *Crozet’s Voyage*, p. 11.

29 Crozet, *Crozet’s Voyage*, p. 16.

30 Crozet, *Crozet’s Voyage*, p. 17.

By the time the fleet returned to Mauritius in 1773 with news of these discoveries, a second expedition led by Yves-Joseph de Kerguelen had long since departed in May 1771. Kerguelen's instructions gave the ambitious young explorer the opportunity to better the achievements of the Englishman, James Cook, who had just completed his first circumnavigation of the globe in which he visited New Zealand and eastern Australia. Indeed, forestalling the British who had sent ships to investigate the existence of a southern continent in the Pacific was an additional motivation for the French to make haste; but whereas the British were now looking to the Pacific, the French were focused upon lands south of the Cape of Good Hope, as with the expedition of du Fresne and Crozet. Thus, Kerguelen's instructions stated:

His Royal Highness fully trusting of his knowledge, skills, zeal and energy has decided to give him preference to attempt one of the most important discoveries remaining to be made.

The Honourable Yves de Kerguelen is hereby informed that all appearances point to the existence of a very large continent to the South of the Islands of Saint-Paul & Amsterdam and that, furthermore, the said continent must lie in a part of the world extending between 45° south and the vicinity of the Pole, in an immense area which as yet has not been entered. It also appears as an acknowledged fact that the Honourable Binot de Bonneville made landfall there around the year 1504 and lived there for about six months, during which time the natives of the land treated him very well.³¹

Barely a month into sailing south from the port of Mauritius, the land now known as Kerguelen Island was sighted. Confronted with heavy seas, strong winds, powerful currents, and the added danger of mists, Kerguelen left it to his more nimble sister ship (the *Gross Ventre*) under command of St. Allouarn

31 Philippe Godard and Tugdual de Kerros, 1772: *The French Annexation of New Holland: The Tale of Louis De Saint Alouarn*, trans. Odette Margot, Myra Stanbury, and Sue Baxter (Perth: Western Australian Museum, 2008), p. 47.

to affect a landing and reconnoitre the coast. But as conditions worsened Kerguelen made the fateful decision to abandon the *Gross Ventre* and return to Mauritius to proclaim his discovery. And just what had he discovered?

I have had the good fortune to discover the Antarctic Continent, and even to find out that it is well placed for the formation of establishments suitable to command Asia and America ...

It is a fifth part of the world ... It extends to the east by north-east, offering settlement under different skies and different climates ... The latitude in which this land is situated holds out the promise of all the vegetable products of the metropolis ... Southern France will provide grain crops suitable for man, building, and masting timber ...³²

These are flattering words for a land neither temperate nor continental. But Kerguelen's enthusiasm carried the moment; with his report at hand, the Governor of Mauritius wrote to Paris in glowing terms. True, all expeditions to these sub-Antarctic waters had encountered a combination of biting cold, heavy seas, snow, icebergs and perpetual mists, and the lands encountered comprised mountainous terrain shrouded in fog and capped with snow; but the Governor was nonetheless swayed by Kerguelen's testimony and the theories of climate and latitudinal determinism that dominated eighteenth-century thinking. The Governor effused:

If one considers the latitude of the land which has been discovered [the same latitude as Paris in the north], one cannot fail to attribute to it the mildest and most felicitous climate ... All that the eyes have been able to see is intersected by woods and greenery, which seems to indicate a country that is inhabited and carefully cultivated.³³

Kerguelen had deceived himself—not in the naïve ways of a true believer like Quirós, but rather from an overweening desire to glorify his exploits and

32 Dunmore, *French Explorers in the Pacific*, pp. 215, 214.

33 Dunmore, *French Explorers in the Pacific*, p. 212.

better his station in life—and, as a result, he had deceived those around him. He could do so on the basis of such flimsy data because he had such a rich store of geographical lore to draw upon.

When he returned to France, no time was wasted in contemplating further expeditions to capitalise on the discovery of the southern continent, a matter of considerable priority in light of the mercantile race in which France found herself lagging. As was keenly observed in the draft preamble to instructions for another expedition to Kerguelen's promised land:

It is far too important to verify ... the existence of the land which M. de Kerguelen has just discovered ... to delay issuing orders for a new expedition to this area. An even more powerful motive ... is the need to forestall the English, or any other nation which, following the rumours that have circulated concerning this discovery, might seek to disturb in its principle the possession which the commander of the flute will, presumably, have claimed on behalf of His Majesty.³⁴

By December 1773 Kerguelen was back at France Australe: Kerguelen Island. From there Kerguelen was meant to proceed east in the high latitudes, assiduously avoiding Australia, Tasmania, and New Zealand, his only landfalls to be upon the southern continent which, with due diligence, should be found to stretch right around the globe. Kerguelen was instructed to follow that coastline—though not if it dipped below 50°S—all the way to Cape Horn. If lucky, he would find that Gonneville's Land tended north into the more temperate climes of the southern Pacific. By the end of the voyage, the southern continent would nowhere remain “unknown”. These were the goals of the voyage; the reality was that Kerguelen had no stomach for a lengthy expedition in dangerous and miserable climes. So, after he arrived at Kerguelen Island, he dithered for some weeks attempting to land, before, once again, returning straight to Mauritius, and eventually France where a court martial awaited. The fairy tale of France Australe was over.

34 Dunmore, *French Explorers in the Pacific*, p. 215.

In Pursuit

The British, too, were closing in on the truth of the continental phantom, Terra Australis. Byron had only wishful portents to report, and Wallis nothing at all—but interest persisted. In his *Account of the Discoveries made in the South Pacifick Ocean*, Alexander Dalrymple, the British geographer-cum-mariner, fanned the flames of British ambition with a treatise of singular conviction. He set out the usual articles of evidence in support of his conjectures, but in one regard he bettered all the arguments of his peers—expanding, even, on the work of de Brosses. With careful calculations of regional land to water ratios, Dalrymple purported to prove that a southern continent must exist—accompanied by an explanation of how his scientific calculations showed where it would be found:

The annexed Table will elucidate the comparative proportion, in square degrees, of land to water in the two hemispheres, as well within the Tropicks as without, tho' it is not extended to the Poles, even of the northern regions, very little being known.

	North Lat.		South Lat.	
	Land.	Water.	Land.	Water.
0 to 10°	1100	2500	1200	2400
10 to 20°	950	2650	950	2650
20 to 23°	420	660	270	810
	2470	5810	2420	5860

The excess of land in North latitude is very inconsiderable, being only 50 square degrees. This will probably be made up in the Southern Lands and Islands not yet discovered.

	North Lat.		South Lat.	
	Land.	Water.	Land.	Water.
23 to 30°	980	1540	560	1960
30 to 40°	1700	1900	400	3200
40 to 50°	2200	1400	100	3500
	4880	4840	1060	8660

From the Tropick to 50° North latitude, the proportion of land and water is nearly equal; but in South latitude, the land, hitherto known, is not 1/8 of the space supposed to be water. This is a strong presumption, that there are in the southern hemisphere, hitherto totally undiscovered, valuable and extensive countries, in that climate best adapted for the conveniency of man, and where, in the northern hemisphere, we find the best peopled countries.³⁵

No scholar had ever provided such a detailed breakdown of the theory of equipoisure, but then it is arguable that no scholar had ever wanted the southern continent to exist as much as Dalrymple. He planned to captain a voyage of discovery that would finally discover the continent that he had shown must exist in the south Pacific, after which glory would forever redound to his good name.

Perhaps Dalrymple's most telling statement is his brief explanation as to why he does not extend his comparison of north and south latitudes all the way to the South Pole:

So little is known here in the Southern Hemisphere, that there is scarce room for a comparison, and as the climate to the South in those latitudes, is probably too severe for such countries to be of much value, they do not come within the object of the present disquisition.³⁶

Dalrymple used theoretical justifications to reason for a southern continent that would be found not loosely in the southern hemisphere, but in the precise region where its existence made the southern continent still worth believing in. Where that geography was no longer valuable to him—that is, among the frigid climes of the Antarctic, climes “too severe for such countries to be of much value”—his theoretical rationalisations evaporated. Dalrymple

35 Alexander Dalrymple, *An Account of the Discoveries Made in the South Pacifick Ocean, Previous to 1764* (London: 1767), pp. 90–91. Note: though printed in 1767, this treatise was not published till 1769.

36 Dalrymple, *An Account of the Discoveries Made in the South Pacifick Ocean*, p. 92.

reverse-engineered his southern continent: he knew what he wanted to exist, then used theoretical justifications to make it so.

In the end, Dalrymple's ingenious arguments and confident lobbying were for nil; his inexperience as a mariner precluded him from captaining a voyage with the expansive undertaking of exploring the southern hemisphere. Nor was it any consolation to Dalrymple that he was overlooked for James Cook—a mariner destined to be recognised as one of the best navigators and commanders of all time. Cook was tasked with the initial objective of observing the transit of Venus across the sun from the vantage of Tahiti. As soon as this was completed, he was to head south in search of Terra Australis. His instructions read:

there is reason to imagine that a Continent or Land of great extent, may be found to the Southward of the Tract lately made by Captⁿ Wallis ...

You are to proceed to the southward in order to make discovery of the Continent above-mentioned until you arrive in the Latitude of 40°, unless you sooner fall in with it. But not having discover'd it or any Evident signs of it in that Run, you are to proceed in search of it to the Westward between the Latitude before mentioned and the Latitude of 35° until you discover it, or fall in with the Eastern side of the Land discover'd by Tasman and now called New Zeland.³⁷

Departing in August 1768 on his first great voyage of discovery, Cook was assiduous in prosecuting these instructions, first taking in Tahiti and with her Venus, then heading south to open waters, before turning for New Zealand. At this point no continent had been discovered, and it appeared none would be. When Cook comments of New Zealand that “This country, which before now was thought to be a part of the imaginary southern continent, co[n]sists of Two large Islands”, an astute Beaglehole detects in Cook's inclusion of the word “imaginary” a shift in his thinking: for all the enthusiasm of his erstwhile peers

³⁷ James Cook, *The Journal of Captain James Cook on His Voyages of Discovery, Volume 1: The Voyage of the Endeavour, 1768–1771*, ed. J.C. Beaglehole, 4 vols., vol. 1 (Suffolk: Boydell Press, 1955), p. cclxxxii.

and true believers, Cook saw his task now not as that of the explorer finding an El Dorado, but of the scientist putting to proof an untenable hypothesis.³⁸

With his principal objectives complete, Cook contemplated the route of his return to Britain. One option was to cross the high latitudes of the Pacific, rounding Cape Horn from the west to east: “To return by the way of *Cape Horn* was what I most wish’d because by this rout we should have been able to prove the existence or non existence of a Southern Continent which yet remains doubtfull”.³⁹ It was not to be, however. Cook continues: “but in order to ascertain this we must have kept in a high latitude in the very depth of winter but the condition of the ship in every respect was not thought sufficient for such an undertaking.”⁴⁰ And so it was that Cook returned to Britain in July 1771, convinced that the southern continent did not exist, but unable to prove this beyond doubt, for there was yet a portion of cartographic space “Northward of 40° where the grand Object can lay.”⁴¹

A Final (Icy) End

Even before he had returned to Britain, Cook knew he had to finish the job:

I think it would be a great pitty that this thing which at times has been the object of many ages and Nations should not now be wholly clear’d up, which might very easily be done in one Voyage without either much trouble or danger or fear of miscarrying as the Navigator would know where to go to look for it ...⁴²

There was no mighty southern continent in the remaining unexplored spaces above 40°S: of that Cook was sure, and it would be relatively straightforward to prove. That should have been where the matter ended, for as geographers and explorers had recognised for centuries, any land further south than 40°

38 Cook, *The Journal of Captain James Cook, Volume One*, p. 274.

39 Cook, *The Journal of Captain James Cook, Volume One*, p. 272.

40 Cook, *The Journal of Captain James Cook, Volume One*, p. 272.

41 Cook, *The Journal of Captain James Cook, Volume One*, p. 290.

42 Cook, *The Journal of Captain James Cook, Volume One*, p. 290.

offered little prospect of either commercial or strategic utility. But Cook, it seems, was not completely impervious to the allure of the southern continent. He was no believer, that is sure, but he had become enchanted by the conceit. So what if it did not exist? It was a geography too splendid, even if a barren wasteland—a geography too expansive, enduring and beguiling—to simply disregard.

Cook is an unfailing sceptic when it comes to the southern continent, and there are glimmers of his disapproval of the overly imaginative geographers and entrepreneurs who vivified Terra Australis in its various guises; but he is as compelled to seek it out as Quirós and Van Diemen before him. The difference is that Cook had the means and the mettle to pursue the continent to the most frigid and inhospitable latitudes in which it might possibly be found, and in pursuing this white whale he could not be disillusioned by non-existence, for to prove that very fact—the fact that the continent was nothing more than a centuries-old wives tale—was the very fire that drove him to the ends of the earth.

Cook devised a plan that was ambitious to the point of immoderacy: he would circumnavigate the southern hemisphere in the highest possible latitudes, pushing as far south as 60°S (to put this in context, Tasman's 1642 expedition had abandoned the higher latitudes at 49°S due to the multitude of dangers and brutal conditions). There were to be no blank spaces left on the map where a continent born of the mould of Terra Australis—no matter how shrivelled and feeble—might reside in the imaginations of men. Cook considered that he might well discover land, but he expected that if he did it would be so close to the Pole that at best it may warrant the label of an Antarctic continent: a continent entirely removed from the essence of Terra Australis.

What is more remarkable than Cook putting forth such a self-sacrificing proposal is the fact that it met with official approval—despite the almost complete lack of strategic or commercial prospects offered by the voyage. By dint of the authority Cook now carried as a bold and successful explorer—promoted after his first voyage from lieutenant to commander, though the

rank of captain would have to wait till he had completed his second voyage—he had unprecedented freedom in choosing his objectives; the result was the first voyage of discovery commissioned by a “potent Sovereign” that did not hide imperial agendas behind the veil of science. This was to be, truly, a scientific expedition; an expedition for which the primary objective was no more and no less than ascertaining geographical truth (though even questing for truth involved a great deal of statesmanship flavoured with imperial jealousies and shows of power). The reality of this makes Cook’s instructions a curious document, as the standard exhortations to take careful note of advantages and commodities is repeated as rote, despite the incongruity of the subject. So, for example, Cook is to seek out Bouvet’s Cape Circumcision, whereupon

you are to satisfy yourself whether it is a part of that Southern Continent which has so much engaged the attention of Geographers & former Navigators, or Part of an Island ... If you find any Mines, Minerals, or valuable Stones, you are to bring home Specimens of each ... You are likewise to observe the Genius, Temper, Disposition and Number of the Natives or Inhabitants, if there be any ... You are with the consent of the Natives to take possession of convenient Situations in the Country in the Name of the King of Great Britain ...⁴³

Cook would do his best to find Cape Circumcision, but there would be no continent attached to it, nor any mines, minerals or valuable stones, nor inhabitants from whom to take possession of the land. Cook knew it, and the Admiralty by now must have suspected that there was nothing of immediate value to be found, be it at Cape Circumcision or any other lands of these southern latitudes.

Such was Cook’s implicit understanding that his was a voyage that sought the prize of truth and nothing more, that it is interesting to find Cook—almost three years into the voyage, by that time nearing its conclusion—caught in a rare moment of disingenuity:

43 Cook, *The Voyage of the Resolution and Adventure*, pp. clxvii–clxviii.

the reader must not expect to find me much farther to the South. It is however not for want of inclination but for other reasons. It would have been rashness in me to have risked all which had been done in the Voyage, in finding out and exploring a Coast which when done would have answered no end whatever, or been of the least use either to Navigation or Geography or indeed any other Science ...⁴⁴

But for the bettering of knowledge itself, no part of Cook's second voyage answered any end whatever.

Yet though Cook and his peers in the Admiralty knew better than their words sometimes portrayed, Cook's sailors did not. Having set sail in the middle of 1772, by the time the expedition found the higher latitudes of the Antarctic the men were on constant alert for land, expecting a sighting at any moment. False cries of land rang out for weeks—but it always turned out to be a fogbank, or an iceberg, or pack ice. There was no mainland to be found in the southern Indian Ocean. After welcome respite from the cold with a brief foray to New Zealand, Cook took his men into the southern Pacific where the same expectations were quashed by the cold reality of a largely unbroken expanse of ocean. Cook, however, suffered no surprise, and so no significant disappointment. That is not to deny that Cook was expecting to discover a continent, but as his naturalist Johann Reinhold Forster made clear, it was not the same continent his less critical charges had in mind. This is borne out in the latitudes which the sailors expected to traverse, contrasted with the latitudes—down to 70°S—to which Cook took them. Forster explains:

Captain Cook in [his former voyage having] penetrated to 40 degrees of south latitude without finding land, the southern continent was restrained within narrower limits, though these were still considerable enough to engage the attention of future navigators. We were now to enter on this unexplored part, and running to the eastward between the 50th and 40th degrees of south latitude, to search for undiscovered

44 Cook, *The Voyage of the Resolution and Adventure*, p. 638.

countries in the depth of winter. Many among our fellow-voyagers proceeded on this dangerous expedition in the firm belief that we should speedily find the coasts we went in quest of, whose novelty and valuable productions would amply reward our perseverance and fatigues. But captain Cook, and several others, judging from what had been done in the former voyage, and what they had already experienced on this, were far from expecting to discover new lands, and greatly doubted the existence of a southern continent.⁴⁵

At every turn Cook's preconceptions were confirmed; the lands his men expected to discover were so many "imaginary Lands."⁴⁶ On the other hand, as he whittled away the possible bounds of the southern continent with each thrust further south, Cook became more certain that there was in fact a continent—but a purely Antarctic one. Each day brought more encounters with ice, which loomed as more evidence of this seemingly inescapable conclusion. These were not just stray bergs, but an endless horizon of "Ice Islands." "It is a general received opinion," Cook wrote, "that Ice is formed near land, if so than there must be land in the Neighbourhood of this Ice, that is either to the Southward or Westward."⁴⁷ So while Cook was intent upon disproving the imaginary southern continent of Terra Australis, he was also intent upon discovering the Antarctic mainland he figured existed. Later in the expedition when South Georgia Island east of Cape Horn was encountered, Cook—and, of course, his men—still held to the vain hope that perhaps, after all, they would find a continent (however enfeebled); Cook pondered "whether the land we had seen the preceding day might belong to an extensive tract and I still had hoped of discovering a continent. I must Confess the disapointment I now met with did not affect me much, for to judge of the bulk by the sample it would not be worth the discovery."⁴⁸

45 Johann Reinhold Forster, *A Voyage Round the World*, ed. Nicholas Thomas and Oliver Berghof, 2 vols., vol. 1 (Honolulu: University of Hawaii Press, 2000), p. 133.

46 Cook, *The Voyage of the Resolution and Adventure*, p. 72.

47 Cook, *Voyage of the Resolution and Adventure*, pp. 71–72.

48 Cook, *Voyage of the Resolution and Adventure*, p. 625.

And so Cook continued to add to the thousand empirical cuts that ensured the demise of Terra Australis. As is now known, and as Cook and his men were figuring out, there are a meagre few islands in the Southern Ocean, beyond which, at the Pole, lies a virtually impenetrable body of ice, beneath which lies a continent that, other than in its southerly location, is completely unlike the imagined Terra Australis. On 30 January 1774 Cook recorded the latitude as 71° 10' S. Not only was Cook within the Antarctic Circle, he was barely 120 miles from the coast of Antarctica itself. With “Ninety Seven Ice hills” on the horizon, Cook had reached the absolute limit of navigable waters.⁴⁹ When his circumnavigation of the Antarctic Circle finally drew to a close a year later, Cook was right that not even his critics (the incorrigible Dalrymple notwithstanding) could begrudge his final assessment:

The risk one runs in exploring a coast in these unknown and Icy Seas, is so very great, that I can be bold to say, that no man will ever venture farther than I have done and that the lands which may lie to the South will never be explored. Thick fogs, Snow storms, Intense Cold and every other thing that can render Navigation dangerous one has to encounter and these difficulties are greatly heightned by the enexpressable horrid aspect of the Country, a Country doomed by Nature never once to feel the warmth of the Suns rays, but to lie for ever buried under everlasting snow and ice.⁵⁰

Conclusion

Reflecting on Cook’s achievements, Beaglehole writes: “if we contemplate these voyages of Cook against the background of geographical thought, or as exercised in the strategy of empire, we may consider their results as primarily negative. There was no continent.”⁵¹ Yet as Beaglehole also recognises, the results of Cook’s voyage are better conceptualised otherwise—as

49 Cook, *Voyage of the Resolution and Adventure*, p. 323.

50 Cook, *Voyage of the Resolution and Adventure*, pp. 637–638.

51 J.C. Beaglehole, “General Introduction,” in *The Journals of Captain James Cook on His Voyages of Discovery*, ed. J.C. Beaglehole (Cambridge: Hakluyt Society, 1955), p. cxx.

additions to knowledge. Had a magnificent southern continent been encountered it would have hardly been a discovery at all, as discovery suggests an addition to knowledge that, in the words of John Allen, does “not conform to their preexisting world view.”⁵² The only way a real discovery could be affected was for the imagined southern continent to be found not to exist—to find that geographic preconceptions were wrong. In that sense, Cook’s discovery of millions of square miles of ocean—unencumbered but for the scarcest fragments of land and seasonal bergs that ride the currents—was the greatest discovery of all. If a southern continent did exist—and, of course, it does—it must necessarily be so small, cold, ice-covered and barren that it may be described as *a* southern continent, but never *the* southern continent. Never could it approximate the imagined magnificence that was Terra Australis, a geographical entity that was no more.

In the end, Cook’s assessment was final:

I had now made the circuit of the Southern Ocean in a high Latitude and traversed it in such a manner as to leave not the least room for the Possibility of there being a continent, unless near the Pole and out of the reach of Navigation ... Thus I flater my self that the intention of the Voyage has in every respect been fully Answered, the Southern Hemisphere sufficiently explored and a final end put to the searching after a Southern Continent, which has at times ingrossed the attention of some of the Maritime Powers for near two Centuries past and the Geographers of all ages.⁵³

It was now for the geographers and statesmen, explorers and idle thinkers, frequenters of taverns and indulgers of scuttlebutt, to get their heads around a more challenging revelation than had ever been expected. There was—there is—no Terra Australis. After two millennia, and countless transformations, this imaginative geography had simply run out of space.

52 Allen, “New World Encounters,” p. 69.

53 Cook, *The Voyage of the Resolution and Adventure*, p. 643.

MISTAKING AUSTRALIA FOR TERRA AUSTRALIS

One is tempted to suppose that until men are literally forced out of it they cling to their image or idea of the truth rather than face up to the truth itself: in fact, that most of what is offered as the truth is just a new re-shuffle of our thinking to adjust the mental image of the world to the bits of the world that actually hit us, so to say, in the face. In other words, the mental image is the environment we go by as true, until the true environment destroys the illusion. Even then we seize on any part of the true environment that might, for the time being, salvage something of our mental map of the world, and so we continue with our images in some other form. None of us lives by the true environment, but only by a mental image of what that environment is; hence the mental environment may be as important for geography as the actual environment itself, were that to be ascertained.

*J. Wreford Watson*¹

1 Watson, "The Role of Illusion in North American Geography," p. 14.

In the wake of Cook's second voyage, Terra Australis was given an icy farewell. Imaginative geographies need space—space in which they can be imagined, and space into which they can retreat when confronted by inconsistent empirical data. Terra Australis had run out of space (see Figure 9.1); there was simply nowhere left in which a great continent could be fitted, and even if revised as a smaller Antarctic continent, the latitudes Cook had left undiscovered were so frigid that any landmass a geographer might postulate could not offer any of the temperate riches the southern continent had always promised. There was no amount of revision or reimagining that could save Terra Australis. It was obsolete, and thus proclaimed a mere fancy of less-informed minds, as John Marra wrote in 1776:

it may be affirmed with certainty, that no continent exists, within those limits, and that all the conjectures and positive assertions of former navigators, and the reasoning of geographers and astronomers concerning a Terra Incognita Australis, have not the least foundation in truth, but are mere fictions unsupported by facts, and now fully disproved by uncontrovertible demonstration.²

And yet, this is not the last heard of Terra Australis. Throughout the last two decades of the eighteenth century and the following two centuries, the name of Terra Australis continues to appear with surprising frequency. Of course, not even the most zealous advocate was prepared to maintain after Cook's voyages that a glorious southern continent still awaited discovery; but the trope of Terra Australis had so dominated images and discussions of the southern hemisphere that, while the continent was discarded, its toponymy was redeployed as a pseudonym for a real land: "*New Holland, or Terra Australis, the largest island in the world, or rather a continent.*"³ This was hardly a

2 John Marra, *Journal of the Resolution's Voyage, in 1772, 1773, 1774, and 1775, on Discovery to the Southern Hemisphere, by Which the Non-Existence of an Undiscovered Continent, between the Equator and the 50th Degree of Southern Latitude, Is Demonstratively Proved* (Dublin: Caleb Jenkin, 1776), p. 38.

3 J. Ouseau, *Practical Geography, with the Description and Use of the Celestial and Terrestrial Globes* (London: C. Macrae, 1794), p. 28.

new development, as it was demonstrated in earlier chapters how some cartographers and geographers confused by the profusion of geographical fragments in the seventeenth and eighteenth centuries clumsily applied the rubric of Terra Australis to any and all southern geographies, including applying it to multiple incompatible entities. Nevertheless, it was understood by most scholars that there was a distinction between the southern continent that had appeared for centuries on cartographers' maps and for which a rich tapestry of resources and advantages had been imagined, as opposed to the lands which the Dutch had discovered south of Java. For example, in an educational geography text published in 1791 (and hopelessly out of date with contemporary knowledge) the following clarification is made between New Holland and Terra Australis:

Q. What is New Holland?

A. It is a very extensive country, situated south of the Moluccas; it has been discovered in the present century; the inhabitants are blacks, very ill made, and live miserably; the English have a settlement on the eastern coast, called Botany Bay, where they send their convicts.

Q. What is the Terra Australis?

A. It is a name given to all the lands situated south of Africa; part of the coasts were discovered, in 1503, by Captain Gonneville, who was thrown upon them by a tempest; since that the Europeans have endeavoured to form establishments there, but without success, from the intractable disposition of the natives. A French navigator discovered another coast, in 1734, which he called the Circumcision.⁴

So while "Terra Australis" was sometimes malappropriated, the fundamental ontological disambiguation between Australia and the southern continent was widely comprehended in the eighteenth century. However, once it had

⁴ John Eden, *The History of New Holland, from Its First Discovery in 1616, to the Present Time*, second ed. (London: John Stockdale, 1791), p. 242.

been proved that there was no southern continent, it meant there was nothing stopping authors from redeploing the nomenclature of the southern continent in hitherto incompatible modes.

At the end of the eighteenth and start of the nineteenth centuries, there did not yet exist any agreed name for the landmass discovered by the Dutch, in part because there was still some uncertainty as to whether Australia was a continent as opposed to a collection of large islands separated by straits. With the circumnavigation and survey of Australia of 1801–02 by Matthew Flinders, that uncertainty was mostly cleared up (though a few question marks still hung over various rivers and inlets). Flinders subsequently tried to make sense of the prevailing toponymic confusion when he published an account of that circumnavigation in 1814:

The vast regions to which this voyage was principally directed, comprehend, in the western part, the early discoveries of the Dutch, under the name of NEW HOLLAND; and in the east, the coasts explored by British navigators, and named NEW SOUTH WALES. It has not, however, been unusual to apply the first appellation to both regions; but to continue this, would be almost as great an injustice to the British nation, whose seamen have had so large a share in the discovery, as it would be to the Dutch, were New South Wales to be so extended. This appears to have been felt by a neighbouring, and even rival, nation; whose writers commonly speak of these countries under the general term of *Terres Australes*. In fact, the original name, used by the Dutch themselves until some time after Tasman's second voyage, in 1644, was *Terra Australis*, or *Great South Land*; and when it was displaced by New Holland, the new term was applied only to the parts lying *westward* of a meridian line, passing through Arnhem's Land on the north., and near the isles of St. Francis and St. Peter, on the south: all to the eastward, including the shores of the Gulph of Carpentaria, still remained as *Terra Australis* ...

It is necessary, however, to geographical precision, that so soon as New Holland and New South Wales were known to form one land, there

should be a general name applicable to the whole; and this essential point having been ascertained in the present voyage, with a degree of certainty sufficient to authorise the measure, I have, with the concurrence of opinions entitled to deference, ventured upon the re-adoption of the *original* TERRA AUSTRALIS; and of this term I shall hereafter make use, when speaking of New Holland and New South Wales, in a collective sense; and when using it in the most extensive signification, the adjacent isles, including that of Van Diemen, must be understood to be comprehended.⁵

As it turns out, it was an additional suggestion Flinders made in a footnote to this passage which was eventually adopted as the accepted name for the continent: “Had I permitted myself any innovation upon the original term, it would have been to convert it into AUSTRALIA; as being more agreeable to the ear, and an assimilation to the names of the other great portions of the earth.”⁶ Yet even after “Australia” became the accepted designate for the continent, it remained common for writers to use Terra Australis as well as Great South Land and Antipodes as interchangeable terms for Australia. Ernest Favenc in his 1888 history of Australia is an example of an author employing various monikers to refer to the one place. He runs through southern continent, Terra Australis, the South Land, Great South Land, Southern Land, New Holland, Australia, and uses more local names such as Gulf of Carpentaria and Arnhem’s Land all within the scope of a few pages.⁷ This is no more than the rhetorical technique commonplace to writers whereby every effort is made to not repeat a word or name, and any chance to add flair to otherwise common statements is embraced. This is still the case today.

For instance, William J. Lines titled his environmental history of Australia *Taming the Great South Land* (unarguably a compelling title), while in his

5 Matthew Flinders, *A Voyage to Terra Australis ...*, 2 vols., vol. 1 (London: G. and W. Nichol, 1814), pp. ii–iii.

6 Flinders, *A Voyage to Terra Australis*, p. iii.

7 Ernest Favenc, *The History of Australian Exploration from 1788 to 1888, Compiled from State Documents, Private Papers and the Most Authentic Sources of Information* (London: Griffith, Farran, Okeden and Welsh, 1967 [original 1888]), see “Introduction”.

2008 Australia Day citizenship speech, then-Prime Minister of Australia Kevin Rudd proclaimed, “We, in this great south land bring these great stories together in one people.”⁸ There is even a well-known song by the Australian band Icehouse titled “Great Southern Land”—an unofficial national anthem to some Australians. As creatures with a love of the familiar and a strong affinity for history, it makes a lot of sense that people would persist in calling Australia Terra Australis or Great South Land. When those terms are used today they simultaneously evoke a sense of place, a sense of history, and a sense of local pride. “Terra Australis” hints at a grand story of exploration and a grand idea that can be traced to antiquity, and when the epithetic appellation “Great South Land” is used it is considered to confirm both a geographic and national reality.

Unfortunately, all instances of this seemingly innocuous rhetorical puffery convey a fundamental misunderstanding about the histories of both Australia and Terra Australia. The problem is that Australia is a southern continent, but it is not *the* southern continent. It may be a great southern land, but it is not *the* Great South Land. It is *une terre australe*, but not Terra Australis. In some ways, the point is a simple one: historically, Australia and Terra Australis were two separate geographical entities. It is a position that goes to the heart of everything in this book: Terra Australis was no mere “poet’s conjecture”; throughout the early modern period Terra Australis existed in people’s minds as a real geographical entity, despite being considered a mostly unknown continent.

Hence, Terra Australis and Australia are no more synonymous than Tierra del Fuego, New Zealand, or Kerguelen or Bouvet Islands are synonymous with Terra Australis. What these entities all share with Terra Australis is coextensivity—they exist in the same place as parts of Terra Australis were imagined to exist—as well as a history of misidentification: all were

8 William J. Lines, *Taming the Great South Land: A History of the Conquest of Nature in Australia* (Sydney: Allen & Unwin, 1991); Kevin Rudd, “Citizenship Ceremony Speech,” 26 January 2008, *Prime Minister of Australia, Media Centre, Transcripts*, available at <http://pmtranscripts.dpmc.gov.au/release/transcript-15733>, accessed 27 November 2015.

temporarily thought to be part of the great southern continent, which turned out to be true for none of them. Terra Australis was a fully realised entity that existed in the minds of its proponents as a geography independent of geographical reality.

The problem, then, with referring to Australia as Terra Australis is that it implies that Australia is Terra Australis, or Terra Australis is Australia, collapsing the histories of two distinct entities into one unhistorical muddle that hints at none of the nuances that define the story of Terra Australis as a part of the history of ideas. This is a criticism that James McClymont saw fit to make more than a century ago:

If any proof were required of the complete absence of all connection between the theory of a *Terra Australis* and the geographical fact of the Australian continent, it would surely be found herein—that the belief in the former persisted for a hundred years after Australia was visited and mapped by Dutch navigators. And yet to this day a confusion exists between these distinct phenomena, which blurs the outlines of early Australian history.⁹

This confusion is perpetuated both in casual references to Australia as Terra Australis, and in explicit statements conflating the histories and identities of the two entities, like the following very clever-sounding pronouncement: “The great southern continent was invented before it was discovered.”¹⁰ A quip too clever by half. To explain why, contemplate the more explicit statement of Oskar Spate in the introduction to a book titled *Terra Australis*, a statement which exemplifies the exact nature of this misconception: “The central theme is the complex process by which a vast unknown, Terra Australis, was reduced to a smaller Australia, no longer hypothetical but known.”¹¹ In a sense, this

9 McClymont, *The Theory of an Antipodal Southern Continent During the Sixteenth Century*, p. 23.

10 Ernst van den Boogaart, “The Mythical Symmetry in God’s Creation: The Dutch and the Southern Continent, 1569–1756,” in William Eisler and Bernard Smith (editors), *Terra Australis: The Furthest Shore* (Sydney: International Cultural Corporation of Australia, 1988), p. 43.

11 O.H.K. Spate, “Introduction,” in William Eisler and Bernard Smith (editors), *Terra Australis: The Furthest Shore* (Sydney: International Cultural Corporation of Australia, 1988), p. 11.

statement is back to front. Much of the southern hemisphere was indeed a vast unknown, but it was Terra Australis which was posited to turn that expanse into a subject of knowledge. By the time the existence of Australia had been roughly sketched out, Terra Australis had not been reduced to the entity of Australia, but to the same entity it had been throughout the sixteenth century, just a smaller, more southern version. That is, Australia and Terra Australis existed contemporaneously and shared a history, but they existed as separate entities.

Consider the following statement on the Cambridge University Library website advertising that “A new exhibition charting the European discovery of Australia and its coastline has gone on display at Cambridge University’s library.” Visitors are informed that “The display of maps from the 16th to the 20th Century, starts with imaginary images of the country.”¹² But there are no imaginary images of Australia, because before its European discovery there was no concept of Australia in Europe. You can no more have imaginary images of a real land *unknown to exist* than you can have real images of an imaginary land *believed to exist*. In European discourse Australia does not exist until it is discovered by the Dutch in the seventeenth century. Hence, those images at the Cambridge University Library are of Terra Australis, and, eventually, of both Terra Australis and Australia. This confusion about Terra Australis prefiguring Australia—about an imaginative geography somehow being turned into a corporeal geography—evokes one of the most insidious phrases ever applied to the subject, that of the “proto-history of Australian discovery”.¹³ Unless an author’s intention is to actually suggest that Europeans were mystical soothsayers, then comments like this one—“I discovered that the ancient Greeks had sensed it was there because something had to balance the white bit at the top of the globe”—are unintentionally but absurdly misleading.¹⁴

12 Cambridge University Library, <http://www.cambridgenetwork.co.uk/news/article/default.aspx?objid=23361>, accessed 17 May 2009.

13 O.H.K. Spate, “Erédia, Manuel Godinho de (1563–1623),” *Australian Dictionary of Biography*, 2 vols., vol. 1 (Melbourne: Melbourne University Press, 1966), pp. 357–358.

14 Sara Wheeler, *Terra Incognita: Travels in Antarctica* (New York: The Modern Library, 1999), p. xv.

Concepts of Terra Australis were not concepts of Australia; knowledge of Australia was not knowledge of Terra Australis. This may seem a pedantic point, but to lose sight of it is to lose sight of what makes sense of the history of Terra Australis.

Conclusion

THE POWER OF IMAGINATIVE GEOGRAPHY

The earth is a stage, and though it may be an advantage, even to the right comprehension of the play, to know its exact configuration, it is always the drama of human endeavor that will be the thing, with a ruling passion expressed by outward action marching perhaps blindly to success or failure, which themselves are often undistinguishable from each other at first.

*Joseph Conrad*¹

The corporeal entity did not exist, yet historians are able to talk of the history of the southern continent—a history not just of ideas, but of actions that led to the unveiling of many of the earth's secrets. For, though it did not exist, during the early modern period the southern continent operated as a geographical fact.

It is worth considering of what stuff a geographical fact is made. In standard historico-geographic textbooks, most attention is directed toward articulating the characteristics that enjoin something as geographic in nature. An interesting example is found in a modern classic of historical geography—interesting because it uses the very terminology of “geographical facts”:

¹ Joseph Conrad, “Geography and Some Explorers,” *The National Geographic Magazine* 45, March 1924, p. 241.

A geographical fact is any fact that can be mapped on the earth's surface, and phenomenon that has an address ... To be important a geographical fact must be one that not only concerns something that varies from place to place so as to give a well-defined geographical pattern, but one that is itself a conspicuous feature in the landscape or exerts an influence, either as a passive factor or an active agent, upon other conspicuous features.²

For most intents and purposes, this suits as a pragmatic and functional definition. As a starting point, then, it might be noted that the southern continent, in the context of the sixteenth through eighteenth centuries, was indeed a mappable entity (certainly it was mapped), and one with a particular address. Given it was the *southern* continent it was a fairly stable address, though the details of its coasts (less so the inland) were under ongoing revision. And importantly, the southern continent operated not merely as an abstract concept lacking tangible character (at least, it was no less tangible than, say, Tierra del Fuego): the southern continent as imagined through maps and literature had rivers, mountains, seas, cities, kings, and natural resources—it was a geography with all the natural and human variety that could be expected of a continent. It was, moreover, a place desirable, and desired. Explorers sailed for its shores; the land-bound dreamed of its riches. And as far as being a conspicuous feature in the landscape goes, the southern continent exerted significant influence over the exploration and interpretation of other geographies. So the southern continent was undoubtedly a geography (according to the above definition), but was it a geographical *fact*?

When thinking about the nature of facts it is tempting to assume that one is talking about truth. But to deal in facts, so-called, is not to necessarily deal in truth but truth-claims (some of which may attain to truth, and all the better for it). In any society at any given point and place, certain truth-claims are accepted as true and function as truth, and it is these truth-claims which become our facts. Thus a geographical fact is not necessarily what is true or what corresponds with reality, though it may be those things. Rather, a

2 J.B. Mitchell, *Historical Geography* (London: English Universities Press Ltd., 1960), pp. 7–8.

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geographical fact is a geographical statement that functions as truth at a given time at a given place.

During the Middle Ages the southern continent features in geographical writings and eventually appears in rudimentary guise on some maps, but it is a contested subject, and accounts of its form and nature vary across time. It does not begin to crystallise as a geographical fact until the early to mid-1500s when a range of factors converged. Tomes bursting with ancient learning were being rediscovered in Europe at a time when the wisdom of the ancients was held in the highest regard; the writings of Ptolemy were especially influential, along with other Greek and Roman scholars who speak of southern lands. The technology of cartography progressed at a rapid rate and provided a powerful medium for the representation of the southern continent. And, of course, the known world began to expand—actual knowledge of what existed in the world blossomed alongside new ways of formulating, interpreting and conveying knowledge.

From a very early point in the sixteenth century, despite a dearth of empirical geographical lore relating to the southern continent, map-makers rendered a highly detailed southern continent on their printed maps. Johannes Schöner is a pioneer of imaginative austral cartography; his globe of 1515 shows a southern ring continent replete with variable coastlines, lakes, rivers and mountains, centred round a south polar sea. Though little information existed about the southern continent—not surprising given it was a geographical figment—Schöner's southern continent was nevertheless a composite of non-empirical and empirical geographical lore, drawing upon the classical theory suggesting the Nile was fed by subterranean sources stemming from the southern hemisphere, and also on the reported pre-Magellan discovery of a passage around the southern end of America.³ Rendered with imagination and attention to detail, Schöner's southern continent proved persuasive, subsequently followed by a number of cartographers. In Oronce Finé's famous

3 Van Duzer, "The Cartography, Geography, and Hydrography of the Southern Ring Continent," pp. 117–121.

double cordiform world map of 1531, he builds on Schöner's depiction, while instating the South Pole with land. Of note on these two maps and the great majority of their successors is that Terra Australis is typically engraved with some version of the rider, "not yet known". Take Monachus's 1527 map which carries an inscription on a partitioned section of the southern hemisphere—part undefined, part detailed coastline—that translates, "This part of the world, not yet discovered by navigators, exists." This is not hubris, nor the mere puffery of businessmen trying to sell their cartographic wares; it is belief based on the combination of ancient wisdom, cosmographical conjecture and contemporary discovery—belief that pays no heed to the strict dichotomies more familiar to modern minds of empirical and non-empirical, desire and data, the possible and the corroborated. It is why the approach of geosophy—of examining the totality of knowledge based on any and all sources—is essential to the study of the southern continent.

Part of that patchwork of knowledge is the knowledge represented on and produced by maps, for cartography was not merely a way for the early moderns to communicate what was known, it was a way to hash out nascent and evolving ideas. A quick glance at an early map—any early map—shows how cartographers' images of the globe differ from the globe now known; their maps were splendid, and often splendidly wrong. But for every *faux* geography on a map, for every untruth a cartographer told, the scope of cosmographic revelation allowed by the map and cartographers' often staggeringly good projections of the real offset these forgivable infelicities. Cartography is one of the seminal advances underpinning our civilisations; without maps, European knowledge of the *oikoumene* could never have been meaningfully expanded beyond Eurasia and Africa. Though adorned with beautiful art and though cartographers were given to the artistic impulse of creation and interpretation, cartography as a discipline—as much as it could be said to form a discrete discipline—existed as a science of good repute. All geographies on a map shared in the medium's authority. Absent compelling reasons to doubt in the southern continent's existence, this fictive geography benefited from the

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map's imprimatur of reputability. This was only possible because cartographers invented for the abstract concept of a southern continent *form* and *location*. As an entity with a particular address and a coastline varying from place to place to give a well-defined geographical pattern, cartography's southern continent acquired geographical verisimilitude: as depicted in printed maps the southern continent had the hallmarks of a real geographical entity recorded and mapped by observers. The effect is like that of a good novel, clearly labelled fiction: the closer the story parallels a known truth, the more compelling the read, until people start to confuse fact with fancy.

Mercator's 1569 world map is one of the key instruments in the production and transmission of knowledge relating to the southern continent. His depiction of the southern continent, popularised by Ortelius, was so uniformly followed that two centuries later its vestiges were still evident. This was no geography of capricious invention; Mercator's southern continent entailed a careful reconciling of empirical and non-empirical lore. Each feature of his southern continent was afforded a full explanation, allowing Mercator to construct a geographical entity possessing geographical verisimilitude and rhetorical force. As articulated by Mercator and those who followed, the southern continent possessed a veneer of empiricism and an imprimatur of scientism which made for a tangible and compelling entity. Belief thus came to be stored in the existence of the southern continent, though not unconditionally in the cartography of the southern continent, its borders permanently provisional, while its status as an extant geography became for many a matter of certitude. The question was not if it would be discovered, but when and in what form? Of course, the map could not perpetuate the southern continent in perpetuity, for its corporeal non-existence would always lead to eventual repudiation. What the map could and did do was establish an orthodoxy that even disbelievers had to grapple with for the better part of three centuries.

When men sought to know the postulated corporeal entity through exploration, the southern continent's operation as a geographical fact—structuring expectation and perception of both empirical and non-empirical

information—produced a remarkable feedback loop common to imaginative geographies: belief affected perception, perception influenced belief, and around it went. As John Wright long ago recognised, “Not only the routes of explorers but the character of their observations must be studied in the light of their preconceived ideas, both true and false.”⁴ The same applies to later interpretations of explorers’ data; even if travel observations and field notes are made with all the cool rationality of a Cook or a Humboldt (though inextricably mediated), when it comes to that information being interpreted and rationalised by others it is filtered through lenses coloured by the persistent illusions of geographical lore. So even where empirical geographical data supplants non-empirical lore, that data as recorded by its observers and as interpreted by its audience remains to some extent a product of the non-empirical lore that informed exploration in the first place. Geographical preconceptions are by this means self-reinforcing; observations are made through the lens of preconception and are then reconciled with and interpreted according to the same geographical preconceptions. Ironically, this process transforms geographies that are fundamentally non-empirical constructs into products of empirical lore, geographical reality notwithstanding.

Thus when Magellan saw Tierra del Fuego, if not he himself then those who studied his expedition perceived not an island, but the first hard proof of the existence of a vast southern continent. It was an interpretation that died hard. Not until Francis Drake’s 1578 voyage when he was blown south toward Cape Horn did cartographers and geographers find good reason to push the southern continent further south. Yet even then it was not until Hendrik Brouwer’s 1643 expedition that it was conclusively proved—and thus adopted as fact—that Tierra del Fuego was an island and not connected to the southern continent. Another example is the 1616 discovery of Staten Island, just east of Tierra del Fuego, by Jacob le Maire and Willem Schouten. The

4 John K. Wright, *Human Nature in Geography: Fourteen Papers, 1925–1965* (Cambridge: Harvard University Press, 1966), p. 28.

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island was promptly appropriated by cartographers as part of the southern continent, picking up where Tierra del Fuego had left off.

Exploration has always proceeded on the basis of what is known, but what is known has never been limited to the information drawn from direct observation. The Spanish sent Alvaro de Mendaña de Neira in 1567 and again in 1595, and then Pedro Fernández de Quirós in 1606, to find the southern continent, a vast land of wealth and resources which they believed may be home to the apocryphal geographies of King Solomon's mines and Ophir, as well as the Southeast Asian lands Marco Polo had visited. Mendaña's discovery of the Solomons may well have been the catalyst for Richard Grenville's 1573 petition to Queen Elizabeth for the "discoverie traffique and enjoyenge" of any or all lands south of the equator.⁵ What makes Grenville's and similar petitions so interesting is that they make almost no reference to empirical data indicating that there is either land or commodities to discover and exploit. That significant "Landes or Islandes and Countries" do somewhere in the southern hemisphere exist is taken as settled fact. And the petitions envisage more than just interested exploration; they contemplate trade, commercial exploitation, religious conversion of civilisations, the populating of new colonies—suggesting that the southern continent loomed as much more than a geographical postulate.⁶

More than any others it was the Dutch who possessed actual knowledge of southern lands through a number of encounters during the early 1600s with the seemingly barren and inhospitable northern and western coasts of Australia. That was a land too arid and insignificant to be reconciled with preconceived notions of *the* southern continent, so the southern continent was pushed further south. When in 1642 Abel Tasman, accompanied by his navigator François Visscher, was commissioned to explore a vast expanse of the southern hemisphere, the southern continent loomed large. His instructions shrewdly note that "up to this time no Christian kings, princes or

5 Chope, "New Light on Sir Richard Grenville," p. 238.

6 Chope, "New Light on Sir Richard Grenville," p. 238.

commonwealths have seriously endeavoured to make timely discovery of the remaining unknown part of the terrestrial globe (situated in the south, and presumably almost as large as the Old or New World)”, and potentially just as profitable.⁷ At some stage, it was imagined, Tasman would have to encounter the Southland. History shows that Tasman discovered the Australian island of Tasmania and considered it unimportant, but when he saw New Zealand he figured he had come upon part of the “great Staten Land”, its other promontory 6000 miles distant, comprising “the mainland coast of the unknown South-land.”⁸ It is worth adding that the problem of whether or not New Zealand was a part of the southern continent remained a live question until the circumnavigation of the north and south islands by Cook in 1769.

In a letter of 22 December 1643 Van Diemen lamented Tasman’s apparent lack of initiative, especially his decision not to pursue his discoveries in New Zealand:

if they had run a few more degrees to the south, they might not unlikely have come upon land again, perhaps even upon the Statenland (thus named by them) which they had left south of them, and which may possibly extend as far as Le Maire Strait, or maybe even many more miles eastward. All this is mere guess-work, and nothing positive can be laid down respecting unknown matters.⁹

This comment is especially interesting because of an apparent contradiction. Van Diemen considered it likely—not merely a possibility among a range of possibilities—that with greater persistence the southern continent would have been discovered. Yet he also suggests that the status of the southern continent is that of an unknown matter. The disassembly of this statement highlights the peculiar epistemological status of the southern continent in early modern thought: while positivistic knowledge (knowledge based on direct observation) was indeed out of Van Diemen’s grasp, the “mere guess-work” as

7 Tasman, *Abel Janszoon Tasman’s Journal*, p. 131.

8 Tasman, *Abel Janszoon Tasman’s Journal*, p. 20.

9 Tasman, *Abel Janszoon Tasman’s Journal*, p. 145.

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Van Diemen called it, or non-empirical lore as it might otherwise be called, expanded to fill that gap. So while Van Diemen on the one hand dismisses the southern continent as an empirically unknown matter, on the other hand he is postulating its likely existence on the basis of non-empirical lore. The unknown, so-called, is rarely totally unknown.

That there should be facts about fictive geographies makes good sense, in a way. European intellectuals and explorers were obsessed with a *need to know* that is manifest from the beginning of recorded history. It is the same need to know—sometimes referred to as the *will to knowledge*—which meant the early moderns could never abandon geographical space to a void when they had the facilities at hand to populate an ontological vacuum with the probable, the possible and the desired. Clark Firestone could not have put this any better when he reflected in his characteristically eloquent way, “It is not given man to envisage reality. His is the greater gift to brood over chaos and shape it as he will.”¹⁰ As the saying goes, if it did not exist, someone would have to invent it—whence the southern continent.

Today, of course, the southern continent no longer operates as a geographical fact, now a mere geographical and historical curiosity. No matter how one tells the story of Terra Australis, it ineluctably ends, as it ends in the stories of nearly all imaginative geographies, in abandonment: the history of an idea pursued to obsolescence. It took many revisions to the outline of Terra Australis to reach that point, with expectations continually shifting and softening, each revision to the southern continent’s prospective geography eroding not just a little more of the continent, but a little more of what made the continent worth believing in. As an entity becomes less valuable, less desirable and less interesting, and as the authority affirming the existence of the entity erodes, the imperative to believe in its existence dissolves; eventually a point is reached where, faced with geographical dissonance, the easier and more reasonable course of action is to abandon belief in the original entity, rather than persist with efforts to reconcile new data.

10 Firestone, *The Coasts of Illusion*, p. 377.

What makes the story of the imaginary southern continent so remarkable is the moment at which that point was reached—the moment when the cost of belief outweighed the lure of the entity being imagined. It is what is so hard to understand about the imaginary southern continent: knowing how the idea developed, knowing the timeline of the various key discoveries, looking back—from a modern perspective—it would have made perfect sense had the idea of Terra Australis been abandoned sometime in the seventeenth century. But it was not. This was an idea so powerful, so potent and so real in the minds of the early moderns, that it was not uniformly abandoned until the 1770s, and in what exceptional circumstances. It took one of the world's greatest explorers in one of history's most remarkable voyages of discovery to finally confute the idea of a great southern land. Two millennia of imagining, and it was not till the very end of the Age of Discovery that Terra Australis was laid to rest.

That is the power of imaginative geography.

BIBLIOGRAPHY

Primary Sources

- Allais, Denis Vairasse d', *The History of the Sevarites or Sevarambi: A Nation Inhabiting Part of the Third Continent Commonly Called Terrae Australes Incognitae* (London: Henry Brome, 1675).
- Arias, Dr Juan Luis, "A Memorial Addressed to His Catholic Majesty Philip the Third, King of Spain, by Dr Juan Luis Arias, Respecting the Exploration, Colonization, and Conversion of the Southern Land," in R.H. Major (editor), *Early Voyages to Terra Australis, Now Called Australia: A Collection of Documents, and Extracts from Early Manuscript Maps, Illustrative of the History of Discovery on the Coasts of That Vast Island, from the Beginning of the Sixteenth Century to the Time of Captain Cook* (London: Hakluyt Society, 1859).
- Aristophanes, "Clouds," in *The Comedies of Aristophanes*, ed. Alan H. Sommerstein (Warminster: Aris & Phillips, 1982).
- Aristotle, *Meteorologica*, trans. H.D.P. Lee (London: Heinemann, 1952).
- Augustine, St., *On Christian Doctrine*, trans. and ed. D.W. Robertson Jr., (Indianapolis: Bobbs-Merrill, 1958).
- Bougainville, Louis-Antoine de, *A Voyage Round the World. Performed by Order of His Most Christian Majesty, in the Years 1766, 1767, 1768, and 1769*, trans. Johann Reinhold Forster (London: J. Nourse, 1772).
- Bowen, Emanuel, *A Complete System of Geography*, 2 vols., vol. 2 (London: William Innys, et al., 1747).
- de Brosses, Charles, *Histoire Des Navigations Aux Terres Australes ...* (Paris, 1756).
- de Brosses, Charles, *Terra Australis Cognita: Or, Voyages to the Terra Australis, or Southern Hemisphere, During the Sixteenth, Seventeenth, and Eighteenth Centuries ...*, ed. John Callander, 3 vols., vol. 1 (Edinburgh: printed for John Callander, 1768).
- de Brosses, Charles, *Terra Australis Cognita: Or, Voyages to the Terra Australis, or Southern Hemisphere, During the Sixteenth, Seventeenth, and Eighteenth Centuries ...*, ed. John Callander, 3 vols., vol. 3 (Edinburgh: printed for John Callander, 1768).
- Buache, Philippe, "Geographical and Physical Observations, Including a Theory of the Antarctic Regions, and the Frozen Sea Which They Are Supposed to Contain, According to the Hypothesis of the Celebrated M. Buache," *Gentleman's Magazine* (January 1763).
- Byron, John, *Byron's Journal of His Circumnavigation 1764-1766*, ed. Robert E. Gallagher (Cambridge: The Hakluyt Society, 1964).
- Capella, Martianus, *Martianus Capella and the Seven Liberal Arts, Volume 2, the Marriage of Philology and Mercury*, trans. and ed. William Harris Stahl and Richard Johnson (New York: New York, 1977).
- Carteret, Philip and Helen Wallis, *Carteret's Voyage Round the World, 1766-1769*, 2 vols., vol. 1 (Cambridge: Hakluyt Society, 1965).

ANTIPODES: IN SEARCH OF THE SOUTHERN CONTINENT

- Cicero, Marcus Tullius, *De Re Publica de Legibus*, trans. Clinton Walker Keyes (London: William Heinemann, 1970 [original 1928]).
- Cleomedes, *Cleomedes' Lectures on Astronomy: A Translation of The Heavens with an Introduction and Commentary*, ed. and trans. Alen C. Bowen and Robert B. Todd (Berkeley: University of California Press, 2004).
- Columbus, Christopher, *The Four Voyages of Christopher Columbus*, trans J.M. Cohen (London: Penguin Books, 1969).
- Cook, James, *The Journal of Captain James Cook on His Voyages of Discovery, Volume 1: The Voyage of the Endeavour, 1768–1771*, ed. J.C. Beaglehole, 4 vols., vol. 1 (Suffolk: Boydell Press, 1955).
- Cook, James, *The Journal of Captain James Cook on His Voyages of Discovery, Volume 2: The Voyage of the Resolution and Adventure, 1772–1775*, ed. J.C. Beaglehole, 4 vols., vol. 2 (Cambridge: Hakluyt Society, 1961).
- Crozet, Julien, *Crozet's Voyage to Tasmania, New Zealand, the Ladrone Islands, and the Philippines in the Years 1771–1772*, trans. H. Ling Roth (London: Truslove & Shirley, 1891).
- Dalrymple, Alexander, *An Account of the Discoveries Made in the South Pacifick Ocean, Previous to 1764* (London, 1767).
- Dalrymple, Alexander, *An Historical Collection of the Several Voyages and Discoveries in the South Pacific Ocean, Volume II* (London: J. Nourse, T. Payne, and P. Elmsly, 1771).
- Dampier, William, *A New Voyage Round the World ...* (London: James Knapton et al., 1697).
- Duhem, Pierre, *Le Système du Monde; Histoire des Doctrines Cosmologiques de Platon à Copernic*, 10 vols. (Paris: A. Hermann, 1861–1916).
- Eden, John, *The History of New Holland, from Its First Discovery in 1616, to the Present Time*, second ed. (London: John Stockdale, 1791).
- de Eredia, Manuel Godinho, *Eredia's Description of Malaca, Meridional India, and Cathay*, trans. J.V. Mills (Kuala Lumpur: Royal Asiatic Society, 1997).
- Favenc, Ernest, *The History of Australian Exploration from 1788 to 1888, Compiled from State Documents, Private Papers and the Most Authentic Sources of Information* (London: Griffith, Farran, Okeden and Welsh, 1967 [original 1888]).
- Flinders, Matthew, *A Voyage to Terra Australis; Undertaken for the Purpose of Completing the Discovery of That Vast Country, and Prosecuted in the Years 1801, 1802, and 1803, in His Majesty's Ship the Investigator, and Subsequently in the Armed Vessel Porpoise and the Cumberland Schooner*, 2 vols., vol. 1 (London: G. and W. Nichol, 1814).
- Forster, Johann Reinhold, *A Voyage Round the World*, ed. Nicholas Thomas and Oliver Berghof, 2 vols., vol. 1 (Honolulu: University of Hawaii Press, 2000).
- Forster, Johann Reinhold, *Observations Made During a Voyage Round the World*, ed. Nicholas Thomas, Harriet Guest and Michael Dettelbach (Honolulu: University of Hawaii Press, 1996).
- Geminus, "Introduction to the Phenomena," in *Geminus's Introduction to the Phenomena: A Translation and Study of a Hellenistic Survey of Astronomy*, ed. James Evans and J. Lennart Berggren (Princeton: Princeton University Press, 2006).
- Ghim, Walter, "Life of Mercator," in *Mercator: A Monograph on the Lettering of Maps, Etc. in the 16th Century Netherlands with a Facsimile and Translation of His Treatise on the*

BIBLIOGRAPHY

- Italic Hand and a Translation of Ghim's Vita Mercatoris*, ed. A.S. Osley (London: Faber and Faber, 1969).
- Gordon, Pat, *Geography Anatomiz'd: Or, the Compleat Geographical Grammar. Being a Short and Exact Analysis of the Whole Body of Modern Geography, after a New and Curious Method* (Cornhill: Robert Morden and Thomas Cockerill, 1699).
- Hall, Joseph, *The Discovery of a New World*, trans. John Healey (Massachusetts: Harvard University Press, 1937).
- Harris, John and John Campbell, *Navigantium Atque Itinerantium Bibliotheca, or, a Complete Collection of Voyages and Travels ... Now Carefully Revised with Large Additions, and Continued Down to the Present Time*, 2 vols., vol. 1. (London: T. Woodward et al., 1744).
- Homer, *The Odyssey*, trans. Samuel Henry Butcher and Andrew Lang (Stilwell: Digireads.com Publishing, 2005).
- Indicopleustes, Cosmas, *The Christian Topography of Cosmas, an Egyptian Monk*, trans. and ed. J.W. McCrindle (New York: Burt Franklin, 1967).
- Kelly, Celsus (editor), *La Australia Del Espíritu Santo: The Journal of Fray Martín de Munilla O.F.M. and Other Documents Relating to the Voyage of Pedro Fernández de Quirós to the South Sea (1605–1606) and the Franciscan Missionary Plan (1617–1627)*, 2 vols. (Cambridge: Cambridge University Press, 1966).
- Kerr, Robert, *A General History and Collection of Voyages and Travels, Arranged in Systematic Order: Forming a Complete History of the Origin and Progress of Navigation, Discovery, and Commerce, by Sea and Land, from the Earliest Ages to the Present Time* (Edinburgh: William Blackwood, 1824).
- Lactantius, Lucius Caecilius Firmianus, *Lactantius: The Divine Institutes*, trans. and ed. Sister Mary Francis McDonald (Washington: The Catholic University of America Press, 1964).
- LeClerc, Georges Louis and Comte de Buffon, *Barr's Buffon. Buffon's Natural History, Containing a Theory of the Earth, a General History of Man, or the Brute Creation, and of Vegetables, Minerals, &C.*, 10 vols., vol. 1 (London: J.S. Barr, 1792 [original 1749]).
- Macrobius, *Commentary on the Dream of Scipio*, trans. and ed. William Harris Stahl (New York: Columbia University Press, 1952).
- le Maire, Jacob, *Mirror of the Australian Navigation: A Facsimile of the "Speighel Der Australische Navigatie ..."* Being an Account of the Voyage of Jacob Le Maire and Willem Schouten 1615–1616 Published in Amsterdam in 1622, with an Introductory Essay by Edward Duyker, ed. Edward Duyker (Sydney: Hordern House, 1999).
- Mandeville, John, *The Travels of Sir John Mandeville*, trans. and ed. C. Moseley (London: Penguin Books, 1983).
- Marra, John, *Journal of the Resolution's Voyage, in 1772, 1773, 1774, and 1775, on Discovery to the Southern Hemisphere, by Which the Non-Existence of an Undiscovered Continent, between the Equator and the 50th Degree of Southern Latitude, Is Demonstratively Proved* (Dublin: Caleb Jenkin, 1776).
- Mercator, Gerhard, Henricus Hondius, Johannes Janssonius and R.A. Skelton, *Atlas, or, a Geographicke Description of the World, Volume 1* (Amsterdam: Theatrum Orbis Terrarum, 1968 [original 1636]).
- Moll, Herman, *The Compleat Geographer: Or, the Chorography and Topography of All the Known Parts of the Earth* (London: Awnsham and John Churchill, 1709).

ANTIPODES: IN SEARCH OF THE SOUTHERN CONTINENT

- Münster, Sebastian and Richard Eden, *A Treatyse of the Newe India with Other New Founde Landes and Islandes, aswell Eastwarde as Westwarde, as They Are Knownen and Found in These Oure Dayes, After the Description of Sebastian Munster in His Boke of Universall Cosmographie ...* (London: Edward Sutton, 1553).
- Narborough, John, *An Account of Several Late Voyages & Discoveries to the South and North* (London, 1694).
- Ouiseau, J., *Practical Geography, with the Description and Use of the Celestial and Terrestrial Globes* (London: C. Macrae, 1794).
- Parker, John, *Tidings out of Brazil*, trans. Mark Graubard (University of Minnesota Press, 1957).
- Pereira, Duarte Pacheco, *Esmeraldo De Situ Orbis*, trans. George H. T. Kimble (London: Hakluyt Society, 1936).
- Pigafetta, Antonio, *The First Voyage around the World, 1519–22: An Account of Magellan's Expedition*, ed. Theodore J. Cachey (Toronto: University of Toronto Press, 2007).
- Popelinière, Voisin de la, *Le Trois Mondes de la Popelinière* (Geneva: Librairie Droz, 1997 [original 1582]).
- Ptolemy, Claudius, J. Lennart Berggren and Alexander Jones, *Ptolemy's Geography: An Annotated Translation of the Theoretical Chapters* (Princeton: Princeton University Press, 2000).
- Ptolemy, Claudius, *Ptolemy's Almagest*, trans. G.J. Toomer (London: Duckworth, 1984).
- de Quirós, Pedro Fernandez, *The Voyages of Pedro Fernandez de Quiros, 1595 to 1606*, ed. Sir Clements Markham, 2 vols. (Nendeln: Kraus Reprint, 1967).
- Ray, John, *Miscellaneous Discourses Concerning the Dissolution and Changes of the World* (London: Samuel Smith, 1692).
- Robertson, George, *The Discovery of Tahiti: A Journal of the Second Voyage of HMS Dolphin Round the World, under the Command of Captain Wallis, R.N., in the Years 1766, 1767, and 1768*, ed. Hugh Carrington (London: Hakluyt Society, 1948).
- Rogers, Woodes, *A Cruising Voyage Round the World: First to the South-Seas, Thence to the East-Indies, and Homewards by the Cape of Good Hope. Begun in 1708, and Finished in 1711* (London: A. Bell, 1726).
- Roggeveen, Jacob, *The Journal of Jacob Roggeveen*, ed. Andrew Sharp (Oxford: Clarendon Press, 1970).
- Rudd, Kevin, "Citizenship Ceremony Speech," 26 January 2008, *Prime Minister of Australia, Media Centre, Transcripts*, available at <http://pmtranscripts.dpmc.gov.au/release/transcript-15733> accessed 27 November 2015.
- Schouten, Willem, *A Wonderful Voiage Round About the World* (London: Da Capo Press, 1968).
- Seneca, *Letters from a Stoic*, ed. Robin Campbell (London: Penguin Classics, 1969).
- Seville, Isidore of, *The Etymologies of Isidore of Seville*, ed. Stephen Barney, Martin W. Lewis, J.A. Beach and Oliver Berghof (Cambridge: Cambridge University Press, 2006).
- Stahl, William Harris, *Martianus Capella and the Seven Liberal Arts: Volume 1, the Quadrivium of Martianus Capella* (New York: Columbia University Press, 1971).
- Tasman, Abel and Jan Ernst Heeres, *Abel Janszoon Tasman's Journal: Of His Discovery of Van Diemens Land and New Zealand in 1642, with Documents Relating to His Exploration of Australia in 1644 Being Photo-Lithographic Facsimiles of the Original*

BIBLIOGRAPHY

- Manuscript in the Colonial Archives at the Hague with an English Translation and Facsimiles of Original Maps, to Which Are Added "Life and Labours of Abel Janszoon Tasman" by J.E. Heeres, And "Observations Made with the Compass on Tasman's Voyage" by Dr. W. Van Bemmelen* (Los Angeles: Kovach, 1965).
- Vespucci, Amerigo, *Letters from a New World: Amerigo Vespucci's Discovery of America*, trans. David Jacobson, ed. Luciano Formisano (New York: Marsilio, 1992).
- Waldseemüller, Martin, *The Cosmographiae Introductio of Martin Waldseemüller*, trans. Joseph Fischer and Franz Von Wieser, ed. Charles George Herbermann (New York: United States Catholic Historical Society, 1907).

Secondary Sources

- Allen, John L., "An Analysis of the Exploratory Process: The Lewis and Clark Expedition of 1804–1806," *Geographical Review* 62, no. 1 (1972).
- Allen, John L., "Introduction to Volume I," in John L. Allen (editor), *North American Exploration, Volume I: A New World Disclosed* (Lincoln: University of Nebraska Press, 1997).
- Allen, John L., "Lands of Myth, Waters of Wonder: The Place of the Imagination in the History of Geographical Exploration," in David Lowenthal and Martyn J. Bowden (editors), *Geographies of the Mind: Essays in Historical Geosophy* (New York: Oxford University Press, 1976).
- Allen, John L., "New World Encounters: Exploring the Great Plains of North America," *Great Plains Quarterly* 13 (1993).
- Allen, John L., *Passage through the Garden: Lewis and Clark and the Image of the American Northwest* (Chicago: University of Illinois Press, 1975).
- Atkinson, Geoffroy, *The Extraordinary Voyage in French Literature: Before 1700*, 2 vols., vol. 1 (New York: Burt Franklin, 1920).
- Bagrow, Leo and R.A. Skelton, *History of Cartography* (London: C.A. Watts & Co., 1964).
- Baugh, Daniel A., "Seapower and Science: The Motives for Pacific Exploration," in Derek Howse (editor), *Background to Discovery: Pacific Exploration from Dampier to Cook* (Berkeley: University of California Press, 1990).
- Beaglehole, J.C., "General Introduction," in James Cook, *The Journals of Captain James Cook on His Voyages of Discovery*, ed. J.C. Beaglehole (Cambridge: Hakluyt Society, 1955).
- Beaglehole, J.C., *The Exploration of the Pacific*, third ed. (Stanford: Stanford University Press, 1966).
- Bodnar, Istvan M., "Anaximander on the Stability of the Earth," *Phronesis* 37, no. 3 (1992).
- van den Boogaart, Ernst, "The Mythical Symmetry in God's Creation: The Dutch and the Southern Continent, 1569–1756," in William Eisler and Bernard Smith (editors), *Terra Australis: The Furthest Shore* (Sydney: International Cultural Corporation of Australia, 1988).
- Bowden, Martyn J., "The Invention of American Tradition," *Journal of Historical Geography* 18, no. 1 (1992).
- Boxer, C.R., *The Dutch Seaborne Empire 1600–1800* (London: Hutchinson, 1965).
- Brotton, Jerry, *Trading Territories: Mapping the Early Modern World* (New York: Cornell University Press, 1998).

ANTIPODES: IN SEARCH OF THE SOUTHERN CONTINENT

- Bunbury, Edward Herbert, *A History of Ancient Geography among the Greeks and Romans from the Earliest till the Fall of the Roman Empire*, 2 vols., vol 1 (New York: Dover Publications, 1959 [original 1883]).
- Cambridge University Library, www.cambridgenetwork.co.uk/news/article/default.aspx?objid=23361, accessed 17 May 2009.
- Campbell, Tony, "Egerton Ms 1513: A Remarkable Display of Cartographical Invention," *Imago Mundi* 48 (1996).
- Carter, Paul, *The Road to Botany Bay: An Essay in Spatial History* (London: Faber and Faber, 1987).
- Chaudhuri, K.N., *The Trading World of Asia and the English East India Company 1660–1760* (Cambridge: Cambridge University Press, 1978).
- Chope, R. Pearse, "New Light on Sir Richard Grenville," *Transactions of the Devonshire Association* 49 (1917).
- Conrad, Joseph, "Geography and Some Explorers," *The National Geographic Magazine* 45 (March 1924).
- Cook, William and Ronald Herzman, *The Medieval World View: An Introduction* (Oxford: Oxford University Press, 1983).
- Cosgrove, Denis, *Apollo's Eye: A Cartographic Genealogy of the Earth in the Western Imagination* (Baltimore: Johns Hopkins University Press, 2003).
- Crane, Nicholas, *Mercator: The Man Who Mapped the Planet* (London: Weidenfeld & Nicolson, 2002).
- Crone, G.R., "A Manuscript Atlas by Battista Agnese in the Society's Collection," *The Geographical Journal* 108, no. 1/3 (1946).
- Crowe, Michael J., *Theories of the World from Antiquity to the Copernican Revolution* (New York: Dover Publications, 2001).
- Dalché, Patrick Gautier, "The Reception of Ptolemy's *Geography* (End of the Fourteenth to Beginning of the Sixteenth Century)," in David Woodward (editor), *The History of Cartography: Cartography in the European Renaissance, Part 1* (Chicago: University of Chicago Press, 2007).
- von Daniken, Erich, *Chariots of the Gods? Unsolved Mysteries of the Past*, trans. Michael Heron (Bantam Books, 1971).
- Deacon, Margaret, *Scientists and the Sea, 1650–1900: A Study of Marine Science* (London: Academic Press, 1971).
- DeVoto, Bernard, *The Course of Empire* (Cambridge: The Riverside Press, 1952).
- Dickson, Peter, "A Secret First: Did European Navigators Explore and Map the West Coast of the Americas before Columbus Died in 1506?" *Mercator's World* no. 7 (2002).
- Dickson, Peter, *The Magellan Myth: Reflections on Columbus, Vespucci and the Waldseemüller Map of 1507* (Privately printed in the USA, 2007).
- Diller, Aubrey, "The Ancient Measurements of the Earth," *Isis* 40, no. 1 (1949).
- Donaldson, Bruce, "The Dutch Contribution to the European Discovery of Australia," in Nonja Peters (editor), *The Dutch Down Under, 1606–2006* (Perth: University of Western Australia Press, 2006).
- Dunmore, John (editor), *The Pacific Journal of Louis-Antoine de Bougainville, 1767–1768* (London: Hakluyt Society, 2002).
- Dunmore, John, *French Explorers in the Pacific* (Oxford: Clarendon Press, 1965).

BIBLIOGRAPHY

- Dunmore, John, *Visions and Realities: France in the Pacific 1695–1995* (Waikanae: Heritage Press, 1997).
- Duyker, Edward, *An Officer of the Blue: Marc-Joseph Marion Dufresne, South Sea Explorer, 1724–1772* (Melbourne: Melbourne University Press, 1994).
- Duzer, Chet Van, “A Newly Discovered Fourth Exemplar of Francesco Rosselli’s Oval Planisphere of C. 1508,” *Imago Mundi* 60, no. 2 (2008).
- Duzer, Chet Van, “The Cartography, Geography, and Hydrography of the Southern Ring Continent, 1515–1763,” *Orbis Terrarum* 8 (2005).
- Duzer, Chet Van, “Cartographic Invention: The Southern Continent on Vatican Ms Urb. Lat. 274, Folios 73v–74r (C. 1530),” *Imago Mundi* 59, no. 2 (2007).
- Eckenrode, Thomas, “The Growth of a Scientific Mind: Bede’s Early and Late Scientific Writings,” *Downside Review* 94 (1976).
- Edson, Evelyn, *Mapping Time and Space: How Medieval Mapmakers Viewed Their World* (London: British Library, 1997).
- Enterline, James R., “The Southern Continent and the False Strait of Magellan,” *Imago Mundi* 26, 1972.
- Fausett, David, *Images of the Antipodes in the Eighteenth Century: A Study in Stereotyping* (Amsterdam: Rodopi, 1995).
- Fausett, David, *Writing the New World: Imaginary Voyages and Utopias of the Great Southern Land* (New York: Syracuse University Press, 1993).
- Fernández-Armesto, Felipe, *Amerigo: The Man Who Gave His Name to America* (New York: Random House, 2007).
- Fernández-Armesto, Felipe, *Columbus* (Oxford: Oxford University Press, 1991).
- Firestone, Clark B., *The Coasts of Illusion: A Study of Travel Tales* (New York: Harper and Brothers Publishers, 1924).
- Fitzgerald, Lawrence, *Java la Grande: The Portuguese Discovery of Australia* (Hobart: The Publishers Pty Ltd, 1984).
- Foucault, Michel, *Power* (New York: New Press, 2000).
- Friedman, John B., “Cultural Conflicts in Medieval World Maps,” in Stuart B. Schwartz (editor), *Implicit Understandings: Observing, Reporting, and Reflecting on the Encounters between Europeans and Other Peoples in the Early Modern Era* (Cambridge: Cambridge University Press, 1994).
- Fritze, Ronald H., *New Worlds: The Great Voyages of Discovery, 1400–1600* (Westport: Praeger Publishers, 2002).
- Furber, Holden, *Rival Empires of Trade in the Orient 1600–1800* (Minneapolis: University of Minnesota Press, 1976).
- Furely, David, *Cosmic Problems: Essays on Greek and Roman Philosophy of Nature* (Cambridge: Cambridge University Press, 1989).
- Glover, Gordon J., *Beyond the Firmament: Understanding Science and the Theology of Creation* (Chesapeake: Watertree Press, 2007).
- Godard, Philippe and Tugdual de Kerros, 1772: *The French Annexation of New Holland: The Tale of Louis De Saint Aloüarn*, trans. Odette Margot, Myra Stanbury and Sue Baxter (Perth: Western Australian Museum, 2008).
- Goldstein, Thomas, “The Renaissance Concept of the Earth in Its Influence Upon Copernicus,” *Terrae Incognitae* 4 (1972).

ANTIPODES: IN SEARCH OF THE SOUTHERN CONTINENT

- Gordon, Amy Glassner, "Mapping La Popelinière's Thought: Some Geographical Dimensions," *Terrae Incognitae* 9 (1977).
- Grant, Edward (editor), *A Source Book in Medieval Science* (Cambridge: Harvard University Press, 1974).
- Grant, Edward, "A New Look at Medieval Cosmology, 1200–1687," *Proceedings of the American Philosophical Society* 129, no. 4 (1985).
- Grant, Edward, "In Defense of the Earth's Centrality and Immobility: Scholastic Reaction to Copernicanism in the Seventeenth Century," *Transactions of the American Philosophical Society* 74, no. 4 (1984).
- Greenblatt, Stephen, "Foreword," in Frank Lestringant, *Mapping the Renaissance World: the Geographical Imagination in the Age of Discovery*, trans. David Faussett (Cambridge: Polity Press, 1994).
- Greenlee, William Brooks, *The Voyage of Pedro Álvares Cabral to Brazil and India: From Contemporary Documents and Narratives* (London: Hakluyt Society, 1938).
- Hackney, Lord Amherst of and Basil Thomson, *The Discovery of the Solomon Islands by Alvaro De Mendaña in 1568* (Nendeln: Kraus, 1967 [original London: Hakluyt Society, 1901]).
- Hall, Elial F., "Gerard Mercator: His Life and Works," *Journal of the American Geographical Society of New York* 10 (1878).
- Harley, J.B. and David Woodward (editors), *The History of Cartography, Volume One: Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean* (Chicago: University of Chicago Press, 1987).
- Harvey, P.D.A., *Medieval Maps* (Toronto: University of Toronto Press, 1991).
- Heeres, Jan Ernst, *The Part Borne by the Dutch in the Discovery of Australia 1606–1765* (London: Luzac and Co., 1899).
- Heidel, William Arthur, *The Frame of the Ancient Greek Maps* (New York: Arno Press, 1976 [original 1937]).
- Hiatt, Alfred, "Blank Spaces on the Earth," *The Yale Journal of Criticism* 15, no. 2 (2002).
- Hiatt, Alfred, *Terra Incognita: Mapping the Antipodes before 1600* (London: University of Chicago Press, 2008).
- International Hydrographic Bureau, "Text and Translation of the Legends of the Original Chart of the World by Gerhard Mercator, Issued in 1569," *Hydrographic Review* 9 (1932).
- Jack-Hinton, Colin, *The Search for the Islands of Solomon, 1567–1838* (Oxford: Clarendon Press, 1969).
- Jacobs, Els M., *Merchant in Asia: The Trade of the Dutch East India Company During the Eighteenth Century* (Leiden: CNWS Publications, 2006).
- James, Preston E. and Geoffrey J. Martin, *All Possible Worlds: A History of Geographical Ideas*, second ed. (New York: John Wiley and Sons, 1981).
- Johnson, Christine, *The German Discovery of the World: Renaissance Encounters with the Strange and Marvelous* (Charlottesville: University of Virginia Press, 2008).
- Kelly, Celsus, "The Franciscan Missionary Plan for the Conversion to Christianity of the Natives of the Austral Lands as Proposed in the Memorials of Fray Juan De Silva, O.F.M.," *The Americas* 17, no. 3 (1961).
- Keuning, J., "Jodocus Hondius Jr.," *Imago Mundi* 5 (1948).
- Kimble, George H.T., *Geography in the Middle Ages* (London: Methuen and Co., 1938).

BIBLIOGRAPHY

- King, Robert J., "The Jagiellonian Globe: A Key to the Puzzle of Jave La Grande," *The Globe* 60 (2008).
- Klinghoffer, Arthur Jay and Harvey Sicherman, *The Power of Projections: How Maps Reflect Global Politics and History* (Westport: Greenwood Publishing Group, 2006).
- van der Kraan, Alfons, "Anthony Van Diemen: Patron of Discovery and Exploration, 1636–45," *The Great Circle: Journal of the Australian Association of Maritime History* 27, no. 1 (2005).
- Kretschmer, K., "Globe," in Emerson D. Fite and Archibald Freeman (editors), *A Book of Old Maps Delineating American History from the Earliest Days Down to the Close of the Revolutionary War* (Cambridge: Harvard University Press, 1926).
- Lane, K. Maria, "Mapping the Mars Canal Mania: Cartographic Projection and the Creation of a Popular Icon," *Imago Mundi* 57, no. 2 (2006).
- Lane, K. Maria, "Geographers of Mars: Cartographic Inscription and Exploration Narrative in Late Victorian Representations of the Red Planet," *Isis* 96, no. 4 (2005).
- Lansdown, Richard, *Strangers in the South Seas: The Idea of the Pacific in Western Thought* (University of Hawaii Press, 2006).
- Lestringant, Frank, *Mapping the Renaissance World: The Geographical Imagination in the Age of Discovery*, trans. David Fausett (Cambridge: Polity Press, 1994).
- Lines, William J., *Taming the Great South Land: A History of the Conquest of Nature in Australia* (Sydney: Allen & Unwin, 1991).
- Livingstone, David N., *The Geographical Tradition: Episodes in the History of a Contested Enterprise* (Cambridge: Blackwell, 1993).
- Lloyd, G.E.R., *Polarity and Analogy: Two Types of Argumentation in Early Greek Thought* (Cambridge: Cambridge University Press, 1966).
- Lozovsky, Natalia, *"The Earth Is Our Book": Geographical Knowledge in the Latin West Ca. 400–1000* (Ann Arbor: University of Michigan Press, 2000).
- Mackaness, George, *Some Proposals for Establishing Colonies in the South Seas* (Sydney, 1943).
- Major, R.H., *Memoir on a Mappemonde by Leonardo Da Vinci, Being the Earliest Map Hitherto Known Containing the Name of America* (London, 1865).
- Marchant, Leslie R., *France Australe: A Study of French Explorations and Attempts to Found a Penal Colony and Strategic Base in South Western Australia 1503–1826* (Perth: Artlook Books, 1982).
- McClymont, James R., "A Preliminary Critique of the Terra Australis Legend," *Papers and Proceedings of the Royal Society of Tasmania for 1890* (1890).
- McClymont, James R., *The Theory of an Antipodal Southern Continent During the Sixteenth Century* (Hobart, 1892).
- McCready, William D., "Isidore, the Antipodeans, and the Shape of the Earth," *Isis* 87, no. 1 (1996).
- McHugh, Evan, *1606: An Epic Adventure* (Sydney: University of New South Wales Press, 2006).
- McIntosh, Gregory C., *The Piri Reis Map of 1513* (Athens: University of Georgia Press, 2000).
- McIntyre, Kenneth, *The Secret Discovery of Australia: Portuguese Ventures 200 Years before Captain Cook* (Medindie: Souvenir Press, 1977).

- Moretti, Gabriella, "The Other World and the 'Antipodes'. The Myth of the Unknown Countries between Antiquity and the Renaissance," in Wolfgang Haase and Meyer Reinhold (editors), *The Classical Tradition and the Americas: European Images of the Americas and the Classical Tradition, Part I* (Berlin: Walter de Gruyter & Co, 1993).
- Mutch, T.D., *The First Discovery of Australia: With an Account of the Voyage of the "Duyfken" and the Career of Captain Willem Jansz* (Sydney: D.S. Ford, 1942).
- Nordenskiöld, A.E., *Facsimile-Atlas to the Early History of Cartography with Reproductions of the Most Important Maps Printed in the XV and XVI Centuries*, trans. Johan Adolf Ekelöf and Sir Clements Markham (New York: Dover Publications, 1973).
- Nunn, George, "The Three Maplets Attributed to Bartholomew Columbus," *Imago Mundi* 9 (1952).
- Nunn, George, *The Columbus and Magellan Concepts of South American Geography* (Glenside, 1932).
- Olshin, Benjamin, "A Sea Discovered: Pre-Columbian Conceptions and Depictions of the Atlantic Ocean," PhD thesis (University of Toronto, 1994).
- Overton, J.D., "A Theory of Exploration," *Journal of Historical Geography* 7, no. 1 (1981).
- Parker, Geoffrey, "Why Did the Dutch Revolt Last Eighty Years?" *Transactions of the Royal Historical Society* 26 (1976).
- Parry, John H., *The Age of Reconnaissance: Discovery, Exploration and Settlement, 1450–1650* (London: Phoenix Press, 2000).
- Pearson, Michael, *Great Southern Land: The Maritime Exploration of Terra Australis* (Canberra: Department of the Environment and Heritage, 2005).
- Pelletier, Monique, "Le Globe Vert et L'Oeuvre Cosmographique du Gymnase Vosgien," *Bulletin du Comite Francais de Cartographie* 163 (2000).
- Pène du Bois, Henri, *The Library & Art Collection of Henry De Pene Du Bois, of New York* (Leavitt, 1887).
- Polk, Dora, *The Island of California: A History of the Myth* (Lincoln: University of Nebraska Press, 1995).
- Randles, W.G.L., "Classical Models of World Geography and Their Transformation Following the Discovery of America," in Wolfgang Haase and Meyer Reinhold (editors), *The Classical Tradition and the Americas: European Images of the Americas and the Classical Tradition, Part I* (Berlin: Walter de Gruyter, 1993).
- Randles, W.G.L., "The Evaluation of Columbus' 'India' Project by Portuguese and Spanish Cosmographers in the Light of the Geographical Science of the Period," *Imago Mundi* 42 (1990).
- Relaño, Francesc, *The Shaping of Africa: Cosmographic Discourse and Cartographic Science in Late Medieval and Early Modern Europe* (Aldershot: Ashgate, 2002).
- Rennie, Neil, *Far-Fetched Facts: The Literature of Travel and the Idea of the South Seas* (Oxford: Clarendon Press, 1995).
- Richardson, W.A.R., "A Cartographical Nightmare—Manuel Godinho De Erédia's Search for India Meridional," in Francis A. Dutra and Joao Camilo dos Santos (editors), *Proceedings of the International Colloquium on the Portuguese and the Pacific* (Santa Barbara: University of California, 1993).
- Richardson, W.A.R., "Mercator's Southern Continent: Its Origins, Influence and Gradual Demise," *Terrae Incognitae* 25 (1993).

BIBLIOGRAPHY

- Richardson, W.A.R., *Was Australia Charted before 1606? The Java La Grande Inscriptions* (Canberra: National Library of Australia, 2006).
- Roberts, Willem C.H., *The Dutch Explorations, 1605–1756, of the North and Northwest Coast of Australia* (Amsterdam: Philo Press, 1973).
- Romm, James S., *The Edges of the Earth in Ancient Thought: Geography, Exploration, and Fiction* (Princeton: Princeton University Press, 1992).
- Ronda, James P., *The Exploration of North America: Essays on the Columbian Encounter* (Washington: American Historical Association, 1992).
- Ross, Michael, “The Mysterious Eastland Revealed,” *The Globe* 53 (2002).
- Schilder, Günter, “From Secret to Common Knowledge—the Dutch Discoveries,” in John Hardy and Alan Frost (editors), *Studies from Terra Australis to Australia* (Canberra: Australian Academy of the Humanities, 1989).
- Schilder, Günter, “New Cartographical Contributions to the Coastal Exploration of Australia in the Course of the Seventeenth Century,” *Imago Mundi* 26 (1972).
- Schilder, Günter, “New Holland: The Dutch Discoveries,” in Glyndwr Williams and Alan Frost (editors), *Terra Australis to Australia* (Melbourne: Oxford University Press, 1988).
- Schilder, Günter, “Organization and Evolution of the Dutch East India Company’s Hydrographic Office in the Seventeenth Century,” *Imago Mundi* 28 (1976).
- Schilder, Günter, “The Dutch Conception of New Holland in the Seventeenth and Early Eighteenth Centuries,” *Technical Papers of the 12th Conference of the International Cartographic Association* 2 (1984).
- Schilder, Günter et al. (editors), *Comprehensive Atlas of the Dutch United East India Company*, 7 vols. (Utrecht: KNAG, 2006–2010).
- Schilder, Günter, *Voyage to the Great South Land: William De Vlamingh 1696–1697*, trans. C. De Heer (Sydney: Royal Australian Historical Society, 1985).
- Schilder, Günter, *Australia Unveiled: The Share of the Dutch Navigators in the Discovery of Australia* (Amsterdam: Theatrum Orbis Terrarum, 1976).
- Schwartz, Seymour, *The Mismatching of America* (Rochester: University of Rochester Press, 2003).
- Scott, Robert and Max Jones, *Journals: Captain Scott’s Last Expedition* (New York: Oxford University Press, 2005).
- Sharp, Andrew, *The Voyages of Abel Janszoon Tasman* (London: Clarendon Press, 1968).
- Shirley, Rodney W., *The Mapping of the World: Early Printed World Maps, 1472–1700* (London: Holland Press, 1983).
- Short, John Rennie, *Making Space: Revisioning the World, 1475–1600* (New York: Syracuse University Press, 2004).
- Siebold, Jim, “Slide #113 Monograph: Crates’ Globe,” *Cartographic Images*, available at www.henry-davis.com/MAPS/AncientWebPages/113mono.html, accessed 12 March 2010.
- Simek, Rudolf, *Heaven and Earth in the Middle Ages: The Physical World before Columbus*, trans. Angela Hall (Woodbridge: Boydell Press, 1996).
- Smyth, Marina, “Isidore of Seville and Early Irish Cosmography,” *Cambridge Medieval Celtic Studies* 14 (1987).
- Spate, O.H.K., “De Lozier Bouvet and Mercantilist Expansion in the Pacific in 1740,” in John Parker (editor), *Merchants and Scholars: Essays in the History of Exploration and Trade* (Minneapolis: University of Minnesota Press, 1965).

ANTIPODES: IN SEARCH OF THE SOUTHERN CONTINENT

- Spate, O.H.K., "Erédia, Manuel Godinho de (1563–1623)," in *Australian Dictionary of Biography*, 2 vols., vol. 1 (Melbourne: Melbourne University Press, 1966).
- Spate, O.H.K., "Introduction," in William Eisler and Bernard Smith (editors), *Terra Australis: The Furthest Shore* (Sydney: International Cultural Corporation of Australia, 1988).
- Spate, O.H.K., *The Pacific since Magellan, Volume I: The Spanish Lake*, 3 vols. (Canberra: Australian National University Press, 1979).
- Spate, O.H.K., *The Pacific since Magellan, Volume III: Paradise Found and Lost*, 3 vols. (London: Routledge, 1988).
- Stallard, Avan, "Antipodes to Terra Australis," PhD thesis (University of Queensland, 2011).
- Stallard, Avan, "Navigating Tasman's 1642 Voyage of Exploration: Cartographic Instruments and Navigational Decisions," *The Portolan* 69 (2007).
- Stallard, Avan, "Origins of the Idea of Antipodes: Errors, Assumptions, and a Bare Few Facts," *Terrae Incognitae* 42 (2010).
- Stallard, Avan, "'Better Than the *Da Vinci Code*': The Theological Edifice that Is Gavin Menzies' 1421," *History Australia* 5, no. 3 (2008).
- Stevens, Wesley, "The Figure of the Earth in Isidore's 'De Natura Rerum,'" *Isis* 71, no. 2 (1980).
- Suarez, Thomas, *Early Mapping of the Pacific: The Epic Story of Seafarers, Adventurers, and Cartographers Who Mapped the Earth's Greatest Ocean* (Singapore: Periplus, 2004).
- Suarez, Thomas, *Early Mapping of Southeast Asia: The Epic Story of Seafarers, Adventurers, and Cartographers Who First Mapped the Regions between China and India* (Singapore: Periplus Editions, 1999).
- Thomson, Oliver J., *History of Ancient Geography* (New York: Biblio and Tannen, 1965).
- Thrower, Norman J.W., *Maps and Civilization: Cartography in Culture and Society*, third ed. (Chicago: University of Chicago Press, 2007).
- Trickett, Peter, *Beyond Capricorn: How Portuguese Adventurers Secretly Discovered and Mapped Australia and New Zealand 250 Years before Captain Cook* (Adelaide: East Street Publications, 2007).
- Trounson, A. Donald, "Psitacorum Regio (Region of Parrots): Fact or Fiction?" *The Globe: Journal of the Australian Map Circle* no. 30 (1988).
- Washburn, Wilcomb E., "A Proposed Explanation of the Closed Indian Ocean on Some Ptolemaic Maps of the Twelfth–Fifteenth Centuries," *Revista da Universidade de Coimbra* 33 (1985).
- Watson, J. Wreford, "The Role of Illusion in North American Geography: A Note on the Geography of North American Settlement," *The Canadian Geographer* 13, no. 1 (1969).
- Watts, Pauline Moffitt, "Prophecy and Discovery: On the Spiritual Origins of Christopher Columbus's 'Enterprise of the Indies,'" *American Historical Review* 90, no. 1 (1985).
- Wheeler, Sara, *Terra Incognita: Travels in Antarctica* (New York: The Modern Library, 1999).
- White, Andrew Dickinson, *A History of the Warfare of Science with Theology in Christendom*, vol. 1 (Kessinger Publishing, 2004).
- Wieder, F.C., *Monumenta Cartographica: Reproductions of Unique and Rare Maps, Plans and Views in the Actual Size of the Originals*, 5 vols. (The Hague: Martinus Nijhoff, 1925–1933).

BIBLIOGRAPHY

- Williams, Glyn, "The Achievement of the English Voyages, 1650–1800," in Derek Howse (editor), *Background to Discovery: Pacific Exploration from Dampier to Cook* (Berkeley: University of California Press, 1990).
- Williams, Glyndwr, "New Holland to New South Wales: The English Approaches," in Glyndwr Williams and Alan Frost (editors), *Terra Australis to Australia* (Melbourne: Oxford University Press, 1988).
- Williams, Glyndwr, *The Expansion of Europe in the Eighteenth Century: Overseas Rivalry, Discovery and Exploitation* (London: Blandford Press, 1966).
- Williams, Glyndwr, *The Great South Sea: English Voyages and Encounters 1570–1750* (London: Yale University Press, 1997).
- Williams, John, "Isidore, Orosius and the Beatus Map," *Imago Mundi* 49 (1997).
- Williams, John, *The Illustrated Beatus: A Corpus of the Illustrations of the Commentary on the Apocalypse*, 5 vols. (London: Harvey Miller Publishers, 1994).
- Woodward, David, "Starting with the Map: The Rosselli Map of the World," in David Woodward, Catherine Delano-Smith and Cordell Yee (editors), *Approaches and Challenges in a Worldwide History of Cartography* (Barcelona: Institut Cartografic de Catalunya, 2001).
- Woodward, David, *Art and Cartography* (Chicago: University of Chicago Press, 1987).
- Wright, John K., *Human Nature in Geography: Fourteen Papers, 1925–1965* (Cambridge: Harvard University Press, 1966).
- Wright, John K., "Terra Incognitae: The Place of the Imagination in Geography," *Annals of the Association of American Geographers* 37, no. 1 (1947).
- Wright, John K., *The Geographical Lore of the Time of the Crusades: A Study in the History of Medieval Science and Tradition in Western Europe* (London: Dover Publications, 1965).
- Zandvliet, Kees, *Mapping for Money: Maps, Plans and Topographic Paintings and Their Role in Dutch Overseas Expansion During the 16th and 17th Centuries* (Amsterdam: Batavian Lion International, 1998).

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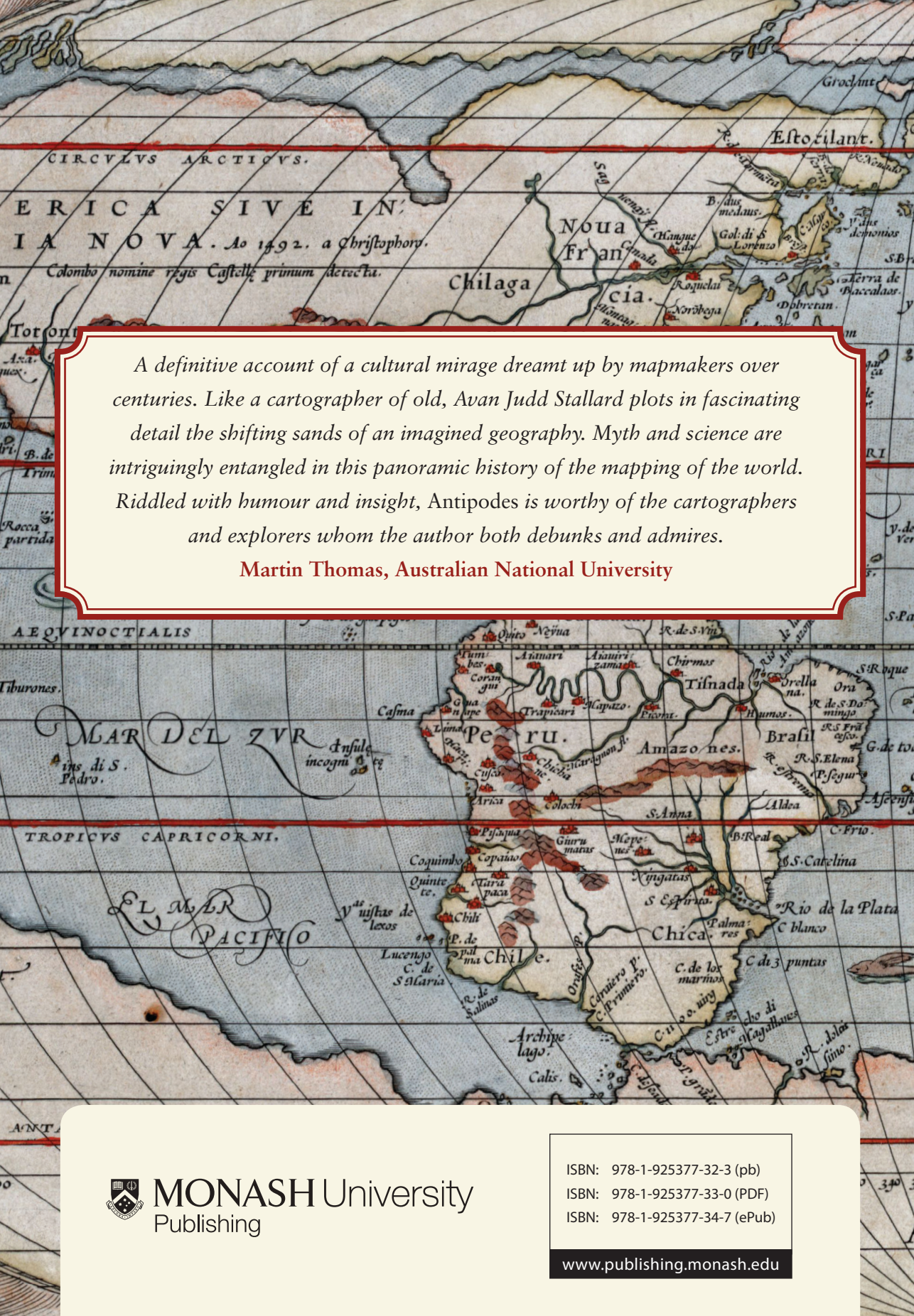
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