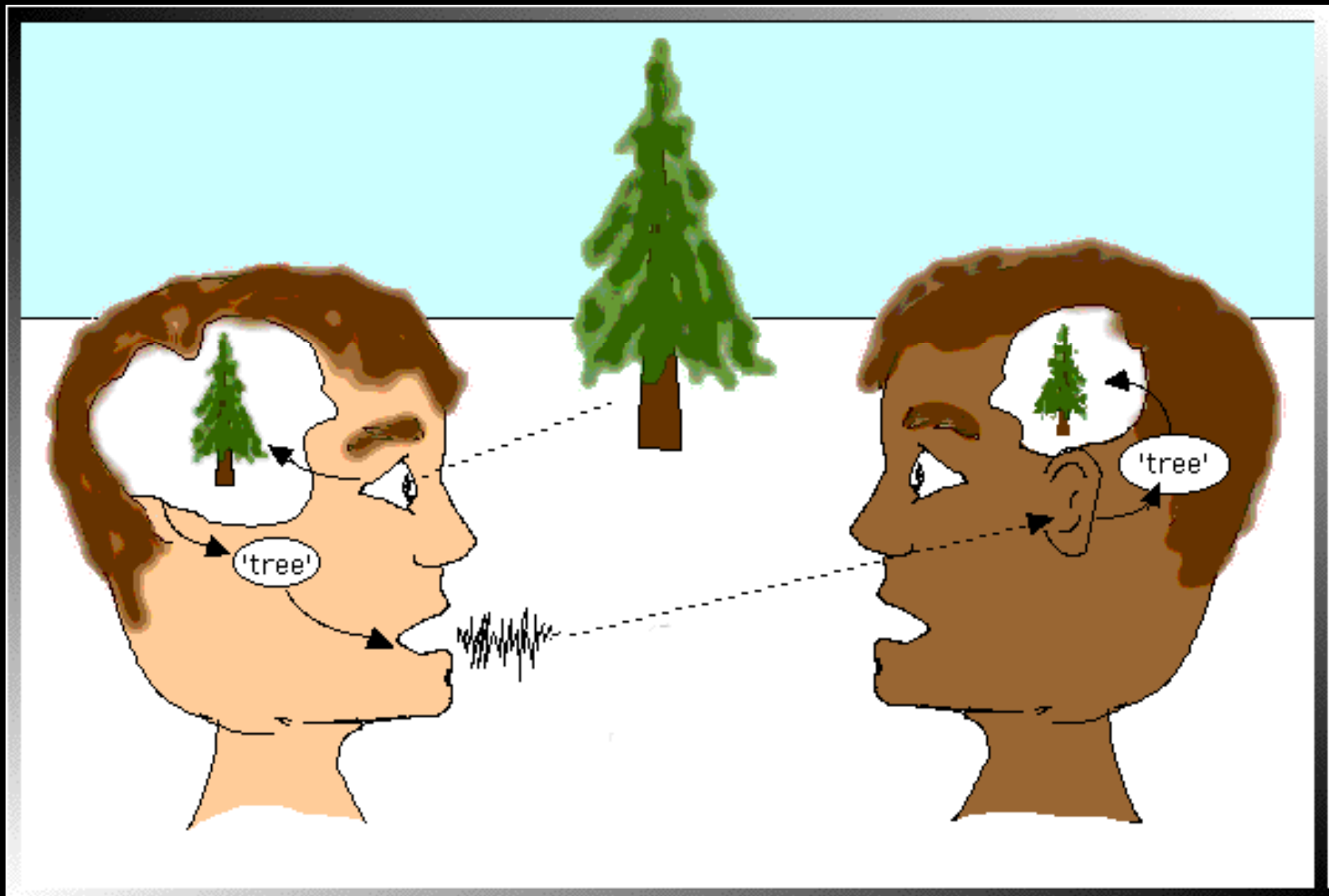# LANGUAGE

Language

- **Language**
  - The use of an organized means of combining words in order to communicate
  - Makes it possible for us to communicate with those around us and to think about things and processes we currently cannot see, hear, feel, touch, smell

- **Communication**
  - Exchange of thoughts and feelings
  - Not all communication is through language (gestures, glances, touches, pictures)

Properties of Language

- Communicative
  - Language permits us to communicate with one or more people who share our language

- Arbitrarily symbolic
  - Language creates an arbitrary relationship between a symbol and its referent: an idea, a process, a relationship, or a description
  - Arbitrary relationship - lack of any reason for choosing a particular symbol to refer to a particular thing

Properties of Language

- <u>Regularly structured</u>
  - Language has a structure; only particularly patterned arrangements of symbols have meaning, and different arrangements yield different meanings

- <u>Structured at multiple levels</u>
  - The structure of language can be analyzed at more than one level (e.g., in sounds, in meaning units, in words, in phrases)

Properties of Language

- <u>Generative, productive</u>
  - Within the limits of a linguistic structure, language users can produce novel utterances, and the possibilities for creating new utterances are virtually limitless

- <u>Dynamic</u>
  - Languages constantly evolve and change

Levels of Analysis

- Phonology: The system of sounds in a language
- Semantics: Examines the meanings of words and sentences
- Syntax: Grammatical rules that govern how we organize words into sentences
- Pragmatics: Knowledge of the social rules that govern language use.

Levels of Analysis

- Phonology

- Phoneme – the smallest unit of speech sound that can be used to distinguish one utterance in a given language from another
  - Different languages use different numbers and combinations of phonemes
  - Phonemics – the study of the particular phonemes of a language
  - Phonetics – the study of to produce or combine speech sounds

Levels of Analysis

- <u>Lexicon</u>

  - the entire set of morphemes in a given language or in a given person's linguistic repertoire; contains the information about meaning, phonological form, orthographic form and syntactic properties of a particular word

    - Vocabulary – the repertoire of words created by combining morphemes

Levels of Analysis

- <u>Syntax</u>
  - The way in which users of a particular language put words together to form sentences
  - It is the structure of our utterances
  - A sentence comprises at least two parts
    - Noun phrase which contains at least one noun
    - Verb phrase which contains at least one verb and whatever the verb acts on

Level of Analysis

- Semantics
  - The study of meaning in language
  - How words express meaning
  - How language interacts with conceptual structure
- Discourse
  - Encompasses language use at the level beyond the sentence, such as in conversation, paragraphs, stories
  - Studies the interactions between the context and language

Comprehension

- Factors effecting comprehension:
  - Negatives
  - Passive Voice
  - Nested structures
  - Ambiguity

Comprehension

- <u>Negatives:</u>
  - Negatives require more processing time
  - EXP: Star is before plus   *+

            Star is not after plus   *+
  - *Double negation* is very hard to comprehend
  - EXP: Few people strongly deny that the word is not flat

Comprehension

- <u>Passive Voice:</u>
  - Passive voice requires more processing time
  - EXP: The man bit the dog

    The dog was bitten by the man

Comprehension

- <u>Nested Structures:</u>
  - A phrase that is embedded within another sentence.
  - EXP: The plane that I want to take when I go to Denver after he returns from Washington leaves at 9.00

Comprehension

- Ambiguity:
- We are good at resolving ambiguities
  - Stolen painting found by tree
  - Clinton wins budget; more lies ahead
  - Miners refuse to work after death
  - Kids make nutritious snacks
  - Local high school dropouts cut in half

LANGUAGE
PRODUCTION
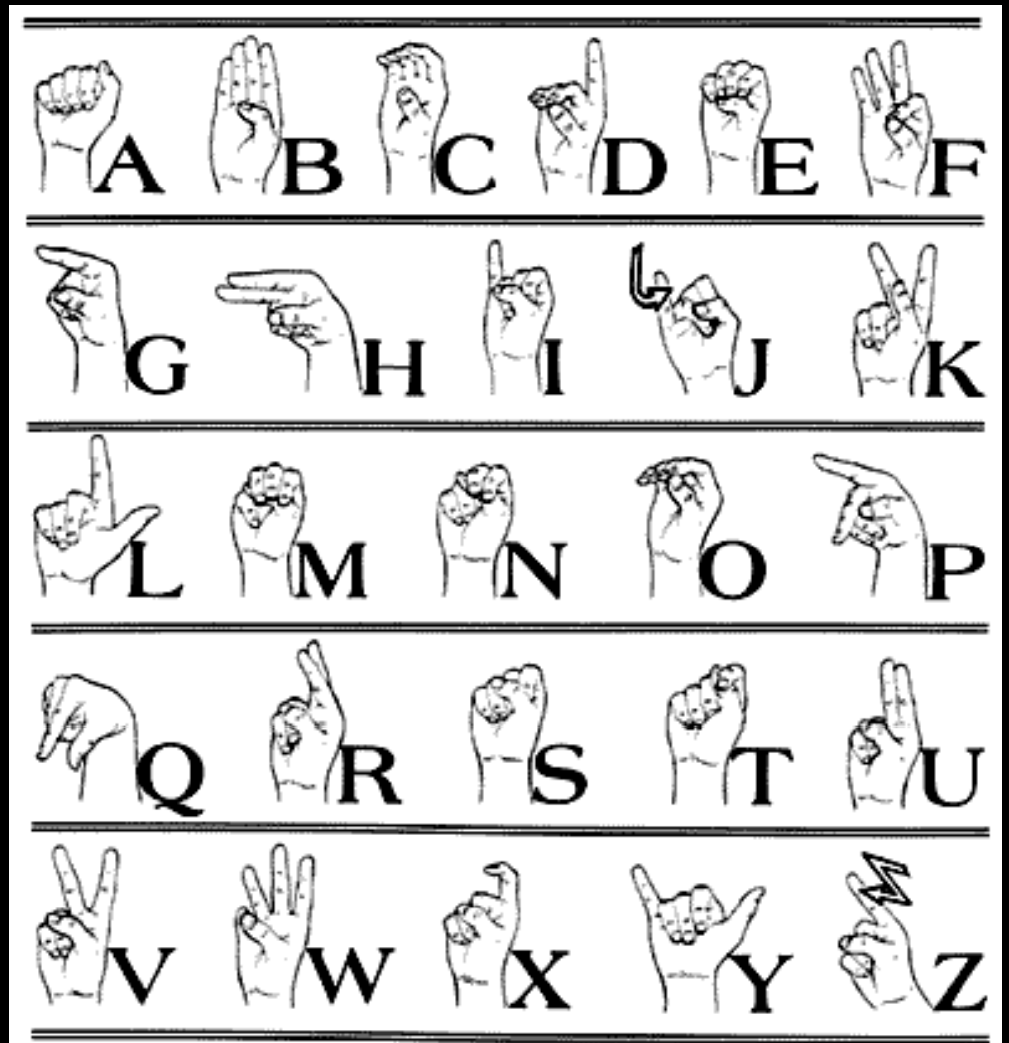
Speaking

- Word production
- Sentence production
- Speech errors
- Discourse production
- Social context of speech

Speech Production

- Speech is produced by interrupting airflow as we breathe out
  - place of articulation: tongue, lips, and teeth move to various positions to restrict the airflow
  - manner of production: air flow may be completely or partially stopped, will flow through different cavities ("m" sound flows through the nose)
  - voicing is produced by vibrating the vocal folds (as with the letter "z")

Word Production

- Most active topic in language research
  - Retrieving grammatical, semantic and phonological information
    - Independent access
      - ERP evidence that we access grammatical information before phonological
    - Simultaneous access
  - Gestures might help us retrieve this information
    - Worse production when gestures were restricted.

Sentence Production

- Certain stages:
  - Mentally planning the *gist*
  - General structure of the sentence
  - Choose words with specific forms
  - Articulate

  These processes overlap in time

Sentence Production

- <u>Linearization</u>
  - arranging words in an ordered, linear sequence

- <u>Prosody</u>
  - Melody, intonation and stress pattern of an utterance

Speech Errors

- Slip-of-the-tongue:
  - Sounds or entire words are re-arranged
  - Three types of errors
    - Sound errors
      - Sulu kar → kulu sar
      - Reading list → leading list → reading rist
    - Morpheme errors
      - self-destruct instruction → self-instruct destruction
    - Word errors
      - Writing a letter to my mother → writing a mother to my letter

Speech Errors

– Anticipatory errors are more common

– When we slip

- we tend to create a word rather than a non-word

- We tend to create a common pronunciation

- Errors occur across items from the same category

  – Vowels, prefixes, nouns…

Speech Errors

- Dell et al (1997) Model
  - Spreading activation
    - She sells sea shells on the sea shore
    - Inappropriate phonemes are activated and cause the tongue slip.

Discourse Production

- Narratives:
  - Discourse in which you describe a series of events
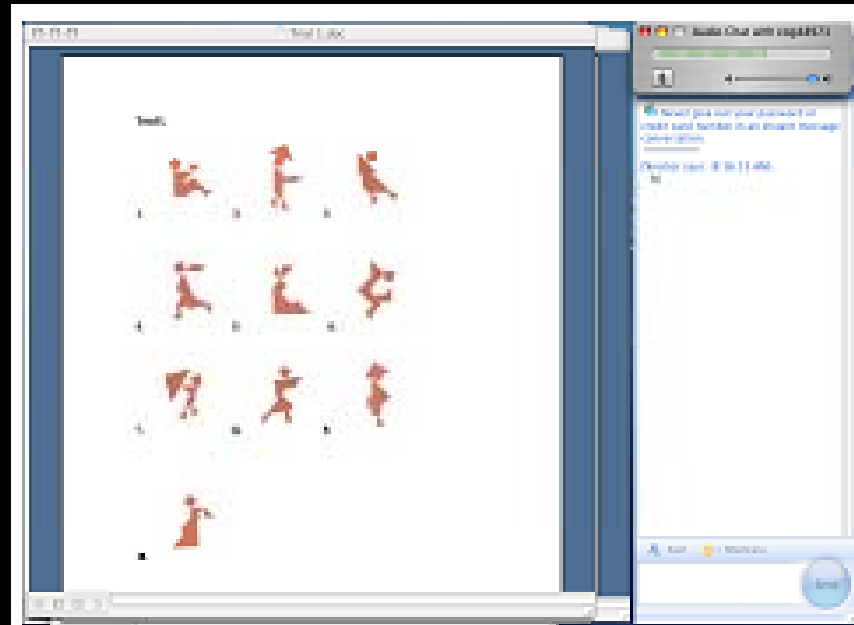
Social Context of Speech

- Pragmatics:
  - The knowledge of social rules that underlie language
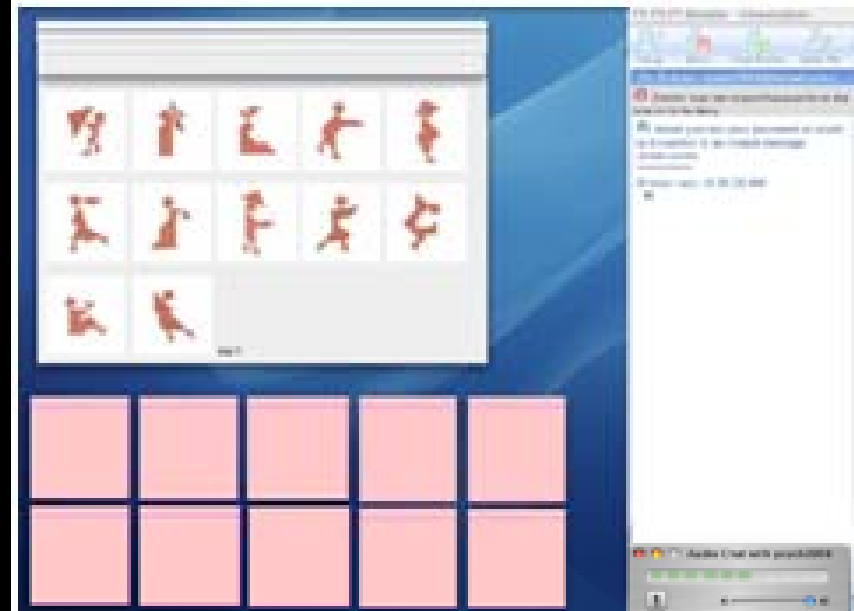
Social Context of Speech

- Common Ground
  - People who are communicating share a similar background knowledge, schemas, experiences that are necessary for mutual understanding
  - Study by Clark et al (1986)

Clark et al (1986)

- Subject 1 tires to communicate subject 2, which figure to choose.

- Becomes more efficient over trials

Director's display.

Matcher's display.

Social Context of Speech

- <u>Lexical Entrainment</u>
  - Specific pattern that two communicators develop and use regarding a certain object or concept.

Subjects, even with different first languages, easily form lexical Entrainments about different kinds of chairs

Speech Acts

- Direct speech acts
  - The speech act is expressed directly (e.g. "Shut the door!")
- Indirect speech acts
  - We accomplish our goals in speaking in an oblique fashion (e.g. "Could you please shut the door?")

Speech Acts

- ## Directives

  - A sentence that requests someone to do something.

    - EXP: Lend me your car.

    - EXP: Could you lend me your car?

    - EXP: Could you possibly by any chance lend me your car for just a few minutes please?

  - ## Indirect Directives

    - What are you talking about?

    - I wish I had a cup of tea.

Speech Acts

- Taxonomy of direct speech acts (Searle, 1975)
  - Representative
    - A speech act by which a person conveys a belief that a given proposition is true
    - E.g. "My students are smart."
  - Directive
    - An attempt by a speaker to get a listener to do something, such as supplying the answer to question
    - E.g. "Shut the door!"

Speech Acts

- Taxonomy of direct speech acts (Searle, 1975)
  - Commissive
    - A commitment by the speaker to engage in some future course of action
    - E.g. "I'll be there."
  - Expressive
    - A statement regarding the speaker's psychological state
    - E.g. "I'm happy."

Speech Acts

- Taxonomy of direct speech acts (Searle, 1975)
  - Declaration
    - A speech act by which the very act of making a statement brings about an intended new state of affairs
    - E.g. "I now pronounce you husband and wife"

Conversational Postulates (Grice, 1967)

- The maxim of quantity
  - Make your contribution to a conversation as informative as required but no more informative than is appropriate

- The maxim of quality
  - Your contribution to a conversation should be truthful
  - You are expected to say what you believe to be the case

Conversational Postulates (Grice, 1967)

- The maxim of relation
  - You should make your contributions to a conversation relevant to the aims of the conversation

- The maxim of manner
  - You should try to avoid obscure expressions, vague utterances, and purposeful obfuscation of your point