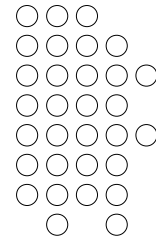# Conceptual Pacts and Lexical Choice in Conversation

Susan E. Brennan & Herbert H. Clark
Journal of Experimental Psychology:
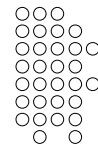**Learning, Memory, and Cognition, 1996.**

Sinuk Kang
Meaning Machine, 10/20/04

Main Question

How people refer something as the same terms?
How people identify an object during interactions?

- The goal of the study is to understand
variability and consistency in lexical choices.

Ahistorical model of reference

- **Informativeness**: People are more likely to give enough information but not too much information to pick out the unique term.
- **Lexical availability**: People are more likely to choose the most available labels such as basic-level terms.
- **Perceptual salience**: People are more likely to describe what is salient about an object.

Problems: No regarding to past references or interactions between speakers and addressers – there might be other variability in speaker's lexical choice

Example of referring an object

Historical model of reference

Trial	A	B	C
Card Set	A	B	A
Reference	Shoe	Loafer	Loafer(?)

A card set: loafer (this is only shoe in Set A)
B card set: loafer, high-heeled shoe, and sneaker

Historical model of reference

Four factors

- **Recency**: the most recent successful reference to object (Output/input coordination principle).
- **Frequency of use**: more often referred terms
- **Provisionality**: terms are achieved by an interactive process (verbatim terms)
- **Partner specificity**: terms are specific to a pair of conversational partners.

Historical explanation, Three experiments
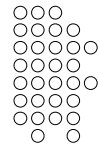
- **Experiment 1**: to compare an ahistorical model to a historical model.
- **Experiment 2**: to test whether speakers mark certain conceptualizations as provisional.
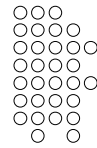- **Experiment 3**: to test a feature of conceptual pacts.

Experiment
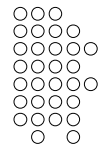
Trial	A	B	C
Card Set	A	B	A
Times of Trial	0, 1, or 4	1 or 4	4

- Card set A: unique trials
- Card Set B: non-unique trials

Experiment 1.
Informativeness

A1	B1	C1
● 70% basic-level terms ● 20% lexcialized terms ● 3% longer descriptive phrases	● 95% more informative ● 5% basic-level terms	● 52% more specific terms they has used in the B trials ● 40% same terms from the last B trial to the C1

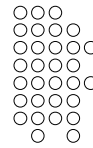# Experiment 1.
Lexical entrainment

- Director were consistent in the terms they used in refereeing to the same object

A3-A4	B3-B4	C3-C4
● 81%	● 71%	● 90%

Experiment 1.
Frequency of use

- People continue to rely on the more specific conceptualization.
- 53% of the time, exactly the same term uses across all four C trials (2/3 from the B trials and 1/3 from the A trials).

Frequency of use and recency better accounts for repeated referring than informativness.
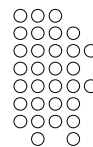
Experiment 2.

Provisionality
Hedges - there were significantly more hedges in B1 than in A1. Hedges decreased in the C trials.
Adaptability
Once people firmly established the conceptual precedents, they were likely to revert to the basic-level terms (49% C trials from B terms contained the basic-level terms).
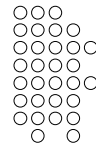
- No effect of roles on the patterns

Experiment 3.

Partner-specific effect
(same-partner vs. switch-partner)

Lexical entrainment: In the same-partners, the same terms were more often used.

Basic-level terms: In a switch-partner condition, unadorned basic-level terms increased.

Summary

1. Support a historical model of referring.
2. Conceptual pacts, lexical entrainments, provisionality, and adaptability through interactive grounding process.
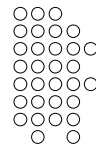
Discussion

1. What are differences (or similarities) in people's referring an object between with human partners and with computer partners?
2. How to improve speech recognition by machines?