

# For Wednesday

- Finish chapter 10
- Program 2 milestone

# Program 2

- Any questions?

# Defining a category

- Necessary and sufficient conditions

# Think-Pair-Share

- What is a chair?

# Prototypes

# In Logic

- Are categories predicates or objects?

# Important Terms

- Inheritance
- Taxonomy

What does ISA mean?

# Categories

- Membership
- Subset or subclass
- Disjoint categories
- Exhaustive Decomposition
- Partitions of categories

# Other Issues

- Physical composition
- Measurement
- Individuation
  - Count nouns vs. mass nouns
  - Intrinsic properties vs. extrinsic properties

# Question 3

- How do we talk about changes?

- When an agent performs actions, the situation the agent is in changes.
- Sometimes need to reason about the situation.
- Planning

# Axioms for Actions

- Can we do the action?
- What changes?
- What stays the same?
  - The frame problem

# An Answer

- Identify changes to the situation and assume everything else remains the same.
- Effect axioms become lists of changes.

# More than One Agent

- Keep track of **events** rather than situations.
- Have to deal with **intervals** of time.
- Have to deal with **processes**. How do processes differ from **discrete events**?
- Objects and their relation to events.

# Question 4

- How do we talk about belief?

# Reification

- Turning propositions into objects.
- Why would we want (need?) to do this?

# Consider the following:

- Jack thinks that the President is still George Bush.
- When I was in Washington, D.C. last month, I got to meet the President.

- This is the issue of **referential transparency** vs. **referential opaqueness**.

- Special rules for handling belief:
  - If I believe something, I believe that I believe it.
  - Need to still provide a way to indicate that two names refer to the same thing.

# Knowledge and Belief

- How are they related?
- Knowing **whether** something is true
- Knowing **what**

# And Besides Logic?

- Semantic networks
- Frames