1. Record Nr. UNINA9910254789903321 Autore Schemmel Matthias Titolo Historical Epistemology of Space: From Primate Cognition to Spacetime Physics / / by Matthias Schemmel Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2016 3-319-25241-0 **ISBN** Edizione [1st ed. 2016.] Descrizione fisica 1 online resource (120 p.) Collana SpringerBriefs in History of Science and Technology, , 2211-4564 Disciplina 115 Soggetti History **Epistemology** History of Science Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto Intro: Preface: Contents: 1 The Challenge of a Historical Epistemology of Space; 2 Natural Conditions of Spatial Cognition; 3 Culturally Shared Mental Models of Space: 4 Social Control of Space and Metrization: 5 Reflection and the Context-Independence of Mental Models of Space; 6 The Expansion of Experiential Spaces Over History; 7 The Decline of an Autonomous Concept of Space: 8 Concluding Remarks: Index: References; The Object of Study; Example: Object Permanence; Example: Cognitive Mapping; The Character of Spatial Knowledge; References; The Object of Study Example: The Eipo's Network of Toponyms and Spatial ReferenceExample: The Absolute-Directional System of the Caroline Island Navigators; The Character of Spatial Knowledge; References; The Object of Study; Example: Field Measurement and the Metrization of Space in Ancient Mesopotamia; The Character of Spatial Knowledge; References: The Object of Study: Example: Deductive Geometry: Example: Theories of Space: The Character of Spatial Knowledge: References; The Object of Study; Example: The Development of Global Coordinates for Geographical Space Example: Independence of Space from Matter and ForceExample: The

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This monograph investigates the development of human spatial knowledge by analyzing its elementary structures and studying how it is further shaped by various societal conditions. By taking a thoroughly historical perspective on knowledge and integrating results from various disciplines, this work throws new light on long-standing problems in epistemology such as the relation between experience and preformed structures of cognition. What do the orientation of apes and the theory of relativity have to do with each other? Readers will learn how different forms of spatial thinking are related in a long-term history of knowledge. Scientific concepts of space such as Newton's absolute space or Einstein's curved spacetime are shown to be rooted in pre-scientific structures of knowledge, while at the same time enabling the integration of an ever expanding corpus of experiential knowledge. This work addresses all readers interested in questions of epistemology, in particular philosophers and historians of science. It integrates forms of spatial knowledge from disciplines including anthropology, developmental psychology and cognitive sciences, amongst others.