# IDEA #1: Measuring structure of semantic space in a novel domain as a function of training

- Lots of evidence that labels support distinguishing between categories in adults and kids
  - And, there are many ways that labels can be learned (e.g. mutual exclusivity, explicit naming)
- There are many types of information other than labels that can also lead to distinguishing two categories
  - E.g. facts - this one only eats plants; that other only eats fish
  - Perceptual - this one is red; the other is green
  - Pragmatic reasons – different functions
  - Cultural reasons – different kinds of people use it
- Some types of information more suggestive of discrete categories than others
- Question:
  - How do different types of information affect the extent to which a continuum is divided into categories?
    - In other words: how distinct are 2 categories given different types of information about the prototype?
  - Does vocabulary size predict the magnitude of categorical distinction of labels?
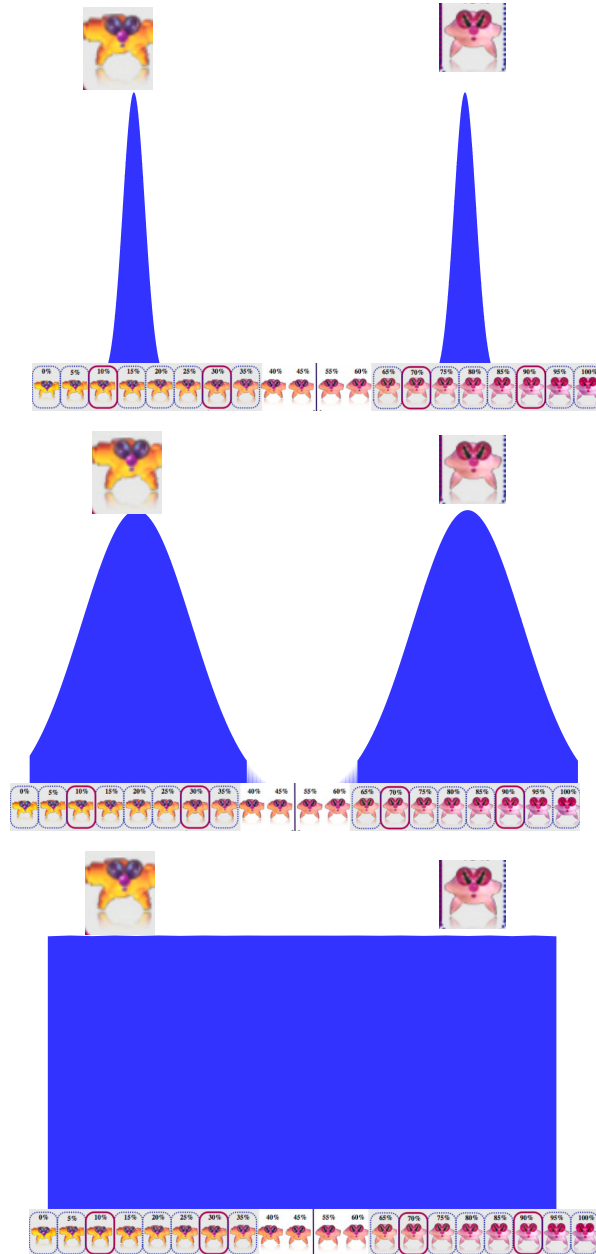
Paradigm:
- Teach kids information about two exemplars from a novel unidimensional continuum
- Between kids, vary the kind of information, e.g.
  - Label (e.g. this is a dax and this is a mip)
  - Label learned via mutual exclusivity
  - Biological fact
  - Non-biological fact
  - Preferences (I like this one; I don't like that one)
  - Functions (this one can be used to do function X; this one can be used to do function Y)
  - No information control
  - Also vary instructions in task? Can you get kids to ignore the dimension if you give them different instructions in the task.
- Then, do the next triad task on the full continuum with many exemplars

Predictions:
- (1) Different kinds of information will lead to different degrees of categorization (maybe labels>biological fact>functions, or something…..)
- (2) Kids with bigger vocabularies will shower greater categorization (more clustering) in the label condition

Thoughts

- How interesting is the question of measuring degree of categorization? i.e. moving beyond the fact that labels support categories to asking *how much,* and how much more compared to other information about categories.

- Is there a way to make this task sufficiently interesting for kids – could be challenging since many similar trials, but maybe that's okay?

- Because the category space is so simple here, I suspect we could very precisely measure individuals kids category structures

IDEA #2: Measuring kids semantic space in a real world domain [Descriptive Project]

- How do kids structure a semantic space and what aspects of experience influence it?

- In particular: food domain
  - This domain is complex and likely variable across kids and cultures; kids also know a lot about it

- Question:
  - How does the organization of semantic space vary across children?
  - How does the organization of semantic space change across development?
  - Can we predict any of this variability? With vocab or food experience

Paradigm:

- In the lab:
  - Parents complete vocab questionnaire, and maybe some questionnaire about their kid's food experience
  - Child completes 50 trials of next tasks
- Parents given link to have kids complete more trials at home over the next week

Predictions:

- There will be a lot of between-kid variability
- As kids get older, more taxonomic organization (e.g. vegetables), less thematic (e.g. breakfast items)
  - (would this be interesting? I suspect that these types of differences have a lot to do with task instructions)
- Maybe kids with bigger vocab do more taxonomic?
- Might be able to predict variability with food questionnaire (if kid always eats yogurt and orange juice for breakfast, might be clustered together)

Thoughts

- Is it feasible to have parents do this at home?
- What sorts of food experience would we want to know about?