Administrivia

• Homework 4 due today
  – usual rules: in my inbox by midnight
  – handed out last Tuesday
Today’s Topic

• Finish Chapter 5
Last Time

- (Section 5.3)
- Contrast **Novelty** (*indefinite*) and **Familiarity** (*definite*)
- **Example:**
  - (6a) A dog (*new information*) came into the house
  - (6b) The dog (*old information*) wanted some water

- (Section 5.4.1)
  Names = concealed descriptions
  - **Example:**
    - (A) (*Name*) Confucius
    - (B) (*Definite Description*) the most famous Chinese philosopher
    - both seem to “pick out” or refer to a single individual but there is one important difference:
    - (B) gives you the criterion for computing or picking out the individual
Last Time

- *(Section 5.4.2–3)*
- Names are directly referential
- Variations:
  - **Kripke**: names are non-descriptive, names refer to things from historical reasons (causal chain)
  - **Evans**: *social context is important* (names can change wrt. referent)
- **Examples**:
  - **Madagascar**
    - originally named part of mainland Africa
    - as a result of Marco Polo’s mistake: the island off the coast of Africa
  - **kangaroo**
  - “I don’t understand” (aboriginal)
  - **ganjurr** (Guugu Yimidhirr word)
  - **ono** (a fish: aka wahoo)
  - “good to eat” (Hawaiian)
  - **livid** as in “livid with rage”
  - pale or red
Last Time

- **(Section 5.4.4)**
- Referential and Attributive Meanings
- **Russell**: definite noun phrases do not refer at all
- **Example**:
  - the teacher is nice \( \text{teacher99} \) (directly referential)
  - there is exactly one \( X \) such that \( \text{teacher}(X), \text{nice}(X) \).
  - \( \text{(attributive: no direct naming)} \)
- **Donnellan**: *both are used*
  - Jones has been charged with Smith’s murder
  - Jones is behaving oddly at the trial
  - **Statement**: “Smith’s murderer is insane” (referential)
  - everyone loves Smith
  - Smith was brutally murdered
  - **Statement**: “Smith’s murderer is insane” (attributive)
Last Time

• (Section 5.5) (Topic of Homework 4)
• Plural and Mass Terms
• **Godehard Link**: Lattice structure
• **Example**: possible worlds (w1,..,w4)
  
  – *a mapping from world to a set of individuals*

  • \( w_1 \rightarrow \{A,B\} \)  
    horse(a). horse(b).
  • \( w_2 \rightarrow \{B,C\} \)  
    horse(b). horse(c).
  • \( w_3 \rightarrow \{A,B,C\} \)  
    horse(a). horse(b). horse(c).
  • \( w_4 \rightarrow \emptyset \)
Last Time

• **W3:**
  – meaning of *horse*: \{A, B, C\}
  – meaning of *horses*: \{A+B, A+C, B+C, A+B+C\}
• Lattice structure representation:
Last Time

• **Mass nouns:** “uncountable”

• **Examples:**
  – gold *(no natural discrete decomposition into countable, or bounded, units)*
  – water
  – furniture *three furnitures*
  – three *pieces* of furniture
  – (unit = one piece)
  – *defines a bounded item which we can count*

• **Generalizing the lattice viewpoint**
  – do we have an infinite lattice for mass nouns?
  – how do we represent mass nouns?

• **Compare with:**
  – three horses *(English)*
  – does “horses” comes complete with pre-defined units?
  – three horse-classifier horse *(Chinese: sān pǐ mǎ 三匹马)*
  – three “units of” horse
Computing Quantity

• One idea (*later to be modified for Chapter 6*):
  – **phrase** **meaning**
  – furniture furniture(X).
  – piece of furniture furniture(X), X is bounded.
  – three pieces of furniture - *requires X to be bounded*
  – |X: furniture(X) | = 3, X is bounded.
  – *three furniture* | X: furniture(X) | doesn’t compute
  – **Chinese: ma is like furniture, doesn’t come with bounded property**
    – **phrase** **meaning**
    – horses horses(X), X is bounded.
    – three horses | X: horses(X) | = 3, X is bounded.
Kinds

• (Section 5.6)
• **Bare plurals**: relation to quantification?
  – occur on their own, i.e. without some determiner or quantifier
• Examples:
  – (15) Horses are rare
  – (16) Horses are mammals
  – (17) Horses have tails
  – (18) Horses give birth to their foals in the spring
  – (19) Horses were galloping across the plain
• *What is different about the meaning of horses in (15)–(19)?*
Kinds

- **Carlson**: nature of predication
- concept of horse:
  - species-level: **kind** or object-level
- assertion:
  - *horses*: intrinsically of level: kind
- Idea (**coercion**):
  - Meaning of horse depends on the type of predicate
- **Examples**
  - (15) *Horses* are rare
  - predicate *rare*: selects for kind or species-level
  - (20) rare(*horses*)
  - (17) *Horses* have tails
  - predicate *have tails* is an object-level predicate (permanent property)
  - mismatch
  - apply a generic operator Gn: Gn: object-level → species-level
Kinds

• Semantics:
  – $\text{Gn}(P)$ true of a kind iff $P$ is true of typical instances of $P$
  – here: iff = *if and only if*

• Idea: stage-level
  – object-level property
  – not a permanent property
  – applies during a time-slice

• Example
  – (19) *Horses* were galloping across the plain
  – predicate *were galloping across the plain* is stage-level
  – coercion or shift needed to apply to some individual: *Silver*

• *Other predicates? Name some Adjectives*
Pronouns and Anaphors

• (Section 5.7)
• Example:
  – (25) Shelby is cute. He is a Keeshond.
  – predicate saturation
• Referent of pronoun not always fully determined:
  – may be ambiguous
• Example: (ambiguity)
  – (26) Shelby met Bucky. He sniffed him.
  – possibilities for he and him?
Pronouns and Anaphors

• Example:
  – (27) Shelby met another male dog and a female cat. He sniffed the dog and bit the cat.

• Example:
  – (29) Only John loves his mother

• World 1 (=31):
  – loves(john,mother(john)).
  – also, no other facts in the database that would satisfy the query
  – ?: loves(X,mother(john)), \+ X=john.

• World 2 (=32):
  – loves(john,mother(john)).
  – also no other facts in the database that would satisfy the query
  – ?: loves(X,mother(X)), \+ X=john.