

Review of the Book:
"Multicriteria Decision-Aid"
by Philippe Vincke,
John Wiley & Sons, 1992

To the best of my knowledge, this is the first book written in English that clearly relates to the "French School" of MCDM initiated by Bernard Roy. This should not be much of a surprise since Philippe Vincke from the *Université Libre de Bruxelles* is one of the prominent actors in this School. Thus, a "French touch" structures much of the material in this book.

The author adopts the typology of methods traditionally used by the "French School":

- aggregation into a single criterion (Chapter 4: MAUT)
- aggregation into one or more binary relations (Chapter 5: "Outranking Methods" à la ELECTRE) and
- interactive methods (Chapter 6: STEM, Geoffrion-Dyer-Feinberg, Steuer-Choo, etc.).

The use of this typology not only allows the author to offer a thorough presentation of "Outranking Methods". It also gives him tools for a critical analysis of other types of methods. Chapter 6 devoted to interactive methods (inspired from a joint paper with Daniel Vanderpooten) is particularly interesting in this respect. Ten among the most important interactive methods are completely described in a unified framework. Their interest is then analyzed. This is not only done by presenting "convergence theorems" but mainly through a thorough analysis of the ability of each method to help a decision-maker to make up his mind.

The strict adherence of the author to the "French School" typology of methods has some drawbacks however. Methods explicitly dealing with uncertainty deserve a much more detailed treatment. The same is true for AHP which does not fit too well in the general framework of the book.

The "French touch" in this book does not only affect the presentation of methods but also the general attitude towards aiding a decision-maker. How should we define alternatives ? How preferences should be modelled ? What distinguishes MCDM from other decision-aid methodologies ? Such important questions are dealt with in the three introductory chapters. This gives the reader tools to understand the reasons of the diversity of methods and approaches in MCDM.

The book concludes with a chapter entitled "Miscellaneous Questions". Behind this humble title the reader will find many useful hints relating MCDM to such diverse fields as Social Choice Theory, Fuzzy Set Theory, Decision Support Systems, Negotiation and Artificial Intelligence. It also contains what I consider to be a very lucid research agenda in MCDM for the next ten years.

This book has less than 160 pages including an impressive list of references and a useful subject index. In spite of this conciseness, rigor and precision are maintained throughout the text. Each term is carefully defined, each concept is illustrated by simple numerical examples. Such rigor and precision do not come at the cost of a cumbersome mathematical apparatus: the level of mathematics used in this book is unlikely to discourage any interested reader. This is a true stylistic *tour de force* and thanks should go to the translator for having successfully managed to preserve the quality of the original French text. The obvious drawback of this conciseness is that the book presents no case studies or real-world examples. Though it contains a useful list of published applications, this might discourage some practitioners.

This book provides the reader with a clear, rigorous and concise introduction to the main concepts and methods in the field of MCDM. Accompanied with selected case studies, I am convinced that many teachers will find it extremely useful. I would also strongly recommend it to anyone curious about the "French touch"