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EPILOGUE

The Spirit of Quantitative Geography[1]

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All of us taking part in the ''Legends'' session must be nearer the end of our academic lives than the beginning and it's a very rare privilege to have this opportunity for reflecting together. Thank you very much. Any occasion like this prompts thoughts in three time frames—past, present, and future—and I've arranged my notes accordingly. My apologies to Charles Dicken's *A Christmas Carol* (1843) for the titles.

The spirit of quantitative geography past

Of course, I don't mean ''spirit'' in the literal ghostly sense although I hope that figures such as Torsten Hägerstrand, Peter Gould, and Dick Chorley might be keeping a friendly and correcting eye on our proceedings. After all, history is ''just a fable agreed upon'' and they played a key role in the quantitative geography fable. But a meeting such as this does inevitably prompt backward glances. I've tried to convey in my own paper about quantitative geography at Cambridge in the 1950s and 1960s (which Barry Boots is kindly giving for me) some sense of how much fun it was (most of the time). ''Bliss was it in that dawn . . . etc. etc.'' Of course, there were down moments as when Chorley and I found we had made an error in computing some of Bill Krumbein's trend surfaces and faced yet another 3 days on the Marchant hand-cranked adding machines. We were both far too junior to be allowed access to the Cambridge EDSAC computer.

Looking back on my own research, I'm struck by what a mixture it was of the planned and the unplanned. It wasn't until David Harvey came back to Cambridge from Uppsala that I learned about Torsten's work at Lund on diffusion waves. This fascinated me as in my meteorological days I had become interested in diffusion plumes and the classic attempts to model pollution tracks from high chimneys. It was Torsten who advised me to work on multiple (i.e., repeating) waves because they gave a greater chance of testing and retesting any models. This was the ''planned'' bit and it led me to work originally on the spatial propagation of business cycles using local unemployment records. This was a direct link to August Lösch, who had tried to track the spatial progress of the Great Depression. But totally ''unplanned'' was the serendipity that caused Brian (Berry) to get flu and ask me at short notice to represent him at a WHO Advisory Meeting in Geneva. There I met Norman Bailey (WHO's chief statistician) who led me into studying infection cycles. So the last 30 years of work (and 100 or so papers and 8 monographs later) have been about the spatial propagation of infection waves (NOT economic waves). So it was a chance virus hitting Brian in Chicago that really determined

[1]Taken from a letter written by P. H. to Robert Baker and Bob Stimson in May 2005 in response to a request to contribute to the general discussion at the ''Legends'' session.

several decades of my work. I wonder how much this chance element played in colleagues' past research?

The spirit of quantitative geography present

Geography is going through a period of parallel and plural developments at this time with scholarly rivers braiding and anastomosing. Maybe we can even spy some abandoned oxbow lakes, cut off from the main flow? But looking around at what is now happening in quantitative geography, insofar as I know it or can cull it from the journals (Australia apart, I've always been an arch conference avoider), I'm struck by the vitality of the field(s). So *much* is going on, most of it of an analytical quality that we could only dream of. Spatial autocorrelation and log-linear modeling are just two of the fields where real strides are being made. So while I'm puzzled by the directions taken in some parts of human geography (which is too mapless for my taste), I generally take a very optimistic view of quantitative geography per se. I wonder whether my optimism is shared by others.

I would like to have been younger when the geographic information systems (GIS) revolution struck and to have been able to catch and ride a little on that wave. As I see it, GIS is maturing and moving away from a purely technological fix toward a much more general philosophy of spatial analysis over an ever-wider series of applications. In geography itself, it has the potential to bring together the age-old interest in cartography, our quantitative geography, and advanced computer graphics. There are some downsides, notably in the discovery of analytical methods that have long been known (maybe under different names) in many other fields. Hägerstrand used to describe *two* research waves—one discovering new findings and a second forgetting old findings. Accumulating knowledge depends on the relative velocity of the two waves. (Aging, I find, slows down the first and accelerates the second!) Each new generation tends to repaint the walls white (covering out own past research graffiti) before starting to write on them its own messages.

As a parochial aside, it is good to see quantitative geographers recognized in the United Kingdom at least. Both Alan Wilson (former Vice Chancellor of Leeds and doyen of spatial interaction modelers) and David Rhind (current Vice Chancellor of City University and dean of the GIS modelers in the United Kingdom) have recently been elected to that most conservative of British scientific bodies, the Royal Society—not important outside the United Kingdom but critical to the status of spatial modeling within. Is there similar change elsewhere?

The spirit of quantitative geography future

Constants, trends, cycles, and shifts are the recipes from which forecasts about the future are made up. And we're so bad at anticipating the ''shifts''—those inexplicable and sudden turns in direction that may carry a whole discipline in directions undreamed of a generation earlier. So maybe Stan Openshaw was right and quantitative studies in the future will look wholly different from the past, maybe in ways

now hard to imagine. Sadly, illness has prevented him from carrying forward his visions of a great geographical analytical machine—the analytical equivalent of a sort of McCormick reaper—that would thresh its way through massive fields of data sorting out the few wheat grains and much chaff into tidy bundles.

My own visions are much more small scale. I hope that some part of future quantitative work will return to sharply focused questions backed up by experimental design. It has always seemed to me that progress (if that term is still allowed) depends on asking—and trying to answer—very specific and well-defined questions. It may be the legacy of being brought up on R. A. Fisher's ''Design of Experiments,'' Medawar's ''Art of the Soluble,'' and such schemes as double-blind trials that has given me a taste for such structured work. I worry about how much we *really* know and, as the comedian W. C. Fields put it, ''how much we think we know, but ain't so.''

Whatever we prescribe about the future, we know we can't control or influence it. Nor should we. In looking back on early work together, my great friend and colleague Dick Chorley wrote that he hoped the new generation ''would be deeply suspicious of too much orthodoxy, not least our own.'' So I hope that there will be some graduate students at Brisbane who listen to our ancient generation, who (as we did) shake their heads in disbelief at such opacity, and go away in the sure and certain knowledge that they can do better. And our hopes go with them with the wish, also, that they enjoy turning over the tables every bit as much as we once did.