

Geography

A Global Synthesis



Prentice
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Peter **Haggett**



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PETER HAGGETT

University of Bristol

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Hall

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PREFACE

I start to write this preface somewhere high over the Bay of Bengal. The 747 appears to be motionless and below great tropical tower clouds boil up on the mid afternoon heat. In reality the aircraft is moving at approaching one thousand kilometres per hour, the outside air temperature is down to -46°C (at the height of 11,000 metres), and I wouldn't survive a few seconds outside the protective cradle of the aircraft hull. I'm on my way to visit grandchildren in Australia and I reflect on the changes between my childhood, growing up in an English village, and theirs today.

Then, in the early 1930s, writing the above paragraph would have been dismissed as science fiction. Electricity had just arrived in our home but a refrigerator was a distant dream, the rural charabanc was the only reliable road transport from the village, our wireless set was still at the crystal stage. Then a journey to Australia by ship would have taken six weeks (and many months' earnings), air transport links still didn't exist, though one Bert Hinkler had just broken the record for a sixteen-day trip from London to Darwin by light aircraft. Most striking of all has been the change in the planet Earth. In the year of my birth the world's population had just reached two billion: today it is three times larger at over six billion. In those seven decades the annual rate of resource extraction has grown nearly a hundredfold and international travel a thousandfold.

Whether my rural roots and the love of the varied West Country landscape played any part in my decision to read geography at Cambridge I shall never know. World War II and petrol bans meant that I had to obey Carl Sauer's dictum that 'locomotion should be slow, the slower the better'. At first a battered bicycle allowed an ever-widening range of landscapes in England and postwar France to be explored. My first continent outside Europe was South America and it was there that I had the good fortune to meet the Brazilian novelist, Jorge Amado, learnt to love his perceptive writing on the Brazilian scene, and eventually stumbled on the geography-hungry Chico Pacheco whose words open this preface.

Whether the book now in your hands would have met Chico's demands I must leave to him. It was started a generation ago when I was visiting Northwestern University in Chicago and talked with a young economist, then editor for Mark Twain's old American publishing house. He encouraged me to write a textbook aimed not at those who were already well versed in the subject, but at those – like Chico Pacheco – who were coming to it for the first time and who would probably be going on to other careers. The book that eventually emerged was called *Geography: A Modern Synthesis* (borrowing the subtitle from the biologist Julian Huxley). It was first published in 1972, ran through three further revisions, was translated into six languages, and continued in print to the present.

Geography: A Global Synthesis is its successor. It was written for a new

'If I ONLY KNEW geography!' Chico Pacheco kept repeating the phrase between clenched teeth, lamenting the wasted days of his youth; He had been a notorious cutter of classes. And all the time he had lost during his life, frittering it away on nonsense, when he could have devoted himself, body and soul, to the intensive study of geography, a science whose utility he had only come to realize! ... 'I'll have to send for Bahia for some textbooks'.

JORGE AMADO 'Of the Drawbacks of Not Knowing Geography, and the Deplorable Tendency to Bluff at Poker', in *Os Velhos Marinheiros* (1963)

century, with a new title and with new features but continues to strive for the same goals as its predecessors. *Geography* is an attempt to present the whole spectrum of geography in a contemporary context and within a single volume. It tries to synthesize at two levels: first, by bringing together the different traditions and themes within the field; second, by stressing the synthesizing role of geography as a whole in relation to neighbouring fields. The book is designed to introduce the student with no previous geographic training to a field of rapidly expanding horizons and increasing consequence both as an academic subject and as an applied science. Lying athwart both the physical and social sciences, geography challenges students to abandon familiar and comfortable 'straightjackets' and to focus directly on relationships between people and the environment, their spatial consequences, and the resulting regional structures that have emerged on the earth's surface. Geography is uniquely relevant to current concerns both with the environment and ecology and with regional contrasts and imbalances in human welfare.

No single exponent of geography or any other academic field of enquiry can write about the whole of it in detail. Past efforts to do so seem naïve in retrospect. The problems that face the beginning student in geography, however, are now so complex that the challenge must be met. It is too easy to take the view that all one can or should do is to have a student take introductory courses in various easily identifiable subfields – physical geography, cultural geography, and so on – and hope that somehow these will produce an integrated view of geography as a whole. The osmosis, however, by which this is supposed to take place is rarely clearly defined.

To begin with the parts of a field of enquiry and go on to the whole seems to me to be a tactic of convenience, forced on us by the rising tide of research and continuous fission of new subdisciplines. Surely, to confine larger questions of the nature of geography to postgraduate seminars is an inversion of desirable sequence of scholarship. We owe it to those who are starting in a field, some of whom we hope will follow us, to look around and ahead just as far as we can. Therefore, in this book I have turned away for a while from my own research patch (a small corner of medical geography) and forced myself to put the various parts of geography together into what seems to me at this time to be an integrated form. I expand further on the structure of the book and the ways in which it can be used in Appendix C of the book.

With each succeeding decade a writer's debts grow. My original debt was to Cambridge where I studied as an undergraduate and graduate student and taught for many years. For the last 35 years my base has been in England's West Country, at the University of Bristol. My debt to successive generations of students and colleagues there is incalculable. Both Cambridge and Bristol allowed me free rein to roam widely across the academic world in pursuing my research. In the United States, I first taught at Berkeley and have subsequently held posts at Pennsylvania State, Wisconsin, Minnesota. Canada provided bases at Toronto, McMaster, and York; Australia at ANU and Monash; and New Zealand at Canterbury. Kuala Lumpur, Singapore, and Bandar provided experience in the growing universities of south and east Asia. Prolonged periods in Sweden and Iceland, and shorter visits to Denmark and Finland have provided rewarding insights into Scandinavian geography. Outside geography departments I've had the privilege to work in the leading epidemiological centres, notably the Centers for Disease Control (CDC), Atlanta, and the World Health Organization (WHO) at Geneva. All these years have left marks on the form and structure of the book.

To mention individual scholars is to open up an unending stream of debts. Don Meinig of Syracuse University edited the initial volumes from which this book has grown and I'm grateful to his outstanding example of scholarship and his wise counsel over the decades. I've been fortunate in my academic climbing companions over many years: Richard Chorley and Andy Cliff (Cambridge) and Matt Smallman Raynor (Nottingham) will recognize many sections stemming from our joint research. Geographers never meet but to talk and debate issues and Ron Abler (AAG), Antoinne Bailey (Geneva), Brian Berry (Texas), Sofus Christiansen (Copenhagen), Robert Geipel (Munich), Torsten Hägerstrand (Lund), David Harvey (Johns Hopkins), Ron Johnston (Bristol), Les King (McMaster), David Rhind (London), Ian Simmons (Durham), David Stoddart (Berkeley), and Alan Wilson (Leeds) have had more effect on this book than they will know. Sadly, the turning globe brings losses and I mourn the passing of three good friends, Jim Parsons and Jay Vance (Berkeley) and Peter Gould (Penn State), who shaped my thinking.

One learns most of all from one's undergraduate and graduate students. I count it a special privilege to have taught and learnt from Kevin Cox (Ohio State), Pip Forer (Auckland), Tony Gatrell (Lancaster), Ray Harris (Durham), Bill Macmillan (Oxford), Glen Norcliffe (York), Nigel Thrift (Bristol), and Roly Tinline (Queen's) among many others. There are too those anonymous referees and commentators who raised questions and clarified meanings and to them I both give thanks and invite readers of this new volume to join their ranks.

Complex books are increasingly the result of a team effort and I'm indebted to the talented team assembled by Matthew Smith at Pearson Education. It has been a pleasure to work with Tina Cadle, Ros Woodward, Faith Perkins, and the behind-the-scenes army who designed the book and drove the programme forward. The book as you see it is very much their creation.

Prefaces are too public a place to express the personal indebtedness of an author to family – they will know just how much I have to thank them for. Oskar Spate, the dean of Australian geographers and a member of my old Cambridge college, put the public and private life of a geographer better than my words can. His aim, he said, was simply 'to make what one can of this our earth, and if the cosmic order holds nothing for us either of despair or hope, to find our happiness in social duty and private love.' I have been blessed in both. I dedicated my first book a generation ago to my wife Brenda; we met as students a half century ago. This book (likely to be my last) I dedicate to the youngest of our four children, wishing God Speed to Andy, Janice, and Isobel, as they journey on into the new century.

PETER HAGGETT
Chew Magna

Special conventions used in this book

This book follows the normal rules of scientific writing but two special conventions used should be noted.

Geographic Scale For maps showing specific parts of the earth's surface, the normal linear scale in kilometres (or miles) is replaced by a unique star system which gives the magnitude on a scale that runs from the global (*) to the local (*****). Readers are advised to look at *Box 1.C: Orders of Geographic Magnitude* (pages 21–22) which describes the use of the scale in detail. Note that the scale is logarithmic so that the size difference between ** and *** is ten-fold, ** and **** a hundredfold, and so on.

Geographic Terms The language of geography is a complex one drawing from both the natural and behavioural sciences. In some cases commonplace terms are used in geographic writing in an unusual way. Terms of special interest in each chapter are therefore highlighted in *blue italics* in the text and *black italics* in boxes and figure captions. Such terms are also gathered together in *Appendix A: Glossary* together with a selection of other key words likely to be helpful to readers of this book.

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by Professor Peter Haggett



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TO THE STUDENT

Starting a course in a new subject at college is like driving into an unfamiliar city. We see sprawling new suburbs, the bustling freeways, the pockets of decay, but find it hard to get an overall impression of the structure or to know where we are. Geography is a Los Angeles among academic cities in that it sprawls over a very large area and merges with its neighbours. It is also hard to be sure which is the central business district.

This book has been written specifically for 'newcomers to the city' who have not previously taken courses in geography at college. It attempts to introduce some of the basic concepts geographers use as well as some of the essential environmental facts that form their background. The emphasis of the book is on ideas, or concepts. But these cannot be applied in a vacuum. Certain technical material has therefore been placed in separate discussions that are set outside the main text, and you may skip or explore them depending on the amount of time at your disposal and your taste.

The approach is essentially non-mathematical, and the book can be understood without any training in mathematics. On the other hand, geographers are using mathematics increasingly in their research, and certain aspects of a topic can be stated more explicitly in mathematical terms. These aspects, too, are presented outside the main text in separate discussions. You may wish to return to this material on a second reading.

For those of you who may be going on to further work in geography, each chapter makes some suggestions for further reading in the section entitled 'One Step Further ...'. These suggestions are largely confined to a handful of books that, in turn, open up other aspects of a subject. The final chapter points out some of the areas in which further training can be obtained and the kinds of courses you may wish to take.

Each of you may have your own favourite method for studying a textbook. Certainly no author can tell you which way is best for you, though many students find it useful to skip through a whole chapter quickly to get the general story. Figures have been designed to be self-contained wherever possible and so have been given somewhat fuller captions than normal. When, after a more lengthy reading of the chapter, you feel confident that you've understood it, you can turn to the concepts listed for review in the 'Reflections' section to check yourself.

For those of you whose formal study of geography takes you no further than this book, I hope the brief acquaintance will have been a provoking one. If you take with you even some small part of the concern and fascination geographers experience in their exploring of the earth's environment and our place in it, then I will feel that my job is done.

P.H.

To teach I would build a trap such that, to escape, my students must learn.

ROBERT M. CHUTE,
Environmental Insight (1971)





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