

INTRODUCTION

As part of the International Geographical Union (IGU) Congress held in Brisbane, Australia in 2006, a special event, "'Legends' in Quantitative Geography and Geographic Information Science," was organized as a joint venture sponsored by the Australian Research Council Research Network in Spatially Integrated Social Sciences (ARCRNSISS) and the IGU Commission on Modelling Geographical Systems (CMGS).

The event brought together a group of researchers who were among the pioneers of the "quantitative revolution" in human geography, which had its origins in the late 1950s and early 1960s, and the subsequent development of Geographic Information Science. This splendid day-long event, attended by about 120 delegates to the IGU, was held in the historic Brisbane Room in City Hall in Brisbane and was followed by a Mayoral reception to honor the "legends" who presented papers or had papers read on their behalf.

This special issue of *Geographical Analysis* is an edited collection of those papers and messages presented and sent by the "legends." The papers not only provide perspectives on the origins and evolution of the quantitative revolution in human geography, but they also provide thoughts on current developments in analytical human geography.

We trust this collection of papers and messages from a sample of "legends" will be a useful historic documentation of some of the wonderful contributions that the proponents of the quantitative revolution have made to enhance the scientific standing of analytical research in human geography that may be pursued by the current and future generations of geographers.

Robert G.V. Baker and Robert J. Stimson
Guest Editors

A Personal Perspective from Being a Student of the Quantitative Revolution

The group of "legends" of the quantitative revolution assembled as contributors to this special event have all made a magnificent contribution to the development of a scientific approach to analytical research in human geography. They have made a lifetime of innovative contributions to the development of analysis and modeling in human geography. Their contributions range across the fields of economic, urban,

social, and behavioral geography, and they extend to the development of Geographic Information Science (GISc). These people are truly giants in our trade and represent a sample of the many scholars who pioneered the quantitative analysis and modeling that made human geography a more respected social science that was embedded in rigorous scientific method.

As one of the cosponsors of the “Legends” sessions, permit me the indulgence of a brief reflective foray to explain why this is such a special event for me.

In 1960, as a callow youth of only 16, I commenced an undergraduate Arts degree at the University of New England in Armidale, a small regional university in New South Wales in Australia. Apart from the then mandatory courses in regional geography (including the Regional Geographies of North America, Europe, Monsoon Asia, Latin America, and Australia), we also had courses in human geography that introduced us to exciting geographical concepts and spatial theories, including those of von Thunen, Reilly, Christaller, Losch, Weber, and others.

By the mid 1960s, when I was doing my first postgraduate degree, the quantitative revolution in geography was in full swing. My then supervisor, the late Eric Woolmington, said to me: “Stimmo, you have to learn about this new quantitative stuff in geography!” And so I embarked on the discovery of new world models and quantitative analysis, delving into the wonderfully exciting hot-off-the-press books such as Stan Gregory’s (1963) *Statistical Methods and the Geographer*, Peter Haggett’s (1965) *Locational Analysis in Human Geography*, Richard Chorley and Haggett’s *Frontiers in Geographical Teaching* (1965) and their *Socio-Economic Models on Geography* (1967), and Les King’s *Statistical Analysis in Geography* (1969).

While in my first academic job as a Senior Tutor in Economic Geography at the University of Melbourne in the mid 1960s, I came across Norton Ginsburg’s *Atlas of Economic Development* (1961), with the section written by Brian Berry in which he presented the results of a multivariate statistical of 42 variables for nations across the world where he extracted and mapped dimensions of demographic and economic performance. And I began to read Torsten Hagerstrand’s wonderful works on migration, migration fields, and time-space geography.

Well, I was totally hooked on all this modeling and quantitative analytical stuff. Wow! Human geography was a real science, not just a descriptive humanities discipline!

During the late 1960s and throughout the 1970s at Flinders University, my teaching and research tried to incorporate all the ideas, theories, and methods of the quantitative revolution. For example: Waldo Tobler was pioneer in computer cartography; Art Getis was developing new spatial statistics; Alan Wilson was modeling urban systems; Brian Berry was analyzing urban systems and economic development and writing on market centers and retail distribution; Dick Morrill was writing on the spatial distribution of settlement systems and simulating the spatial evolution of the black ghetto; Julian Wolpert was modeling decision choices in spatial contexts; Ron Johnston was writing on a wide range of topics in urban and

social geography; Peter Gould was writing about mental maps; Reg Golledge was pioneering the link between geography and psychology in his work on spatial learning and cognitive mapping; Gerry Rushton was analyzing revealed space preferences; Bill Clark, Eric Moore, and Larry Brown were developing behavioral models on housing location choices and the analysis of housing markets; and Andrei Rodgers was modeling migration processes.

I was incredibly fortunate to meet with many of these pioneers of quantitative geography. Peter Haggett was a regular visitor to Australia and was particularly kind to me when I spent a sabbatical in the United Kingdom in 1974. And of course I began what has been a long collaboration with my dear friend Reg Golledge, which has resulted in the publication of two textbooks on analytical behavioral geography, with the third book almost completed. In particular, through the involvement of quantitative geographers in the Regional Science Association International, I have become good friends with so many of the “legends,” including those assembled for this event.

Since those heady days of the quantitative revolution and the analytical and modeling work it engendered, we have witnessed the fantastic innovations associated with the new spatial information technologies and the emergence of GISc, pioneered by geographers such as Stan Openhshaw, Duane Marble, Michael Goodchild, Michael Batty, Art Getis, and many others.

Now many of our contemporary colleagues who have been sidetracked into the various “isms” that have, in my view, considerably undermined the credibility of human geography in the eyes of scientists—Marxism, feminism, post-modernism, and so on—will not agree with me when I assert that it is the pioneers of the quantitative revolution and those who have more recently developed GISc who have provided the intellectual basis for modern scientific, analytical human geography. And it is undoubtedly this “spatial science” aspect of human geography that makes it relevant in both the public and the private sector domains and that gives graduates the knowledge and skills to be employable in, and useful to, government and business.

We are celebrating half a century of scientific human geography through the quantitative revolution and the subsequent emergence of GISc with a small number of the “legends” to whom analytical human geographers owe a great debt. The group contributing to the event that has produced this special issue of *Geographical Analysis* provides us with a nostalgic yet exciting retrospect–prospect overview of the great benefits that quantitative geography and GISc have brought to making the spatial science side to our discipline respectable in the eyes of the scientific community and in making the application of geography useful to society.

It is fitting that this special issue be published in *Geographical Analysis*, which was founded by and has been edited by a number of the “legends” who we celebrate and honor at this event. That journal has continued since the 1960s to promote the rigorous scientific research that was born through the quantitative revolution in geography. We thank Alan Murray, the current editor of *Geograph-*

ical Analysis, for his support in agreeing to publish this special issue to celebrate the “legends.”

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