

The Cognition of Geographic Space

Rob Kitchin and Mark Blades

From driving the car to work to doing the shopping, our daily lives consist of a myriad of spatial behaviours – movements across and within spatial environments. Each day we make hundreds of complex spatial choices and spatial decisions. In the vast majority of cases we rely not on external references such as maps to make these choices but upon a previously acquired spatial understanding of the world in which we live – we rely upon our mind's spatial representation of the environment, our so-called 'cognitive map'.

How we perceive our spatial environment, how our mind stores such information, and how we use it to make a wide variety of complex spatial decisions, are some of the concerns of cognitive mapping. These questions are fundamental for a wide range of disciplines and cognitive mapping has applications in environmental planning, cartography, transportation, migration, route learning and wayfinding, business location and consumer behaviour.

In this first comprehensive overview for more than twenty years, Rob Kitchin and Mark Blades synthesize ideas and empirical findings from geography, planning, cartography, anthropology, computer science, psychology and cognitive science to provide a critical assessment of how we think about and behave in geographic space. They detail the current 'state of play' of cognitive mapping research, with detailed analysis of how spatial knowledge is created, stored, used and measured. Using these results and their own empirical research they put forward a new conceptual model of cognitive mapping which integrates research focused on specific aspects of cognitive mapping, and unites the theoretical traditions of behavioural geography and environmental psychology. In the final chapter they outline a research agenda to guide future studies.

This new book from two leading researchers will be welcomed by those looking both for new ideas and the broader picture in this wide-ranging field of study.

Rob Kitchin is Senior Lecturer in Human Geography and Research Associate of NIRSA at the National University of Ireland, Maynooth. **Mark Blades** is Senior Lecturer in the Department of Psychology at the University of Sheffield.

Cover illustration: 'Evolution II' by James Quinn, www.QuinnArt.com

Cover Design: Steve Leary

I.B.Tauris Publishers

LONDON • NEW YORK

www.ibtauris.com

ISBN 1-86064-705-7



9 781860 647055

Contents

Figures and Tables	vi
Preface	viii
1. Introducing Cognitive Mapping	1
2. Models of Cognitive Mapping	11
3. Learning and Acquisition of Cognitive Maps	33
4. Structure and Form of Cognitive Maps	57
5. Development of Cognitive Maps over the Lifespan	85
6. Individual and Gender Differences in Cognitive Mapping	99
7. Cognitive Mapping and Disability	111
8. Methods and Methodological Issues	127
9. A Model for Future Research	177
10. Future Research	195
References	205
Index	239