

Given the lack of 'off the shelf' population projection models this book is valuable in setting out the options for purpose-built models. It covers all the pitfalls of special issues, such as students and armed forces, that may be critical for some areas but of no consequence to others. However, demographers have not been successful at predicting the consequences of social changes that have affected the timing of births and migration patterns. Writing in the week of the World Trade Centre atrocity one wonders what its impact will be for the future location patterns of workplaces and hence residential settlement.

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**Mapping cyberspace** by M Dodge, R Kitchin; Routledge, London, 2001, 260 pages, £60.00 cloth, £19.99 paper (US \$99.00, \$32.99) ISBN 0 415 19883 6, 0 415 19884 4

Let us start with the title. *Mapping Cyberspace* is not an atlas of maps of cyberspace for the coffee table or airport bookshop market. It is a serious academic text aimed at advanced students and academics. Given that it is not really an atlas of cyberspace maps, the title is not really appropriate. The challenging, analytical, and reflective nature of the content would have been better represented by something like *Geographies of Cyberspace*. The authors have in fact produced a separate *Atlas of Cyberspace* (Dodge and Kitchen, 2001; <http://www.kitchin.org/atlas/index.html>).

*Mapping Cyberspace* is really about the impact of information communication technologies (ICTs) on space–time relations and social, cultural, and economic life. The authors define cyberspace as the conceptual space within ICTs. Herein lies the problem with mapping the geographies of cyberspace. They are often ephemeral, discontinuous, transient, and non-uniform. Cartographers are familiar with these problems as well as the need to distinguish between conceptual (mental), cartographic, and physical representations, as Gatrell and others have documented (Gatrell, 1983).

The first chapter sets the scene for the book by offering some definitions and history, and by reviewing the scope of the book. The next two chapters, “Geographies of the information society” and “Geographies of cyberspace”, are essays that provide the heavyweight academic justification for examining the topic and discuss various academic theories about how analysis can proceed. The remaining eight chapters constitute a discussion of examples of cybergeographies. The authors propose and use a classification of maps based on three axes: (1) geographic referent (ICTs/cyberspace), (2) immateriality/materiality (material, spatial form), and (3) map/spatialisation form (static, animated, interactive, and dynamic). Confused? To take the first one what is the difference between a cyberspace map of an ICT and cyberspace? The former is about things that can be represented in geographic space (for example, network devices, users, and traffic), whereas the latter is represented in nongeographic space (for example, topological or relational views of networks created for the purpose of illustrating connectivity rather than locating physical devices). This dual logical/physical representation of networks is very common across applications from airlines systems to domestic electricity distribution. Immateriality/materiality is concerned with whether the phenomenon being mapped is material (for example, physical conductor) or immaterial (for example, flow of electricity). Map/spatialisation form is more obviously the form of the phenomenon. One of the problems of this classification is its complexity; assigning map instances to classification space is not obvious. The final chapter, “Future mappings of cyberspace” returns to the academic naval gazing.

The maps themselves cover an eclectic range of topics including Internet network topologies, physical device layout, ISP locations, usage traffic, cyberart, and conceptual representations in two and three dimensions. Several of the maps were originally interactive. Many of the maps are best experienced at the website accompanying the book (<http://www.geog.ucl.ac.uk/casa/martin/atlas/atlas.html>). The site is superb and reflects the cutting edge nature of the topic. The website allows readers to experience the geography of cyberspace firsthand, as well as publication of updates about this ever-changing digital world. A quick survey suggests it is updated monthly on average.

It is a dense book, both physically and intellectually. There are over 200 pages of text containing about 100 maps (28 of them in color). The diagrams are on the whole well reproduced given the demands of reproducing maps of the Internet on a comparatively small, static, paper medium. At £19.99 for the paperback it represents comparatively good value for money. The extensive list of references is especially useful. In a technical book such as this I would also have liked to see a 'list of acronyms'. If anything the book is too long; I thought the material on VR, for example, was superfluous given the main focus.

*Mapping Cyberspace* is one of the first, if not the first book about the geographies of the Internet. It is an eclectic compendium of cyber-information and a must read for anyone serious about spatial, geographic, and cartographic representations of cyberspace. The collection of maps is superb, especially when used in conjunction with the website. As a GIS practitioner I was most interested in the material describing the maps themselves; others may have more of an appetite for the chapters dealing with the implications of the social and analysis.

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### References

Dodge M, Kitchen R, 2001 *Atlas of Cyberspace* (Addison-Wesley, Reading, MA)

Gatrell A C, 1983 *Distance and Space: A Geographical Perspective* (Oxford University Press, Oxford)

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**Managing sustainable development** (2nd edition) by M Carley, I Christie; Earthscan Publications, London, 2000, 322 pages, £35.00 cloth, £15.95 paper (US \$60.00, \$25.00) ISBN 1 85383 445 9, 1 85383 440 8

The first edition of this book was well received when it appeared in 1992 and during the intervening years the once lonely voices of people like Michael Carley and Ian Christie have been listened to. Highly influential international conferences at Rio, Istanbul, Kyoto, and Buenos Aires have spread the word and most governments are now committed, at least in principle, to the idea of sustainable development. It seems almost paradoxical, therefore, that the authors should begin their preface to the second edition with the observation that "there is still no substantial agreement on what this [sustainable] means or how to achieve it" (page vii). Undeterred, they segue to the position on which the book is predicated: the need to establish guidelines for genuine sustainable development. It turns out that what this entails is that there can be no great answers to assist environmental managers, who must instead resign themselves to 'muddle through', though in a more thoughtful and responsive way than before. On the face of it, this seems a somewhat depressing premise to reach after eight years' gestation. However, the authors speak from a wealth of experience and on this almost platitudinous basis they succeed in building a pragmatic case to convince the reader that this kind of muddling through—identified as the action network approach to environmental management—can really work.

The first edition was regarded both as a tour de force and as a suitable undergraduate text, which was perhaps both a reflection of the nature of the field and of the book's content and structure. The first part looks at ecology and political change. Part 2 focuses on the dominance of Western thought in science, technology, and politics. In part 3 the relationship between the global economy and local democracy is explored. The authors' own thesis unfolds against this background and by part 4 the reader is well prepared for a complete exposition of their ideas on innovative management for sustainable development. As in the first edition, a strength of the book is the inclusion of several case studies which appear in part 5.

The argument throughout is balanced and presented within an appropriate and thoroughly referenced academic framework. Although the reader is left in no doubt about the authors' commitment to the principles they expound, mentors may be assured that impressionable minds will not be exposed to any excess of proselytising zeal—a fear that might not always be entirely groundless in the wider context of a field often given to factional debate. There are no calls here for wholesale deindustrialisation or the dismantling of Western financial institutions. Even so, it is fair to note that the authors are not on the side of the World Bank or of those who argue that the problems largely caused by technology-inspired growth can be solved by the same means. In this light, it is reassuring to note the historical depth of the early