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| Nota di contenuto | Cover; Title Page; Copyright; Contents; Introduction; 1: Building Objects in Time; 1.1. Different points of view on ontology; 1.1.1. Defining ontology; 1.1.2. Qualification of the objects from an ontological perspective: "bona fide" versus "fiat" objects; 1.1.3. Specification of ontologies in the field of spatial analysis and geographical sciences: objects versus fields; 1.1.4. An example of empirical objects' construction: the case of cities; 1.2. Locating spatial objects in time; 1.2.1. Objects' formalization in time: "endurant" and "perdurant" entities of philosophers 1.2.2. From change to objects' life 1.3. Conclusion; 2: From Empirical Questioning to Spatio-temporal Modeling; 2.1. From the conception of entities to their analysis of responding to thematic issues; 2.1.1. Building the spatio-temporal objects from the empirical observations (challenge 1); 2.1.2. Representing and exploring change and movement (challenge 2); 2.1.3. Analyzing the evolution of statistical and spatial relationships (challenge 3); 2.1.4. Identifying the underlying processes of change: simulation and scenario testing (challenge 4) 2.2. Challenges and models: the possible misunderstandings 2.3. Application examples; 2.3.1. Cities' dynamics: construction and follow-up of composite objects in time; 2.3.1.1. Step 1: to build a set of objects coherent in space and time: a harmonized database of European cities; 2.3.1.2. Step 2: to explore the dynamics of cities; |

2.3.1.3. Step 3: to analyze the differences in the evolution of cities: a trajectories' typology; 2.3.1.4. Step 4: to simulate the dynamics of a system of cities

2.3.2. Distribution of urban functions in the intra-urban space:

construction of spatio-temporal functional objects 2.3.2.1. Step 1: to build a coherent set of functional objects in space and time; 2.3.2.2.

Step 2: to explore the temporalities; 2.3.3. Evaluating the impact of

mobile objects on a spatial support; 2.3.3.1. Step 1: construction of the

entities (objects and properties) from the empirical data: identifying the "places of animal frequentation" from GPS readings, and characterizing the change in vegetation cover from satellite images

2.3.3.2. Step 2: to represent and to explore herds' movements and the changes in the vegetation cover 2.3.3.3. Step 3: to analyze the

relationship between the intensity of animal frequentation and the

change in vegetation cover; 2.3.3.4. Step 4: to identify the processes

linking animal behaviors and the change in the vegetation cover;

2.3.4.1. Step 1: construction of the objects and their properties from a multilevel perspective

2.3.4.2. Step 2: representing and exploring the pupils' choices of

school and the consequences of these choices on the social

composition of schools and their evolution

Sommario/riassunto

Spatio-temporal Approaches presents a well-built set of concepts, methods and approaches, in order to represent and understand the evolution of social and environmental phenomena within the space. It is based on examples in human geography and archeology (which will enable us to explore questions regarding various temporalities) and tackles social and environmental phenomena. Chapter 1 discusses how to apprehend change: objects, attributes, relations, processes. Chapter 2 introduces multiple points of view about modeling and the authors try to shed a new light on the different, but complementar
