Contents

1 Philosophy, Epistemology, and Cartography ...................... 1
  1.1 Introduction ................................................................. 1
  1.2 Philosophy and Epistemology: Some Scopes ...................... 1
  1.3 Cartography and Knowledge of the World: Philosophical and Epistemological Implications ....................... 2
  1.4 Different ‘Isms’ and Their Repercussions in Cartography and Mapping ........................................... 4
    1.4.1 Positivism and Empiricism ......................................... 4
    1.4.2 Logical Positivism or Neo-Positivism ......................... 7
    1.4.3 Geography and Cartography in View of Logical Positivism ......................................................... 9
  1.5 Postmodernism and Poststructuralism .............................. 12
    1.5.1 Postmodernism and Cartography .................................. 15
    1.5.2 Mental Map Generation Through Map Reading: Against Ubiquitous Geoinformation .......................... 17

2 A Philosophical Framework Applied to Cartography ............... 19
  2.1 Introduction ................................................................. 19
  2.2 Immanuel Kant ................................................................. 19
    2.2.1 No Epistemology Without him: Kant’s Role for Spatial Sciences ....................................................... 19
    2.2.2 Kant’s Philosophy: An Epistemological Frame for Geography and Cartography ............................. 20
  2.3 Ludwig Wittgenstein .......................................................... 21
    2.3.1 Wittgenstein’s Early Work “Tractatus logico-philosophicus” ............................................................. 21
    2.3.2 Wittgenstein’s Late Work “Philosophical Investigations” ................................................................. 24
  2.4 Karl Popper ................................................................. 27
    2.4.1 Popper’s Three Worlds Theory and Cartography ..................... 28
    2.4.2 Three-Worlds Model of Popper and Multisensory Cartography ............................................................ 31
6 Post-representational Cartography ........................................ 87
6.1 Introduction .................................................................. 87
6.2 What is Post-representational Cartography? ................. 87
6.3 Transition Towards a Post-representational Cartography .. 88
   6.3.1 Maps as Historical Products: Horizon of Possibilities . . 89
   6.3.2 Maps as Locus of Semiosis: Self-Reference of the Map ................. 90
   6.3.3 Maps as Propositions: Perimap and Epimap ............... 91
   6.3.4 Maps as Immutable Mobiles: Stable Form of Knowledge ................. 93
   6.3.5 Maps as Actants: Social Context of the Map ............. 94
   6.3.6 Mapping as Image Rhetorics .................................. 95
6.4 Foundations for a Post-representational Cartography ....... 95
   6.4.1 Maps as Inscriptions: Social Life Affected by Maps .... 96
   6.4.2 Maps as Practices: a State of Becoming .................. 96

7 Possibilities of Paradigms in Cartography ...................... 101
7.1 Introduction ................................................................ 101
7.2 Criteria of Contrast .................................................. 101
7.3 Contrasting Paradigms in Geography: An Example ....... 103
7.4 Comparing Tendencies in Cartography within the Epistemological Space ......... 104
7.5 New and not so New Epistemological Crises in Cartography .... 110
7.6 Autostereoscopic True-3D Cartography: Another New Paradigm ................. 113

8 Scopes of Paradigms in Cartography .............................. 115
8.1 Introduction ................................................................ 115
8.2 Paradigmatic Tendencies as in Other Sciences (Geography) .... 116
   8.2.1 Proposed Paradigm Tendencies in Cartography ......... 116
   8.2.2 Distinction Between Scientific-Empirical and Critical Approaches .............................. 120
   8.2.3 Transition from the Scientific Paradigm to the Critical Paradigm .............................. 121
   8.2.4 Post-Representational Cartography: A Paradigmatic Proposal .............................. 124
8.3 Paradigms in Cartography: An Epistemological Review .... 126
   8.3.1 Returning to Kuhn .............................................. 126
   8.3.2 On the Scope of Cartographic Paradigms ................. 128
9 Conclusions

9.1 Insights

9.2 Achievements

9.3 Suggested Advancements

References
Paradigms in Cartography
An Epistemological Review of the 20th and 21st Centuries
Azócar Fernández, P.I.; Buchroithner, M.
2014, XVII, 150 p., Hardcover
ISBN: 978-3-642-38892-7