

Series Editor's Introduction

This book by Borg and Shye is quite different from other books in the series. Facet theory is original, because it links social science theory, design of studies, and analysis of the data in a very intricate way. As Borg and Shye explain, facet theory is a "methodological approach," which means that it is not just a family of data analysis techniques. Comparable "frameworks" are Fisher's theory of experimental design (with strong links to the analysis of variance), Wold's approach to soft modeling (using partial least squares regressions), and the Luce-Suppes-Krantz-Tversky approach to measurement (although this last framework mostly hovers above the social and behavioral sciences, without really touching them).

Facet theory originates with Louis Guttman. Over a period of more than 40 years, Guttman has contributed many of the basic building blocks and frameworks of the current quantitative social and behavioral sciences. Anybody with any knowledge of the field of quantitative social and behavioral research will have no difficulty identifying Guttman as by far the most influential and original contributor. He invented scale analysis, laying the foundations for much of latent structure and latent trait theory. This resulted in his 1941 paper introducing multiple correspondence analysis in full detail. Factor analysis never recovered from the fundamental contributions Guttman made over a period of 20 years. In the 1950s and

1960s, he worked, in relative isolation, on nonmetric scaling techniques, applying them to various forms of categorical data structures. In a sense, Guttman's contributions are all incorporated in the framework of facet theory.

Facet theory provides social and behavioral scientists with a language to talk about their domains of discourse, and to structure and analyze the instruments they use to study this domain. In a sense, it is a rather idiosyncratic approach, because it relies heavily on a specific language that not many people outside the International Facet Theory Society are using. But of course Fisher's approach to agricultural experiments was probably idiosyncratic as well, until everybody started using the language of randomization and blocking. The mapping sentence approach of facet theory, coupled with the heavily geometric and nonlinear representations of SSA and MSA, is an interesting alternative to some of the existing frameworks in quantitative social science. In particular, it seems to me that it comes up with interesting results in the fields of attitude and intelligence measurement, in the areas usually subjected to LISREL and friends, and in the wasteland of factor analysis.

One problem with facet theory is that there has not been an introductory text or textbook available, although many applications have been published illustrating the use of the methodology. This book by Borg and Shye fills this gap, and it does it in a clear and comprehensive way.

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