

GUEST EDITORIAL PREFACE

Special Issue on Geospatial Focus on Urban Geography

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INTRODUCTION

The increased availability and continued use of geospatial technologies have profoundly influenced the discipline of geography. These technologies not only function as effective tools to engage in geographical inquiry, their increased use has also prompted new groupings and priorities across the discipline (Wright, Goodchild, & Proctor, 1997). For example, the “information” generated from the application of geographic information science (GIS) confers precision, rigor and replicability to various forms of geographical analysis and even serves as the very basis for many of the mysteries that geographers now ponder. GIS originally evolved out of traditional areas of geography such as cartography, remote sensing and image processing, as well as geodata coding and computer science (Kaplan, Wheeler, & Holloway, 2009). Yet its crystallization as a distinct subfield partially relates to the significant degree to which GIS applications have enhanced other subfields within the discipline. By providing numerous opportunities to integrate a wide variety of traditional spatial approaches with modern technological capabilities, GIS has played a major role in transforming geography into the 21st century (Sui, 1995; Wheeler, 1997).

Perhaps no subfield of geography has benefitted more from the evolution of GIS technologies than has urban geography. Given the natural link between the urban experience and the development of technologically-based societies, it should not be surprising that the scope and possibilities for GIS applications are heavily focused on the study of urban issues and problems (Graham, 2003). Since its initial emergence in the mid-1960s, GIS has naturally appealed to urban geographers, who have made widespread use of GIS in planning, research and teaching (Greene & Pick, 2006; Kaplan, Wheeler, & Holloway, 2009). Consequently, GIS technologies have been strongly integrated into the study of the important topics that have always defined urban geography, such as urban spatial structure, central place theory, neighborhood change, transportation planning, crime, retail analysis, industrial location, environmental justice, demographic change, just to name a few. Conversely, the technological and methodological sophistication of modern GIS have made it possible for urban geographers to expand upon the types of questions they ask concerning urban phenomena. The eclectic breadth of the subject matter treated in this collection, ranging from the dynamics of residential segregation to the study of air pollution and ef-

forts to enhance the pedagogical presentation of urban concepts, demonstrates the diverse ways in which GIS applications have contributed to our understanding of urban areas.

IN THIS ISSUE

The first three articles presented in this collection address issues pertaining to racial and/or ethnic segregation within the urban context, and involve the use of spatial analysis in order to document and understand the implications of this phenomenon. These three articles share a common focus on the neighborhood dynamics associated with this topic, yet they each link the residential aspects of segregation to different dimensions of the urban experience. Strait and Gong investigate the residential impacts of ethnic change by analyzing the evolution of racial and ethnic segregation across post-Katrina New Orleans. By considering both the residential influences that stem from the influx of Hispanic populations attracted to New Orleans in the aftermath of the storm, and the intra-urban dynamics among other racial and ethnic groups during the same time period, they demonstrate the complex social impacts that a “natural” disaster can have on an urban landscape. Hermes and Poulsen focus on the structure of urban neighborhood cohesion and by doing so link levels of residential segregation to issues of social capital and the functioning health of residential communities. The authors utilize synthetic spatial microdata to analyze neighborhood cohesion within both Sydney and Los Angeles and investigate the ways that cohesiveness is influenced by ethnic diversity evident at the neighborhood-level. Through a comparison of the spatial dimensions of cohesion across two different urban contexts, they shed considerable light on the complex links evident between both race and class, and the realization of social capital. Clery analyzes the neighborhood dimensions of segregation as a means to focus attention on the spatial manifestations of place marketing. He frames his analysis of spatial segregation around dis-

courses of social exclusion and makes effective use of semi-structured interviews to examine legacies of institutionalized exclusion within the marketing apparatus of Miami, Florida.

Additional articles within this volume address the spatial dimensions of crime, environmental impacts of urbanization, and the social politics associated with a community-wide GIS initiative, respectively. Wu, Ye, and Webb utilize space-time analysis to examine auto burglary patterns in Shenandoah, Texas, a fast-growing suburban community near Houston. They identify the spatial and temporal dimensions of burglary hot spots within this community and use their results to offer policy recommendations as to the most effective crime prevention strategies. Mukherjee and Ghose addresses a fundamental challenge that has emerged since the advent of geospatial technologies into the arena of communal problem-solving; how to deal with the potential possibility that such technologies may end up encouraging a digital divide rather than being a tool that makes the world digital. They address this important topic by exploring the dynamics of power relations among political actors involved with the implementation of a participatory GIS project in Verona, Wisconsin. By tracing the evolution of the particular GIS project in question, and critically examining the ways that various actors have shaped this evolution, the authors vividly demonstrate the institutional complexities associated with the so-called “grass roots” utilization of geospatial technologies. Connolly, Hagelman, and Fuhrmann employ block-group level census data as a means to gauge the feasibility of estimating potential carbon footprints from a continuous urban landscape. Their methodological approach combines GIS modeling with choropleth and dasymetric visualization techniques in a study of Austin, Texas. The authors interpret their results to confer the potential benefits realized from analyzing the environmental impacts associated with urban land use at a scale that is both appropriate and which allows for geographic replication. The research by

The article that concludes this collection highlights one of the more positive developments associated with the increased accessibility of geospatial technologies, one that offers much interest to contemporary urban geographers. Romig introduces the utility associated with the use of video vignettes as a means to teach urban concepts. The author focuses on the use of a simple form of technology, yet the paper makes a compelling argument calling for the increased use of methodologies that effectively illustrate urban processes that are inherently dynamic. Moreover, the use of video technology offers an affordable and creative way to enhance the pedagogical delivery of urban concepts to a student population that is increasingly living in a technologically advanced world.

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