

Preface

When I was asked to put together a Selected Works volume for David Brillinger, I never even considered saying no. But I realized that the hardest part of the job would be to convince David to let me do it. “The question that I keep asking myself is ‘Is that really me?’” he wrote to me. But eventually he relented, when I argued that this would make some of his interesting papers, that are now hard to find, available to everyone. He started sending me thick envelopes full of papers. Going through all of them was pure joy. The breadth of David’s contributions is incredible. Selecting which 600 pages out of the 224 entries in his bibliography (when I write this—when you read it there are undoubtedly more) to include was not so much joy. Some of his richest papers are just too long ([104] with Tukey, *Spectrum analysis in the presence of noise: some issues and examples*, is 141 pages, but can be found in Tukey’s Collected Works that David edited; [53] *Comparative aspects of the study of ordinary time series and of point processes* is 101. Both these papers are full of new ideas, many of which have not yet been fully developed). However, after a sequence of emails and a long session at a Berkeley coffee shop, we agreed on the current selection. It was fortunate that Victor Panaretos’ interview with David for *Statistical Science* was finished during this process, and could be included in this volume.

The selection contains all of David’s named lectures (Wald, Fisher, Herzberg, Hunter and Neyman), in which he carefully presents material from his research, always containing important answers to scientific questions and illustrated with LOTS of pictures. In addition, there are papers from his main methodological areas: time series and point processes; and from his three main scientific interests: neurophysiology, seismology and population biology. We tried to make sure that there were papers with the main people he has worked with: Bruce Bolt, Jose Segundo, Alan Ager, Brett Stewart and Haiganoush Preisler. Some important work, for example his papers in demography, or on using wavelets, there simply was not room for. As I said, his scientific work is very broad.

I was fortunate to have both Jerzy Neyman and David Brillinger as teachers and advisers. The principal lesson I learned from both of them is the importance of working hard at understanding the science behind the questions you are trying to address. Collaboration is key to modern statistical science.

In finding appropriate researchers to comment on David's papers I needed not go beyond his list of former PhD students (39 at last count). David's more theoretical work is discussed by Victor Panaretos (PhD 2007), a Greek working in Switzerland. Time series papers are discussed by Pedro Morettin (PhD 1973) from Brazil, a country David loves and visits as often as he can. Some biological papers are addressed by Tore Schweder (PhD 1975) from Norway, another country that David frequently visits, assisted by Haiganoush Preisler (PhD 1977), a Palestinian working in the US, while I (PhD 1980), a Swede working in the US, deal with point processes, neurophysiology and earth sciences.

David is a very close friend of mine. Apart from statistics, we share interests in politics, hockey, and soccer, which we discuss at great length in person or briefly in emails. When he recently was selected as honorary member of the Canadian Statistical Society, he remarked to me "Somehow that's all about another person. I am just me, a kid from Toronto who a lot of people have helped." Well, the kid from Toronto is a member of the Canadian, Brazilian and Norwegian Academies, has three honorary doctorates, and a share of the Nobel Peace Prize for work done for the IPCC [112]. Not only is he a most accomplished scientist, but he is the epitome of the modern statistical scientist.

So David, this is for you. We all hope you will enjoy it. Thanks for teaching us what a statistician can and should be, being there for us to talk about science, soccer, and survival, writing poetry in a dissertation or signing in Hollerith. We owe you so much.

Peter Guttorp

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