II.1
A Brief History of Geography

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Geography has meant, and still means, different things to different people. For some it conjures up images of far-away places and intrepid explorers going where none has gone before. For others, the geographer is regarded as the person with an encyclopaedic knowledge of the longest rivers, the highest mountains, the largest cities and so on – a sort of talking atlas invaluable for television quiz-shows but useful for little else. For still others geography is the subject that deals in charts and globes; history is about chaps, it is said, geography about maps. In all likelihood today's professional geographers would reject all these commonplace notions as definitions of their discipline and provide their own explanation of just what geography is all about.

I do not intend to adjudicate these disparate claims. All of them – and doubtless many others – are valid interpretations of geography to one degree or another. Instead my intention is to look at what people *have taken geography to be* over the years and to trace the evolution of what I like to call 'the geographical tradition'. Accordingly I have no desire to defend any particular definition of geography, as many historians of the subject have done; rather I just want to consider some of the different ways people have thought about it down through the ages.

In order to confront this task I propose to identify some ten different discourses – conversations, if you will – in which geography has been engaged. Certainly my list is not exhaustive. Nor does it have to be. For the heart of my argument is simply that geography changes as society changes, and that the best way to understand the tradition to which geographers belong is to get a handle on the different social and intellectual environments within which geography has been practised. Some of the topics which we shall explore will undoubtedly seem bizarre, or exotic, or quaint to modern eyes; but if we are to take history seriously we will have to learn to understand past geographies in *their own contexts* without subjecting them to twentieth-century judgements.

To the Ends of the Earth

The story of geography, like the history of many sciences, has frequently been traced back to the Greek and Roman worlds, to figures like Thales, Anaximander, Herodotus, Strabo, Ptolemy and a dozen or more others. Their contributions – frequently of a mathematical character – did much to advance geographical theory. But it was through the explorations of Muslim scholar-travellers like Ibn-Batuta and Ibn-Khaldun, and the voyages of the Scandinavians, the Chinese and medieval Christian adventurers that first-hand knowledge of the world began to contribute to geographical lore. Eventually the European explorers of the fifteenth and sixteenth centuries helped to transform

these earlier fragmentary gleanings into a more or less coherent body of knowledge about the terrestrial globe.

Indeed it could be argued that the voyages of discovery, so called, made a vital contribution to the development of science in the West. Many of these seafarers, for example, saw themselves as involved in world-scale experiments to test the accuracy of Renaissance concepts inherited from the ancient classical world. This is not to say, of course, that they all thought of themselves as proto-scientists; many were just lustful for adventure on the high seas or greedy for the untold riches of exotic kingdoms. But the information they gathered helped challenge the scholarly authorities of the day by demonstrating that people *did* inhabit the southern hemisphere or that there were varieties of plant and animal that just did not fit into Aristotle's taxonomy. Besides all this, the whole business of navigation required sophisticated technological and scientific skills to determine a ship's position at sea and, more important, to chart the way back to safe havens. So it is not surprising that the navigational institute that Prince Henry the Navigator established at Sagres in the early fifteenth century – and which drew together experts in cartography, astronomy and nautical instrumentation – has been seen as a crucial early move in the development of Western science. The names of Diego Cão, Bartholemew Dias, Vasco da Gama, the Cabots, Christopher Columbus, Francis Drake and Ferdinand Magellan – to name but a few – thus all occupy as important a niche in the early annals of modern geography as the re-publication of Ptolemy's *Geography* in 1410.

Of course geography's engagement with exploration did not come to an end in the fifteenth century. Voyages of reconnaissance continued to expand geographical knowledge of the globe throughout later centuries and special mention might be made of the eighteenth-century journeys of James Cooke and Joseph Banks into the South Pacific and the nineteenth-century circumnavigations of such naturalists as Charles Darwin and Thomas Henry Huxley. At the same time the significance of scientific travel was being championed by men like Alexander von Humboldt (plate II.1.1), Henry Walter Bates and Alfred Russel Wallace through their own explorations of the Far East and South America. Indeed the Royal Geographical Society, which did so much to advance overseas exploration in the Victorian era, continues to sponsor expeditions of this sort right up to the present day. Moreover geographers have continued to speak of expeditions in other contexts: expeditions into the urban jungle, ethnic ghettoes and other such 'threatening' environments. The vocabulary of exploration thus continues to capture the spirit of certain aspects of the geographical tradition. My argument here is simple: geography has always been closely associated with the exploring instinct.

Geography is Magic!

Even while new geographical knowledge was challenging accepted scholarly traditions there were ways in which geographical lore continued to confirm long-held beliefs. Thus, just as other nascent sciences were deeply implicated in various magical practices, so too was geography. This is plain for example in the early development of modern astronomy. Much interest in the stars was stimulated by astrological concerns and among the earliest Copernicans there is evidence of a continuing interest in that enterprise. Kepler, for example, cast his own horoscope every day, and in so doing he was far from unique. Aside from this the belief that various plants possessed hidden occult powers that could be harnessed for medicinal powers led to important pharmacological and chemical findings. Moreover the writings of such giants of the scientific revolution as Bacon and Newton reveal a substantial interest in such seemingly arcane practices.

Geography, of course, was no less identified with astrology and natural magic than these other fields of discourse. Numerous early writers on geography, like William Cunningham, Thomas Blundeville, John Dee, and Thomas and Leonard Digges involved themselves in various aspects of magic. For some, like Dee, the key lay in the mystical significance of number – the celestial and terrestrial worlds were held together in certain mathematical relationships in such a way that changes in one directly influenced the other. For others, like the Digges, astrology was of first importance and their early meteorological efforts were all of a piece with astrological knowledge; to them weather forecasting required acquaintance with the significance of celestial changes in the moon, the stars and the planets. For still others, notably Jean Bodin and Cunningham, the diversity of the world's peoples and cultures was closely bound up with which sign of the zodiac governed the particular region they inhabited.

No doubt this chapter in the history of geography will seem utterly bizarre to modern eyes. But it would be mistaken to ignore it, or suppress it, as historians of geography have all too frequently done, because it demonstrates the role of apparently non-rational discourse in the evolution of the discipline. Moreover, this geographical interest in the mystical has continued to manifest itself right up to the twentieth century. Recent work has shown various mystical elements in the history of the modern conservation movement – in late nineteenth-century and early twentieth-century figures like

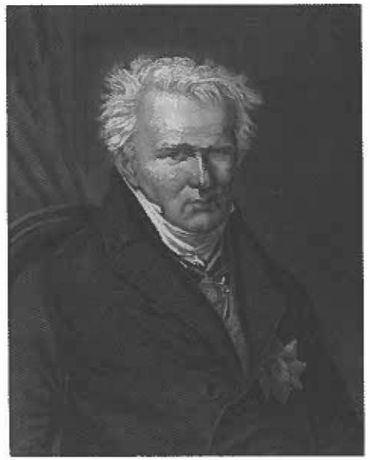

Plate II.1.1 Alexander von Humboldt, who died in the same year (1859) that Charles Darwin's *The Origin of Species* was published, made important contributions to many areas of natural history. His influential book *Cosmos: A sketch of a physical description of the universe* was published from 1845 onwards.

Francis Younghusband and Vaughan Cornish, for example – and that strain of thought which spiritualizes, even divinizes nature, continues to be with us to the present day.

A Paper World

The knowledge explosion occasioned by the European voyages of exploration soon brought new cartographic challenges and accomplishments. To be sure, the science of cartography was not born in the sixteenth century. Portolano sea charts had been circulating for long enough around the Mediterranean and of course there already existed numerous symbolic depictions of the world in the form of various Mappaemundi. But now whole new worlds had to be reduced to paper and that brought new challenges. Gerard Mercator solved some of the mathematical problems associated with transferring a sphere to a flat surface with his famour map projection. Soon a series of Dutch and Belgian cartographers such as De Jode, Jodocus Hondius and Petrus Plancius splendidly mapped the progress of overseas discovery. Closely associated with these accomplishments was the development of surveying skills and instruments, and so instrument making was frequently one of the craft competences of the early cartographer.

Map making, of course, was as artistic a practice as it was scientific. Frequently maps were elaborately decorated and skilfully executed, so much so that they frequently became *objets d'art* in their own right. Besides, the whole cartographic impulse in painting is nowhere more clearly manifest than in the Dutch art of the seventeenth century. And this serves to remind us of the early associations between geography and humanistic endeavours.

In the following centuries geography's links with cartography have continued to be maintained. The progress of the Ordnance Survey's work in nineteenth-century Britain was regularly reported at the Royal Geographical Society; geographers frequently involved themselves in the thematic mapping of drift geology, soils, disease, populations and so on; now in our own day geographers maintain this tradition when they turn to remote sensing and computer mapping. The mapping drive has thus always been strong in geography; so much so that Carl Sauer believed that, if a geographer was not fascinated by maps to the extent of always needing to be surrounded by them, then that was a clue that he or she had chosen the wrong profession.

A Clockwork Universe

In the wake of the Mechanical philosophy that came to dominate science in the seventeenth century, there were numerous efforts to retain the integrity of religious discourse in the face of the apparently naturalistic implications of a mechanistic world picture. One of the most common strategies, defended by men like Newton and Boyle, was to argue that the world was essentially like a grand clock, comparable with that at Strasbourg, and that by investigating the world machine scientists were interrogating the very mind of the Great Designer. This logistic move was to play a key role in the evolution of the geographical tradition. Numerous writers during the period of the Enlightenment developed a style of natural history called Physico-theology. Regarding the world as teleologically designed and providentially controlled they interpreted the world environment as a functioning revelation of divine purpose. In the writings of Thomas Burnet, John Ray, John Woodward, William Derham, as later in the works of William Paley, the world's geography

– its physical and organic forms – was seen as pointing beyond itself to nature's God.

Of course these practitioners of natural theology differed frequently among themselves on both detail and strategy; but between them they delivered to history a vision of nature as a holistic system, a sort of ecological picture, that emphasized the interrelationships and interdependences among organisms and environment. Here the image of a warfare between science and religion turns out to be something of a historical fiction. Indeed there were geographers like Bartholomaus Keckermann in Germany (author of *Systema Geographicum*) and Nathanael Carpenter in England (author of *Geography Delineated Forth*) whose commitment to the theology of the Reformation encouraged them to *reject* ecclesiastical authority in matters of science and to argue for the liberation of science from scholastic censure.

This particular intellectual trajectory continued to inform geographical thought over the next centuries. In the nineteenth century Karl Ritter exemplified the same stance, and the Ritterian vision was propagated in the United States by his disciple-devotee Arnold Guyot. Besides these there is much evidence of teleological thinking in the works of Mary Somerville and David Thomas Ansted in England, and Matthew Fontaine Maury and Daniel Coit Gilman in the United States. Indeed H. R. Mill, writing in 1901, was entirely correct when he noted that teleological modes of reasoning were 'tacitly accepted or explicitly avowed by almost every writer on the theory of geography'. Even more recently the self-same teleological vision comes through in the writings of the Dutch geographer De Jong. Here geography continues to operate as the handmaiden to theology.

On Active Service

If, as we have just seen, geography could subserve theological ends, its services to external interests did not stop there. Throughout the nineteenth century it was frequently cast as the *aide de camp* to militarism, imperialism, racism and doubtless a host of other 'isms'. Maps, it was long known, were as vital implements of warmongering as gunnery, and it is no surprise that institutional geography first flourished in military schools. Indeed the prehistory of the Ordnance Survey can be traced back to military needs during the Jacobean era, while in the twentieth century geographers like Isaiah Bowman played their parts in America's involvement with post-war European reconstruction.

By the same token British expansion overseas aroused a renewed interest in geography for its functional purposes. At the inaugural meeting of the Royal Geographical Society of London in the early 1830s the need for such a society was defended on the grounds that geography was vital to the imperial success of Britain as a maritime nation. Accordingly there was, and continued to be, considerable debate in British – not to mention German and American – geography on the subject of acclimatization because the question of white adaptation to the tropical and subtropical worlds was of pressing international significance. Here geographers worked closely with medical experts to delineate the signifiance of climatic factors. Indeed in so doing they kept alive an ancient tradition, rejuvenated by Montesquieu, that explained the cultural in terms of the natural.

Besides this there were certain aspects of geographical theory ripe for manipulation. Environmental determinism – a doctrine emphasizing the moulding power of physical conditions – could be used for a range of purposes. Some found in it justification for a racial ideology;