Define Uncertain Knowledge.

Uncertainty

Let action At = leave for airport t minutes before flight Will At get me there on time?

Problems: 1) partial observability (road state, other drivers’ plans, etc.) 2) noisy sensors (traffic reports) 3) uncertainty in action outcomes (flat tire, etc.) 4) immense complexity of modelling and predicting traffic Hence a purely logical approach either 1) risks falsehood: “A25 will get me there on time” or 2) leads to conclusions that are too weak for decision making: “A25 will get me there on time if there’s no accident on the bridge and it doesn’t rain and my tires remain intact etc etc.” (A1440 might reasonably be said to get me there on time but I’d have to stay overnight in the airport ...) 3 / 86 Methods for handling uncertainty Default or nonmonotonic logic (Ch. 12.6): Assume my car does not have a flat tire Assume A25 works unless contradicted by evidence Issues