Conclusions

- An architecture for "anthropomorphic agents" must mimic (but not necessarily duplicate) human rational cognition.
- Practical cognition makes choices based upon information supplied by epistemic cognition.
- Most of the work in rational cognition is carried out by epistemic cognition, *and must be done defeasibly*.
- OSCAR implements a sophisticated system of defeasible reasoning that enables it to deal defeasibly with:
  - perception
  - change and persistence
  - causation
  - probabilities

Conclusions

- Sophisticated agents operating in complex environments cannot plan by using conventional planning algorithms that produce r.e. sets of solutions.
- However, the ideas underlying conventional planning algorithms can be resurrected as *defeasible* principles for reasoning about plans.
- Defeasible principles of deterministic planning can be generalized to produce defeasible principles of decision-theoretic planning.
- In decision-theoretic planning, decisions about whether to adopt new plans (and perhaps to reject previously adopted plans) must be made on the basis of the effect that has on the expected value of the master plan.
- An efficient computation of the expected value of the master plan can be done defeasibly.