

BOOK REVIEWS

QUALITATIVE GIS: A MIXED METHODS APPROACH, edited by Meghan Cope and Sarah Elwood. London: Sage Publishing, 2009.

The aim of the book is to show how a qualitative GIS (that is, a GIS based on qualitative research methods) can expand and strengthen our knowledge base and make possible frames of reference that touch on the entire research process: from the data-collection stage to result analysis to the integrative presentation of findings. A mixed qualitative-quantitative approach contributes to a fuller understanding of reality and makes holistic analysis possible.

The book is divided into four levels that include nine chapters, which examine the options for presenting qualitative information using a variety of means in geographical information systems (GIS). The underlying concept is that there is a great deal of qualitative information relating to society and space that can be expressed visually in conjunction with quantitative information. The different means proposed for presenting this information include metadata, community mapping, innovative computer software, technical information systems, grounded visualization, etc. The authors borrow from ethnographic investigation methodologies and employ them for qualitative GIS, bringing examples and looking at the advantage of incorporating them in a quantitative GIS database. Each chapter includes a philosophical discussion regarding the methodology presented and a range of examples using case studies of spatially and socially different population groups from several locations around the world (Chicago, Illinois, the Philippines, Kenya, New York and more). Various investigation methods (constructivist and positivist) are integrated with GIS in different studies. Nonetheless, this book breathes new life into the philosophical discussion that accompanies every investigative method proposed and attempts to connect some of the qualitative GIS methods by using similar reference points.

Level 1 is the introduction, and is divided into two chapters. Chapter 1: "Introduction: Qualitative GIS: Forging mixed methods through representations, analytical innovations and conceptual engagements" (by Sarah Elwood and Meghan Cope) explores the meaning of the term "qualitative GIS". The emphasis is on how the earlier approach of quantitative data entry developed into an approach embracing data of a qualitative character, that is, verbal information obtained via qualitative research methods, e.g., interviews, focus groups, etc. The use of qualitative research methods is accompanied by presentation of the qualitative data and imbues them

with spatial meanings related to such questions as: why there in particular, how a specific phenomenon developed in a specific place, etc. The mixed quantitative-qualitative approach to GIS enhances the quality of the information provided by the technology, thereby not only increasing descriptive value, but also making it possible to analyze the phenomena described in a more holistic manner.

Chapter 2: Non-quantitative GIS (by Marianna Pavlovskaya) addresses the epistemological and ontological aspects of qualitative GIS, as well as the geographic discipline's attitude toward these concepts. The author sheds light on its capabilities as a qualitative research tool in the visual realm, providing examples taken from research in a variety of disciplines, including human/social geography. These examples support the argument that qualitative GIS is possible and that it fulfills an important epistemological function, one that quantitative research cannot fulfill, particularly when investigating social phenomena.

These chapters complement each other, in spite of certain repetitiveness with regard to the issue of mixed methodology (quantitative and qualitative). Generally speaking, although the introduction deals with philosophical questions, the discussion is supported by concrete examples.

Level 2, Representations, contains three chapters. Chapter 3: "Metadata as a site for imbuing GIS with qualitative information" (by Nadine Schuurman) focuses on the potential of metadata (data about data) to become a repository of qualitative information about both quantitative and qualitative spatial and non-spatial attributes. The author reviewed a method for eliciting ontology-based metadata from data based on ethnography by describing eight fields (sampling methodologies, definition of variable terms, measurement system, taxonomic system data model, collection rationale, policy constraints and anecdotes). "Using metadata information is a way of making GIS a tool for producing multiple rather than singular narrative" (p. 54.). This chapter is linked to its predecessors by a preoccupation with metadata-related ontology, and by the presentation of case studies from different areas of inquiry (forest type and pregnancy-induced hypertension).

Chapter 4: "Multiple representations, significations and epistemologies in community-based GIS" (by Sarah Elwood), presents examples from two communities in Chicago, Illinois that took part in the decision-making process regarding neighborhood development, by means of a mixed-methodology approach to the presentation of GIS information. The intention was to portray their neighborhoods as social spaces and as material spaces. The examples illustrate an approach to qualitative GIS that is characterized by epistemological and methodological flexibility.

Chapter 5: "Geographic information technologies, local knowledge, and change" (by Jon Corbett and Giacomo Rambaldi) explores the strength of GIT (geographic information technologies: namely maps, GIS and three-dimensional models collectively). By means of case studies from the Fiji Islands, Indonesia, Kenya and the Philippines, in which community mapping was executed, they explore some of the social and political issues related to the creation and use of GIT in gathering and

representing local knowledge in the struggle for some communities to gain local autonomy over traditional lands and development processes and safeguard their cultural heritage.

Considerable attention is paid in this chapter to the differences between community mapping and traditional mapping. It maintains that “Community mapping differs from conventional cartographic approaches in its process, potential productions or outputs, and content – the sources and forms of spatial knowledge that is integrated” (p. 79).

Level 3 – Analytical Interventions and Innovations contains two chapters. Chapter 6: “Grounded visualization and scale: A recursive analysis of community spaces” (by LaDona Knigge and Meghan Cope) builds on previous work by Knigge and Cope in order to explore ways that ethnographic methods of qualitative research can be combined with visualization of spatial data to create new forms of knowledge. The approach uses the ‘zoom’ function available in cartographic software to see how the visibility or spatial patterns, clusters, or anomalies might change at different cartographic scales.

Chapter 7: “Computer-Aided Qualitative GIS: A software-level integration of qualitative research and GIS” discusses the development of innovative software that makes it possible to treat qualitative information *as a part* of the GIS data structure, in contrast to other approaches and computer programs in which qualitative information is something viewed *alongside* the GIS database. This chapter is a logical continuation of the previous one, as innovative development is based on the core of the grounded theory, meaning coding. The heart of grounded theory is the process of coding. “The codes created by a researcher as s/he analyzes qualitative data function as a ‘bridge’ that connects these two types of software”. (p.125), namely GIS and CAQ-GIS (computer aided qualitative GIS). There is a description of the innovative program’s theoretical and technological concept, accompanied by instances of its application.

The last of the four levels, Conceptual Engagements, contains three chapters. Chapter 8: “Into the image and beyond: Affective visual geographies and GIS science” (by Stuart Aitken and Jim Craine), brings a methodology called “affective geovisualization” that attempts to elaborate how humans interact with GIS-based digital virtualized environments and datasets.

Chapter 9: “Towards a genealogy of qualitative GIS” (by Matthew W. Wilson) is a conceptual and methodological summary of the entire book, using an extensive review of the literature on the genealogy and history of qualitative GIS. Chapter 10: “Conclusion: For Qualitative GIS” (by Meghan Cope and Sarah Elwood) relates to three elements: the investigation method and its application in qualitative GIS, the dual significance of the knowledge, and the meaning and implications of qualitative GIS.

The bibliography provided by the various chapters is rich and extensive. It encompasses both geographic literature related to GIS, and literature dealing with

qualitative research methods and with multimethodology (qualitative and quantitative). The scope of the literature review contributes to a broad understanding of the transition taking place in geographic thought, from a conception of GIS as a spatial research tool to one in which it serves as an integrative information system comprising positivist and qualitative research methods. The aim is to provide a more holistic perspective on the entire range of phenomena in space, rather than merely presenting (giving expression to) spatial phenomena.

The GIS discipline's identification with positivist methodology has undergone a transition in recent years. A variety of studies have employed methods identified with the qualitative approach (interviews, focus groups, narrative, mental maps, videos, etc.) as sources of non-cartographic data for the GIS system, in order to create forms of spatial information that are non-cartographic in character.

The book is distinctive for its abstract discussion of the theoretical framework of philosophical concepts, accompanied by concrete examples. The authors link philosophical and operational issues by means of case studies from social science disciplines other than geography. In this way they demonstrate that the use of qualitative GIS offers expanded possibilities for understanding processes in space.

The book is an important and meaningful, even an innovative, resource in its field of inquiry. It makes a major contribution to geography by describing, presenting and analyzing the way in which qualitative information may be included in geographic information systems. GIS technology in general is not merely a tool for processing quantitative or qualitative spatial data. Qualitative GIS in particular constitutes a knowledge base with philosophical (ontological and epistemological) foundations. The incorporation of qualitative methods into GIS produces a whole that is "greater than the sum of its parts." Moreover, the book contributes to our understanding of processes in the social sciences by giving a visual presentation of social and spatial phenomena, and thus its contribution goes beyond the geographic discipline.

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EXPERIENCE AND CONFLICT: THE PRODUCTION OF URBAN SPACE, by Panu Lehtovuori. Hampshire, UK: Ashgate Publishing, 2010.

Urban restructuring in the post-Fordist city, foremost in the development of inner-city areas, is increasingly focused on a unidimensional logic of commodification, monofunctionality and control. This process of planning and building urban spaces is conducted in an artificial reality, the 'Concept City', characterized by a simplified and outdated conception of space. Panu Lehtovuori sets against this logic a new concept of place – the 'weak place' – relational and non essentialist social