1 ▣ ## Language Comprehension
- Perception of language
- The internal lexicon
- Sentence comprehension and memory
- Discourse comprehension and memory

2 ▣ ## Perception of isolated speech segment
- Auditory level
- Phonetic level
- Phonological level

3 ▣ ## Speech as a modular system
- Domain specific
- Operates on a mandatory basis
- Fast
- Unaffected by feedback

4 ▣ ## The problem of in variance
- No one-to-one correspondence between acoustic cues and perceptual events.

5 ▣ ## Categorical perception
- Criteria determine categorical perception
- Sharp identification functions
- Failure to discriminate between sound within a given sound class
- Consonant perception is categorical.
- Vowel perception is continuous and noncategorical.

6 ▣ ## Attentional processes
- When attention was directed to the speech, categorical-like performance was found.
- Discrimination performance was flat when attention was directed to nonspeech.
- Phonetic trading relations hold for speech mode only.

7 ▣ ## Motor theory of speech perception
- Sound produced in similar ways but with varying acoustic representations are perceived in similar ways

8 ▣ ## Perception of continuous speech
- The words were perfectly intelligible in the context of fluent speech.
- Only one half of the words were correctly identified when presented in isolation.

9 ▣ ## Prosodic factors in speech recognition
- Stress
   light house keeper
- Rate
Rate normalization: the process of taking information about speech rate into

consideration when identifying individual speech segments.

## 10 ▢ Context and speech recognition

1. Accidents kill motorist on the highways.
2. Accidents carry honey between the house.
3. Around accidents country honey the shoot.

## 11 ▢ Phonemic restoration

1. It was found that the _eel was on the axle.
2. It was found that the _eel was on the shoe.
3. It was found that the _eel was on the orange.
4. It was found that the_eel was on the table.

## 12 ▢ Mispronunciation detection

- It has been zuggested that students be required to preregister.
- Shadowing task—repeat or restore what they hear
- Restorations were associated with greater fluency.
- Mispronounced sound need to be similar enough to the expected sound for restoration to occur.

## 13 ▢ TRACE model of speech perception

- Several levels of processing are simultaneously active during speech perception and interact with each other.
- The entire network is called trace.
- The pattern of activation left by a spoken input is a trace of the analysis of the input at each of the three processing level.

## 14 ▢ Perception of written language

- Different writing systems
- Levels of written language processing
- Eye movement during reading
- Perception of letters in isolation
- Perception of letters in word context
- The interactive activation model

## 15 ▢ Different writing systems

- logography: one logograph or character represent a morpheme, e.g. Chinese
- Syllabary: one symbol, one syllable, e,g, Japanese kana
- Alphabet: each letter is supposed to represent a phoneme

## 16 ▢ Chinese writing

- Pictographic
- Ideographic
- Syllabic
- Semantic radicals + Phonetic determinatives

## 17 ▢ Japanese writing

- Logographic characters :kanzi (Chinese)

- Syllabic symbols: kana

## 18 ▢ Problems in English orthography
- Some letters do not represent any sound in a particular word.
- A group of two or more letters can represent a single sound.
- A single letter can represent a cluster of sounds.
- The same letter can represent different sounds.
- The same sound can be represented by different letters.

## 19 ▢ Levels of written language processing
- Feature level
- Letter level
- Word level

## 20 ▢ Eye movement during reading
- Saccades: the movements of the eyes during reading, 10-20 msc
- Regressions: saccades that move backward
- Fixations: the time that we spend at a given location between eye movements
----250 msc, varies with the difficulty of the content and the skills of the reader

- Grade level norms for reading skills (Table 4-3, p. 94)

## 21 ▢ Span fixation
- the size of the area from which a reader picks up visual information
- The captain granted the pass in the afternoon.
- The captain quarded the pass in the afternoon.
- The captain gnarbed the pass in the afternoon.
- The captain pmavbcd the pass in the afternoon.

- Both visual and semantic inconsistencies increased fixation duration.

## 22 ▢ R

## 23 ▢ Perception of letters in isolation
- Tachistoscope: a device that permits the rapid visual presentation of a stimulus.
- Constituent features of letters are a significant determinant of performance. P, R, K, Z
- In a brief presentation without word context, we can extract some but not all the features associated with that letter.

## 24 ▢ Search an array of letters for a prespecified target letter
- Search for letter Z in Figure 4-7 on p 96.
- Compare the time spent for two arrays.

## 25 ▢ qazplmwsxokmijnrf

## 26 ▢ overgeneralization

## 27 ▢ Perception of letters in word context
- The word-superiority effect

- Cattell (1886)
- People were able to report only about 3 or four unrelated letters.
- Two short words

28 ◻

- Word processing aids letter identification
- Readers searching for letter *t* missed more letters when they were embedded in words than in embedded in words than if embedded in nonwords.
- Readers have tendency to group letters into higher order units such as groups of letters or entire short words.

## 29 ◻ Character reading

- Radicals were identified better when they were presented in characters than in pseudocharacters, and better than in non-characters.

## 30 ◻ Summary

- We perceive lower-level units such as letters and radicals differently when they occur in familiar contexts than in unfamiliar contexts.
- When words are familiar, we can perceive them as complete units rather as sets of letters.

## 31 ◻ Two Models of Reading

- Dual-Route Model
1. Lexical route
2. Nonlexical route
- Connectionist Model
1. Orthographic layer
2. Phonological layer
3. Semantic layer

## 32 ◻ Evaluation of the models

- Dual-Route model captures two different forms of acquired dyslexia
1. Phonological dyslexia: ability to read nonwords aloud is impaired
2. Surface dyslexia: retains the naming of nonwords but not words
- Connectionist model captures an important feature of development dyslexia—children with poor reading skills have greater difficulty with exception words than other children
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