

Working with Bill Kruskal: From 1950 Onward

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1. INTRODUCTION

Bill Kruskal and I arrived at the University of Chicago at about the same time, a very long time ago, in time for the beginning of the 1950–1951 academic year. We became colleagues and very good friends, and we worked together very harmoniously and productively as colleagues, and also as co-authors, over a very long period of time. We started to work together in the early 1950s on the introduction and development of various measures of association for the analysis of cross-classified categorical data, and we published our first joint article on this subject in 1954, followed by a series of three other joint articles on the subject in 1959, 1963 and 1972; and the four articles were then brought together in a single volume in 1979. Bill and I worked on the first article—the core article—on and off for about two years before we submitted it for publication, and the series of four articles evolved over a 20-year period. The 1979 volume appeared in print 25 years after the publication of the first article; and now more than 50 years have gone by since the first article was published. Yes, a very long time has gone by.

I shall describe here some of the experiences that Bill and I shared over the years, from the early 1950s until 1987, when I retired from the University of Chicago (UChicago) to take up work at the University of California at Berkeley (UCBerkeley), and I shall also comment briefly here on some experiences shared from 1987 onward. The experiences described here will make clear some of Bill's very special—wonderfully special—characteristics. He was a wonderful person.

2. MEASURES OF ASSOCIATION

In a conversation that Bill had with Sandy Zabell, which was published in the 1994 *Statistical Science*, Bill said that the joint work that he and I had done on

measures of association for cross-classifications grew out of a conversation that we had at a New Year's Eve party that Bill and I happened to attend at The Quadrangle (Faculty) Club. Our conversation at the party was about our earlier experiences serving as statistical consultants after we arrived at the university. As beginning faculty members, Bill had been asked to serve as a statistical consultant to Bernard Berelson in the Graduate Library School, and I had been asked to serve as a statistical consultant to Louis Thurstone in the Psychology Department.

Berelson was the dean of the Graduate Library School at that time and later became the president of the Population Council. He also was an important figure in the social and behavioral sciences at that time, and later became an even more important figure. Thurstone was a distinguished professor in the Psychology Department where he was the founder and director of the Psychometric Laboratory. He had been instrumental in the development of the field of psychometrics, and was at that time the major figure in the development of factor analysis. (By the way, as a very young, beginning assistant professor, I thought it passing strange that I had been asked to serve as a statistical consultant to the great L. L. Thurstone.)

Well, the conversation that Bill and I had at that party took place some time after Bill had met with Berelson and some time after I had met with Thurstone and some other members of his Psychometric Laboratory. Bill and I were describing to each other what happened when he met with Berelson and I met with the Thurstone group, and we observed in this conversation that the kinds of statistical problems with which Berelson was concerned and the kinds of statistical problems with which the Thurstone group was concerned could be viewed as problems concerning the measurement of association for cross classifications. We discovered that each of us had been independently thinking about similar kinds of questions. So, right then and there, at that party, Bill and I joined forces, and we were off and running. Incidentally, I would guess that it was Bill who had engaged me (rather than I who had engaged him) in this conversation about our work. I doubt that, as a

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