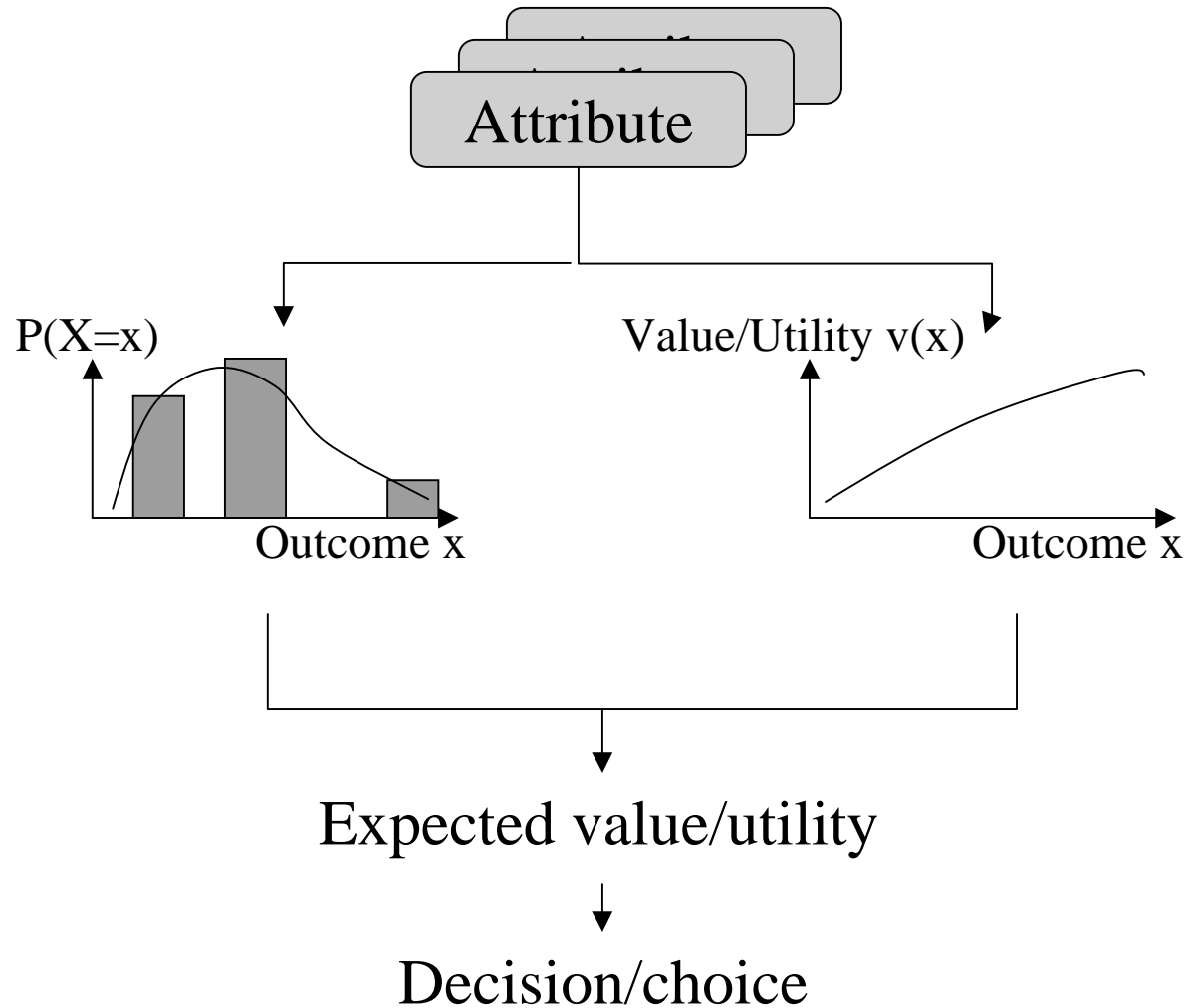


Norms and prescriptions in decision analysis

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Decision analysis - principles



Descriptive-Normative-Prescriptive

- **Descriptive:** what has happened in the past, what is now or what will happen in the future.
- **Normative:** what ought to be or how we ought to act
- **Prescriptive:** making rules or giving orders or directions. To order or advise as a medicine

Lindley (1985)

- “the laws of probability and the existence of utility are part of the normative approach; whereas the properties of utility now being discussed (*risk-aversion, diminishing marginal utility*) are prescriptive. You do not have to take the prescription.”

Keeney and Raiffa

Decisions with Multiple Objectives

- ... It is also not normative since it is not an idealized theory designed for the superrational being with an all-powering intellect
- “We suggest - or prescribe - how a decision maker (perhaps *you*) should think systematically about identifying and structuring objectives, about making vexing value trade-offs, and about balancing various risks.”

French Decision Theory

- “...,the output of any decision analysis is not, and should not be, a prescription of my choice of action. Rather the output should be understanding.”

Normative objections to EUT

- Consequentialist in its structure
- Utilitarian in spirit
- Is not open to altruistic or rights-based principles

Responses to normative critique

- (Risk-) informed decisions are by nature ‘consequentialist’. Public discourse presupposes knowledge
- Alternatives that violate certain moral principles can be eliminated prior to formal analysis.
- Weighting or discounting of attributes can be done according to non-utilitarian principles.
- Any non-utilitarian principle could be represented through construction of attributes and weights.

Norms for decision aid

- Formalised Consequence and Risk analysis should be performed as part of the decision process.
- Value trade-offs and/or utility assessments/construction could be performed if
 - it is regarded as requisite by decision makers
 - documentation of a value structure is required by stakeholders
- Synthesising measures - expected value or utility could be performed if - ditto