Semantics

Connecting words & concepts
- Association
- Joint attention
- Understanding of adult’s intent, goal (Tomasello & Barton, 94)
- Discourse context (Akhtar, 2002)
- Ostension
  - Constraints/biases

Connecting words & concepts
- Constraints (E. Markman)
  - Whole-object constraint
  - Mutual exclusivity
- Principle of contrast (Clark)
  - Kids assume any two words must mean different things (but they can be slightly different)
- Shape bias
  - Categories defined by shape, not color/texture

More on the shape bias
- Related to the count/mass distinction among nouns
  - Count nouns
    - Stapler, pen
    - Can be pluralized
    - Usually, object
    - A stapler, two pens, many staplers
    - NOT *some stapler, *too much pen
  - Mass nouns
    - Grass, water
    - No plural
    - Usually, substance
    - Some water, too much grass
    - NOT *a water, *two grasses, *many sands

More on the shape bias
- Samuelson & Smith, 1999
- Looked at kids’ vocabs and shape bias
- Kids didn’t start showing “shape generalization” until they knew a large number of nouns (which predominantly referred to shape)
- Shape bias is acquired thru vocab

Connecting words & concepts
- All this works well for imageable nouns.
  - Some things aren’t imageable.
    - Jingoism
    - Contemplate
  - Some things aren’t nouns.
    - Verbs
    - Adjectives
Nouns rule.

- Far more nouns in early vocabularies than anything else
  - In most languages studied
- Why is this?
- Nouns are conceptually easier (D. Gentner)
- Nouns are syntactically easier (Gillette, Gleitman, Gleitman & Lederer, 1999)
  - “Human simulation” of word learning

Nouns rule.

- Gilette et al.
- Question: do kids show noun bias because they have different concepts or because verbs are harder to learn syntactically?
- Do a “human simulation” with adults (ugrads)
  - Adults know a lot, conceptually, about verbs and nouns, so conceptual knowledge shouldn’t be prob
- Mother-child interactions

Nouns rule.

- Gilette et al.
- Visual info only: 45% of nouns, 15% of verbs
- Visual + nouns: 29%
- Syntactic frames: 51.7%
  - Can ver GORP itch on the fulgar?
- Syntax + nouns: 75.4%
  - Can you GORP Markie on the phone?
- Syntax, nouns, visual: 90.4%

Verbs are less OBSERVABLE, and thus must be inferred using noun & syntax info.

Nouns rule.

- One language without noun bias: Mandarin.
  - More verbs said
  - Verbs are less variable in form
    - Not so many “go went gone” ones

Fast mapping

- Carey & Bartlett, 1978
- 3 & 4-year-olds
- Give me the chromium tray. Not the blue one, the chromium one.
- Weeks later, remembered!
- Don’t even need ostensive labeling.

Vocabulary spurt

- Big increase in rate of word learning around 18 months
- Suddenly “figure out” how to learn words?
- May not happen for all kids, though
- Even if it does happen, could be that they’ve been learning bits all along and that lots of words “hit threshold” at that “word spurt” point (McMurray, 2007)
Funny meanings

- **Overextension** and **underextension**
- (Also over- and undergeneralization)
- Overextensions (too broad):
  - Dog is “kitty”
  - Cotton ball is “snow”
- Underextensions (too narrow):
  - Only your dog is “dog”
  - Only Honda Civic is “car”

• What do these imply?

- Kids have different categories?
- OR, not category problem at all?
  - Some categories have **fuzzy boundaries**
  - Retrieval problems (know what a moose is but more used to saying “dog”)
  - Just don’t know word though you know category (use dog for cat if you don’t know the word cat)
  - Joking or playing (e.g. banana = phone)

Funny meanings

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- What do these imply?

Invented words

- **Berko (1958):** preschool, first-grade kids can make up words
  - What’s a man who zibs for a living?
    - Rarely, zibber (suffix)
    - More often, zib-man (compound word)
      - (Remember “light-up sword”?)
  - They do this spontaneously, too.
  - Especially common: make verb from noun
    - (Very easy in English)
      - “I’m crackering my soup”; “Billy squeaked the hamster”

Invented words

- Clark (1981)’s principles of word invention in kids (“lexical innovation”):
  - **Simplicity** (use word obviously)
    - To pillow = to throw pillow at (see prev. vb ex’s)
  - **Semantic transparency**
    - Invented word more obvious than conventional one (“shoe man” instead of “cobbler”)
  - **Productivity**
    - Use adult patterns (suffixes) in new ways
      - Adults: teacher, player
      - Kids: cooker, bicycler

Role of parental input

- Parents sometimes adopt kids’ labeling conventions, like calling a toy leopard a “kitty”
- Parental labels seem to correspond to **basic-level categories**
- When parents present basic-level, just label
- When they present **superordinates**, they often include basic-level members
  - Vehicle: plane, train, car
  - Furniture: chair, table, sofa
Kids’ word associations

• At 5, categories “fuzzier” than at 8
  – Fewer members
  – Mention fringe-ier members (wall is furniture)
• Brown & Berko (1960): syntactic-paradigmatic shift
  – Before 7: “eat”. Kid: “lunch!” syntax

Learning verbs

• Gilette et al.
  – Most verb guesses were concrete verbs, not abstract ones
• Easier to learn abstract verbs when in context of someone’s false belief (Papafragou & Gleitman)
  – Red Riding Hood thought the cookies were good.
  – Red Riding Hood thought her grandma was in the bed.

Learning adjectives

Which is the big one?

1 2

Which is the green one?

1 2 3
Learning adjectives

• Linda B. Smith