The three main classes of decision theory are evidential decision theory, causal theory and logical decision theory.

Evidential decision theory (EDT) reasons with the conditional probability of events based on the evidence. An agent using EDT selects the action which has the best expected outcome based on the evidence available. It views its action as one more fact about the world, which it can reason about, but does not distinguish the causal effect of its actions from any other conditional factor. See What is "evidential decision theory" for further explanation.

Causal decision theory (CDT) reasons about the causal relationship between the decision and its physical consequences. An agent using CDT views its choice as affecting the specific action that it takes, and, by extension, everything which that action causes. It selects the action which will bring about the best expected outcome based on its knowledge at the time of the decision. See What is "causal decision theory" for further explanation.

Logical decision theory (LDT) is a class of decision theories, including updateless decision theory, functional decision theory and timeless decision theory, which share in making use of logical counterfactuals. An agent using a LDT will act as if it controls the logical output of its own decision algorithm, and not just its immediate action. In general a LDT can outperform other forms of decision theory in problems that include:

- Parfit's hitchhiker
- The smoking lesion problem
- Newcomb's problem

A specific example of a LDT is Functional Decision Theory (FDT). This says that agents should treat one's decision as the output of a fixed mathematical function that answers the question, "Which output of this very function would yield the best outcome?". It does not calculate the best outcome based on its immediate circumstance, but rather views itself as an instance of a function which must be consistent under all instantiations that it finds itself in.

See What is "functional decision theory"? and What is "logical decision theory" for further explanation .

Further reading:

Decision Theory FAQ

Comprehensive list of decision theories

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