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*Colour Plate One: Cartographic Production*  
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### Section One Conceptualising Mapping  

1.1 Introductory Essay: Conceptualising Mapping  
Reviews changing approaches to the practice and understanding of mapping.  

1.2 General Theory, from *Semiology of Graphics*, by Jacques Bertin  
The first formal specification for semiotic rules controlling the representation of different kinds of information in a graphical form.  

An important contribution to the status of maps and mapping reflecting on the need for cognitive and perceptual approaches to map design and cartography as visual communication.  

1.4 The Science of Cartography and its Essential Processes, by Joel L. Morrison  
An overview of cartography as communications science and justification for a progressive and experimental approach.  

1.5 Analytical Cartography, by Waldo R. Tobler  
An early call for a rethinking of cartography deploying a more analytical approach grounded in theory and deploying mathematical principles.
1.6 Cartographic Communication, by Christopher Board
One of the most complete discussions of the communications paradigm and the role of modelling the flow of cartographic information.

1.7 Design on Signs/Myth and Meaning in Maps, by Denis Wood and John Fels
A structuralist reading of the map as a sign system exploring how codes operate to naturalise the cultural work of the map.

1.8 Deconstructing the Map, by J.B. Harley
An influential call for a more engaged, critical and social constructivist approach to mapping drawing upon notions of the map as a form of power knowledge and arguing that we need to deconstruct its discursive power.

1.9 Drawing Things Together, by Bruno Latour
Argues that visualisations play central roles in the practices of knowledge construction and establishes how the map might function as an immutable mobile.

1.10 Cartography Without ‘Progress’: Reinterpreting the Nature and Historical Development of Mapmaking, by Matthew Edney
Argues for an anti-progressive view of cartography as an assemblage in which different modes of knowing the world emerge from local contexts.

1.11 Exploratory Cartographic Visualisation: Advancing the Agenda, by Alan M. MacEachren and Menno-Jan Kraak
Sets out research agendas for a more exploratory and interactive mapping emerging from technological and epistemological change of the early 1990s.

1.12 The Agency of Mapping: Speculation, Critique and Invention, by James Corner
A persuasive argument for the creative and emancipatory potential of mapping as a set of practices exemplified from architecture, and planning.

1.13 Beyond the ‘Binaries’: A Methodological Intervention for Interrogating Maps as Representational Practices, by Vincent J. Del Casino Jr. and Stephen P. Hanna
A call to move beyond orthodox binary thinking and to adopt a more performative approach to mapping informed by feminist critiques.
1.14 Rethinking Maps, by Rob Kitchin and Martin Dodge 108
Rejects the idea of mapping as ontic knowledge, focusing instead upon its processial and emergent qualities as a context-dependant and relational problem solving technology.

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2.2 A Century of Cartographic Change, from Technological Transition in Cartography, by Mark S. Monmonier 122
A progressive overview of technological change in the first eight decades of the twentieth century, focusing upon the nature, combinations and rates of change.

2.3 Manufacturing Metaphors: Public Cartography, the Market, and Democracy, by Patrick H. McHaffie 129
Charts the connections between technological change and the labour process in the context of mass production of official mapping.

2.4 Maps and Mapping Technologies of the Persian Gulf War, by Keith C. Clarke 134
Explores the impacts of war on mapping technologies through a case study on United States military intervention in the first gulf war.

2.5 Automation and Cartography, by Waldo R. Tobler 137
A pioneering consideration of the potential of using the computer in map data, storage analysis output and display.

2.6 Cartographic Futures on a Digital Earth, by Michael F. Goodchild 141
A view from the late 1990s reflecting upon the power of digital technology to widen access to mapping but also diminish traditional visual cartographic skills.

2.7 Cartography and Geographic Information Systems, by Phillip C. Muehrcke 147
Explores the emerging relationship between the map and GIS in the early days of GI technologies.
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Reviews the potential of remotely-sensed technologies in supplementing more traditional urban mapping practices.

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2.10 Mobile Mapping: An Emerging Technology for Spatial Data Acquisition, by Rongxing Li 170
A paper from the late 1990s illustrating the potential of mobile data collection methods subsequently realised in consumer services like Google Street View.

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An illustration of how multi-mediated interaction can deliver new kinds of information design in game like, web-served, hyper-linked applications.

2.12 Imaging the World: The State of Online Mapping, by Tom Geller 185
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3.2 Interplay of Elements, from Cartographic Relief Presentation, by Eduard Imhof 201
Shows the importance of interplay between visual forms in the design of topographic mapping, with a particular focus on the mapping of mountains.
3.3 Cartography as a Visual Technique, from *The Look of Maps*, by Arthur H. Robinson 215
Justifies the need for a visual approach to mapping, focusing in particular upon the design of thematic maps.

3.4 Generalisation in Statistical Mapping, by George F. Jenks 219
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3.5 Strategies for the Visualisation of Geographic Time-Series Data, by Mark Monmonier 231
An early classification and conceptual framework for the consideration of mapping that simultaneously depicts time and space.

3.6 The Roles of Maps, from *Some Truth with Maps: A Primer on Symbolization and Design*, by Alan M. MacEachren 244
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3.7 Area Cartograms: Their Use and Creation, by Daniel Dorling 252
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3.8 ColorBrewer.org: An Online Tool for Selecting Colour Schemes for Maps, by Mark Harrower and Cynthia A. Brewer 261
Describes the development and potential of an online tool for guiding appropriate selection of colour schemes for the representation of quantitative data in choropleth mapping.

3.9 Maps, Mapping, Modernity: Art and Cartography in the Twentieth Century, by Denis Cosgrove 269
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people and their subjectivities play in the mapping process.

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An overview of behavioural geographic understanding of 
cognitive mapping that argues the need for experimental 
investigation and establishes basic principles.

4.4 Natural Mapping, by James M. Blaut 318
Provides arguments and empirical evidence for a cross cultural 
development of map skill acquisition and explores the 
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4.5 The Map as Biography: Thoughts on Ordnance Survey Map, 
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by J.B. Harley 327
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4.6 Reading Maps, by Eileen Reeves 332
An exploration of the cultural meanings attached to maps 
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5.3  Texts, Hermeneutics and Propaganda Maps, by John Pickles 400
A textual approach to mapping focusing on an interpretive case study of propaganda maps.

5.4  Mapping: A New Technology of Space; Geo-Body, from Siam Mapped: A History of the Geo-Body of a Nation, by Thongchai Winichakul 407
A case study exploring the constitutive role of maps in the making of imaginative geographies of nationhood.

5.5  First Principles of a Literary Cartography, from Territorial Disputes: Maps and Mapping Strategies in Contemporary Canadian and Australian Fiction, by Graham Huggan 412
Examines the potential of maps to control, but reminds us of the destabilising potential of maps in feminist, regionalist and ethnic literature, serving as both texts, but also textual events.

5.6  Whose Woods are These? Counter-Mapping Forest Territories in Kalimantan, Indonesia, by Nancy Lee Peluso 422
Shows how state interests deploy mapping as a powerful discourse, but also reveals the potential of counter-mapping by NGOs and local people in a case study of Indonesian forests.

5.7  A Map that Roared and an Original Atlas: Canada, Cartography, and the Narration of Nation, by Matthew Sparke 430
A postcolonial approach to maps as contra-punctual moments in the struggle for identity and space, developed through an analysis of Canadian mapping encounters.

5.8  Cartographic Rationality and the Politics of Geosurveillance and Security, by Jeremy W. Crampton 440
An historical overview of the role of mapping as a surveillant technology deployed as part of governmental regimes to rationalise and discipline citizens.

5.9  Affecting Geospatial Technologies: Toward a Feminist Politics of Emotion, by Mei-Po Kwan 448
Argues for a vision of geo-spatial technologies informed by feminist approaches and notions of affect, that incorporates an emotional and embodied approach to mapping practices.

5.10 Queering the Map: The Productive Tensions of Colliding Epistemologies, by Michael Brown and Larry Knopp 456
Explores the tensions between queer geographies and Cartesian rationality, revealed in ontological and epistemological differences in a community mapping project.
5.11 Mapping the Digital Empire: Google Earth and the Process of Postmodern Cartography, by Jason Farman 464
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