Learning Big Things from Small Numbers

Wallace Chafe
University of California, Santa Barbara

chafe@linguistics.ucsb.edu
Functionalism  Formalism
Formalism
Functionalism
Functionalism

Cognitive Linguistics

Ethnolinguistics

Sociolinguistics

Psycholinguistics

Pragmatics

Discourse Studies

Corpus Linguistics

Language Documentation
Functionalism

Etc.

Etc.
Two major types of functions

(1) What something is *used* for:

   going to the store, visiting friends, etc.

(2) What something *does* and how it does it:

   moves people,
   with an internal combustion engine, transmission, wheels, etc.
Will focus here on what language *does*, as opposed to what people *use* it for.
Language does two things:

(1) It lets one person know at least a little of what another person is thinking.

*The communicative function*

(2) It *organizes* people’s thoughts.

*The organizational function*
Language begins and ends with thoughts.

Thoughts of a speaker

Sounds

Thoughts of a listener
Sounds are reasonably well understood.
Thoughts are mysterious and elusive. How can we better understand them?

Coming at them from different angles:

- Introspection
- Linguistics
- Psychology
- Other fields
A small illustration
Introspection
How many faces?

fast, accurate, confident

counting or guessing
Linguistics
Greville Corbett, *Number*
Cambridge University Press
(2000)
Number marking in various languages:

Japanese: number marking not obligatory

English: singular - plural

Seneca: singular - dual - plural

Larike (Indonesia): singular - dual - trial - plural

?: singular - dual - trial - quadral - plural

probably paucal
There is something special about how our minds process small numbers.
Psychology
Among early experiments:


speed, accuracy, confidence

“subitizing”

subitare “to arrive suddenly”
A useful survey

What does this show about thinking?
Basic to thinking is assigning particular instances to categories.
Categorizing provides: a word expectations

“dog”
Do thoughts include small number categories?

“dog”

“threeness”
Do thoughts include small number categories?

But not:

“elevenness”
Language Design

Thoughts

Semantic structures (organized thoughts)

Syntactic structures (semantic structures distorted by lexicalization and grammaticalization)
Thoughts

Semantic structures

Syntactic structures

Where linguistics has focused most of its attention
Language Design

Thoughts

deserve more attention
Are thoughts and semantic structures different?
(1) Thoughts contain more than language. (imagery, emotions, actions, ...)

(2) The same thoughts may be verbalized differently on different occasions.
Thoughts can be the focus of triangulation.

Thoughts

Semantic structures

Syntactic structures

Introspection
Linguistics
Psychology
Literary Studies
Not true of syntax
Thoughts

Semantic structures

Syntactic structures

← Linguistics
Back to small numbers
Thoughts distinguish foreground and background knowledge.
I know when there are two of something, but such knowledge is in the background of my thoughts.

For a Seneca speaker it’s in the foreground, and it’s passed on to Seneca semantic structures, and from there to Seneca morphology.
Seneca

dual

we

plural

\( \text{ęJahdē:di}' \)

English
Lessons

(1) Separate disciplines can approach the same phenomenon from different angles without any awareness of what each other has been doing.

(2) Triangulating from different disciplines can bring us closer to a fuller understanding.

(3) A goal of functional linguistics should be to understand the nature of thoughts.

(4) And the place of thoughts in the design of language.
A large order!