UTILITY, PROBABILITY, AND HUMAN DECISION MAKING

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PREFACE

Human decision making involves problems which are being studied with increasing interest and sophistication. They range from controversial political decisions via individual consumer decisions to such simple tasks as signal discriminations. Although it would seem that decisions have to do with choices among available actions of any kind, there is general agreement that decision making research should pertain to choice problems which cannot be solved without a predecisional stage of finding choice alternatives, weighing evidence, and judging values.

The ultimate objective of scientific research on decision making is two-fold: (a) to develop a theoretically sound technology for the optimal solution of decision problems, and (b) to formulate a descriptive theory of human decision making. The latter may, in turn, protect decision makers from being caught in the traps of their own limitations and biases.

Recently, in decision making research the strong emphasis on well-defined laboratory tasks is decreasing in favour of more realistic studies in various practical settings. This may well have been caused by a growing awareness of the fact that decision-behaviour is strongly determined by situational factors, which makes it necessary to look into processes of interaction between the decision maker and the relevant task environment. Almost inevitably there is a parallel shift of interest towards problems of utility measurement and the evaluation of consequences.

Scientists from a variety of fields have been interested in these and related problems – psychologists, mathematicians, economists, business administrators, managers, and consultants. A few colleagues from other fields of application like physicians, lawyers, teachers and meteorologists have been concerned with problems arising in the application of normative decision models to various situations. Some of these scientists convene at regular meetings to discuss these problems under an interdisciplinary approach. This volume grew out of one of these meetings, the Fourth Research Conference on Subjective Probability, Utility, and Decision Making, held in Rome, Italy, Sept. 3–6, 1973. Previous con-

ferences were held in Hamburg (1969), Amsterdam (1970), and Uxbridge (U.K., 1971), respectively. Proceedings are available from the Amsterdam conference (see *Acta Psychologica* **34**, (1970), 129–397).

The Rome conference was organized around (1) invited review papers, (2) specific research papers, and (3) tutorials. From the written material which came out of the meetings as potential conference proceedings, we have made a careful selection which hopefully fits the interests of a wider audience, and which certainly fits the restrictions formulated by the publisher, as well as our own biases. Our criteria led us to incorporate two papers which had been presented at a previous meeting (Uxbridge, 1971), proceedings of which were never published.

The book is organized into a number of sections which contain related papers. Each section is preceded by a brief ‘editors’ introduction’, in which we attempt to give some background and suggest implications. Occasionally a paper is followed by a critical discussion. For many other papers, discussion comments have led to significant revisions of the original text.

We wish to thank Professor Bruno de Finetti of the University of Rome for his opening talk to the conference participants, as well as for his help in organizing the University’s hospitality. Some conference activities were greatly facilitated by a grant to the organizing committee from the Italian Ministry of Public Education. The publication of this volume was financially supported by the ‘Systeemgroep Nederland.’ We are indebted to all those who actively contributed to the conference programme either with a paper or with prepared discussions. Without their efforts the composition of this volume would have been impossible. Finally, our thanks go to Gernot Kleiter of the University of Salzburg and to Carl-Axel Staël von Holstein of Stanford Research Institute, who were our colleagues on the organizing committee.

Hamburg/Leyden, February 1975

D. W.
C. A. J. V.