

Scoring-Rule Procedures for Eliciting Subjective Probability and Utility Functions

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Abstract: This chapter considers a situation in which the elicitor wants to discover the precise form of a *function* which characterizes a subject's preferences or probabilistic beliefs. All of the "scoring-rule" elicitation procedures developed have a common structure: the subject's expected utility depends on a function reported by the subject, and the elicitor uses the reported function to calculate the subject's actual (utility or distribution) function. By reversing the roles of probability and utility, the method of eliciting probabilities can be used to elicit utilities. The general scoring-rule procedure outlined in theorem 1 can be used to derive a number of specific scoring rules, some of which are well known and some of which are new. A method of simultaneously eliciting probability and utility information for the same subject is also discussed.