

Between category structure

- Hierarchical structure
- The basic level
- Goal-derived categories

Multiple categorization

- What is this?
 - Poodle, dog, animal, thing, pet?

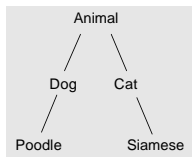
Any object can be seen as a member of a number of different categories.



Chances are, you first identified this as a dog.

Hierarchical categories

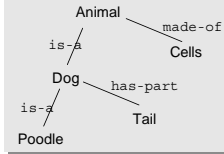
- Categories are organized hierarchically
 - Different levels of abstraction.



- Why do we have different levels?
- How do we know which one to use?

Why different levels?

- Communication
 - Different levels communicate different things.
 - Allows us to refer to groups of different sizes.
- Inference
 - Hierarchies allow inheritance.



Does a dog have a tail?
Is a dog made of cells?
Does a poodle have a tail?

How do we use these levels?

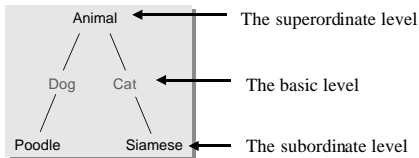
- One level appears to be favored.



Quickly,
What are these items?

The middle level

- Objects are named at a middle level of abstraction
 - Often called the *basic* level.



- What makes the basic level basic?
 - Studied by Rosch and colleagues

Why is the basic level basic?

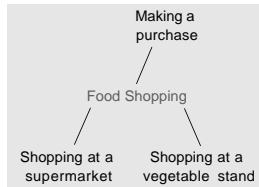
- Many factors converge at the basic level.
- The most abstract level at which:
 - Objects from a category tend to have the same shape
 - The same motor movements are used with the objects
 - Objects within the category tend to share parts
 - Contrasting categories can be easily compared
- A high level of within category similarity
 - Members of a category tend to be similar
- A low level of between category similarity
 - Members of contrasting categories tend to be dissimilar

Changes with expertise

- Novice-expert differences
- American students differ from Itzaj Mayans
 - Bird is the basic level for American students
 - Level is more specific for Itzaj Mayans
 - This difference is only seen for naming
 - American students and Mayans similar when tested using other functions of categories
 - We'll talk more about that next class.
- Similar results have been observed within this culture for experts and novices.

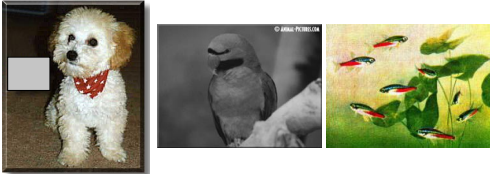
Is this only true for objects?

- There may be a basic level for events too.
 - Basic level events contain common subevents
 - Superordinate events may have many possible subevents.



Goal-derived categories

- Not all categories name groups of objects
- Some categories are organized around goals
- Pets



Goal-derived categories

- Are goal-derived categories at all like taxonomic categories?
- They have a graded typicality structure
 - There are good and bad examples
 - What is a good example of a pet?
 - What is a bad example of a pet?
- Typicality is assessed relative to ideals
 - What is the ideal pet?
 - How is this related to good and bad examples of pets?

Ad hoc categories

- Goal-derived categories may also be formed on line
- Things to take on a picnic
- Things to take out of the house in the event of a fire
- Categories are easy for people to form
- These novel categories also have a graded typicality structure
- Like other goal-derived categories, typicality is assessed relative to an ideal.

Summary

- Between category structure
- Hierarchical categories
 - Good for making inferences
- Basic level
- Goal-derived categories
