

Probleme bei der Konstruktion von Ontologien. Nach einer inhaltlichen Präzisierung des Ontologiebegriffs werden erkenntnis- und sprachtheoretische Problemfelder diskutiert.

Uncertainty, Bayesian Belief Nets, and Knowledge Management

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Many decisions, of an entrepreneurial as well as an institutional or personal character, have to be made on the basis of incomplete or partial information about the outcomes and results and, hence, under conditions of risk and uncertainty. Among the numerous proposals for dealing with uncertainty Bayesianism has gained a prominent role. Although originally founded in decision theory, where for some it still constitutes a paragon of rational choice, Bayesian methods have become increasingly popular in recent years in statistics, in particular since the inception of Bayesian Belief Nets (BBNs), also known as Bayesian networks, now an area of lively research.

Worlds, Models, and KM

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Techniques for computation on generalized diagrams are defined and the KM implications are explored. Descriptive Computing is presented and plan computation based on world models that are constructed from the syntax of logical theories is defined by generalized diagrams. Further epistemics for computation are defined by introducing der Vielleicht Vorhandenen, and defining an epistemic for computational illusion. A formulation of situations and possible worlds allow us to make precise theoretical statements regarding the computability of AI planning problems. Dynamic Epistemic Computing (Nourani 94) is a consequence of the present approach. It is further shown how knowledge representation by generalized diagrams can be applied to descriptive and dynamic epistemic computing. Applications to the consequence closure problem, comparisons and to new A.I. advances in cardinality for concepts, KR, and cognitive modeling is reviewed.