CHAPTER 2

LINGUISTIC PRINCIPLES

<u>Chapter Outline</u>

Introduction
Basic Grammatical Concepts
      Duality of Patterning
      Morphology
      Phrase Structure
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      Differences Between Signed and Spoken Languages
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      Deep and Surface Structure
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Key Terms

duality of patterning	phones
aspiration	phonemes
distinctive feature	voicing
morphology	morpheme
free morpheme	bound morpheme
grammatical morpheme	phrase structure
determiner	phrase-structure rules
lexical insertion rules	derivation
phrase-structure ambiguity	linguistic productivity
linguistic creativity	recursive rule
American Sign Language	arbitrariness
iconicity	reciprocity
language	grammar
observational adequacy	descriptive adequacy
explanatory adequacy	deep structure
surface structure	deep-structure ambiguity
active voice	passive voice
transformational rules	particle-movement transformation
structure-dependent	passive transformation
auxiliary verb	derivational theory of complexity
lexical-functional grammar	agent
patient	psychologically realistic grammar
parameter	null-subject parameter

1. **To advance understanding of surface and deep structure, provide examples of related and ambiguous sentences**. For relatedness, discuss how active and passive sentences such as:

    Rafael hit the ball.

    and

    The ball was hit by Rafael.

    are related in meaning, but not in their surface form.   Next, have students derive the meanings of a multiply ambiguous sentence such as
    He made the bat fly.

    whose one surface form has several underlying meanings. Discuss the difference between structural and syntactic ambiguity. Use these examples to explain that transformational grammar was developed to account for phenomena in language such as relatedness and ambiguity.

2. **To increase student awareness of constituent structure,** have students analyze simple declarative sentences into their major constituents, identifying the major break in the sentence, then the next largest break, and so on. Students usually have little difficulty in doing this. This simple activity serves two functions. The first is to provide students confidence in their own ability to perform linguistic analyses. Many psychology students feel that they know little about linguistic analysis and some of the material in Chapter 2 may prove difficult to appreciate. This exercise may serve to boost their confidence when it is needed most: when they are about to encounter some difficult material. A second function is to relate immediate constituent analysis to some important psycholinguistic issues. For example, you can point out that speakers hesitate or pause at constituent boundaries, thus enabling a listener to "chunk" the previous constituent in working memory before processing subsequent speech.

3. **To increase student understanding of language as a unique communication system,** compare and contrast human language with other systems of communication (notably, animal communication). The most widely acknowledged approach is found in Hockett (1960), who identifies thirteen design features that are unique to human language.

    Hockett, C. F. (1960). The origin of speech. Scientific American, 203, 89-96.

Suggested Readings

Jackendoff, R. (1994) Patterns in the mind: Language and Human Nature. New York: Basic Books. This is an entertaining view into language, with wonderfully accessible explanations of universal and mental grammar.

Klima, E. S., & Bellugi, U. (1979). The signs of language. Cambridge, MA: Harvard University Press. An excellent starting introduction to sign language. Includes discussion of historical and grammatical properties of sign, experimental studies of sign language production, and a discussion of wit and poetry in sign.

Newmeyer, F. J. (1986). Linguistic theory in America (2nd ed.). Orlando, FL: Academic Press. An excellent overview of generative theories of grammar, beginning with transformational grammar. It is particularly helpful for psychologists desiring some background on newer grammatical theories.

Pinker, S. (1984). Language learnability and language development. Cambridge, MA: Harvard University Press. A major work in the study of language acquisition, Pinker's book doubles as a tutorial of Bresnan's lexical-functional grammar.

Suggested Web Sites

http://www.nidcd.nih.gov/health/hearing/asl.asp

The National Institute on Deafness and Other Communication Disorders (NIDCD) is part of the National Institutes of Health (NIH). This website lists resources and research dedicated to improving the lives of people with communications impairments and disorders.

http://complex.gmu.edu/people/ernie/witty/ambiguities.html

This site includes such items as "Include your children when baking cookies" and "Police begin campaign to run down jaywalkers." An amusing way to teach different about ambiguity in language.

http://www.ling.ed.ac.uk/linguist/

The Linguist List is billed as the world's largest online linguistic resource. It includes a linguist directory, a free subscription service, and a database on over 7000 languages.

http://commtechlab.msu.edu/sites/aslweb/browser.htm

This site enables viewers to select from a sample of words and then watch a video demonstration of the corresponding ASL sign.

http://www.lsadc.org/

The home page of the Linguistic Society of America, this Web site includes information about different fields of linguistics, language policies, LSA programs, and grant opportunities.

Multiple Choice Questions

1. In English, the basic word order is:
    a. subject-object-verb, or SOV
    b. object-subject-verb, or OSV
    c. subject-verb-object, or SVO
    d. verb-subject-object, or VSO
        Answer: c   (p. 19)

2. The concept that a language contains a large number of meaningful words and also contains a small number of elements that combine to form words is known as:
    a. derivation
    b. lexical insertion
    c. phrase structure
    d. duality of patterning
        Answer: d   (p. 20)

3. The smallest unit of sound that makes a difference in meaning is a(n):
    a. phone
    b. phoneme
    c. morpheme
    d. inflection
        Answer: b   (p. 20)

4. The initial sounds in the words *big* and *dig* are:
    a. different morphemes
    b. different phonemes
    c. different features
    d. different allophones
        Answer: b   (p. 20)

5. A characteristic that distinguishes each phoneme from every other is called a(n):
   a. distinctive feature
   b. morpheme
   c. phone
   d. inflection
   Answer: a   (pp. 20-21)

6. The phonological rule "A word cannot begin with two stop consonants" is:
   a. an adequate description of a phonological pattern
   b. inadequate, in that it does not take syntax and semantics into account
   c. inadequate, since the pattern can be described more generally
   d. inadequate, since it is possible, though rare, for a sentence to begin with two stop consonants
   Answer: a   (p. 21)

7. The smallest meaningful unit in language is called a:
   a. phone
   b. phoneme
   c. morpheme
   d. phrase
   Answer: c   (p. 22)

8. The system of rules that governs how different forms of the same word may be used convey different shades of meaning is referred to as:
   a. phonology
   b. morphology
   c. syntax
   d. semantics
   Answer: b   (p. 22)

9. A representation of how words in a sentence are grouped into larger phrases (i.e., constituents) is known as:
   a. lexical insertion
   b. phrase structure
   c. transformational grammar
   d. recursion
   Answer: b   (p. 23)

10. The set of rules needed to generate a sentence is called its:
    a. phrase structure
    b. morphology
    c. derivation
    d. constituent structure
    Answer: c   (p. 23)

11. If two distinct phrase markers can be derived for a single sentence, the sentence is said to be:
    a. declarative
    b. recursive
    c. ambiguous
    d. arbitrary
    Answer: c   (p. 24)

12. Linguistic productivity is best described as the ability to:
    a. produce and comprehend novel sentences
    b. speak more than one language
    c. speak in semantically correct sentences
    d. describe linguistic knowledge in explicit terms
    Answer: a   (p. 25)

13. A rule that refers to itself, such as the rule a sentence may be rewritten as a NP and V and S is called a(n):
    a. recursive rule
    b. generational rule
    c. transformational rule
    d. arbitrary rule
    Answer: a   (p. 26)

14. Which of the following statements most accurately reflects the degree of iconicity and arbitrariness in American Sign Language (ASL)?
    a. ASL is a more arbitrary language than English
    b. ASL is a more iconic language than English, but the degree of iconicity in ASL has declined over the past 200 years
    c. ASL and English do not differ in arbitrariness
    d. ASL and English do not differ in iconicity
    Answer: a   (p. 27)

15. Which of the following is NOT a major parameter of American Sign Language?
    a. hand configuration
    b. place of articulation
    c. movement
    d. distinctive features
    Answer: d   (p. 29)

16. A grammar is:
    a. an infinite set of sentences
    b. a theory of language
    c. a finite set of sentences
    d. an infinite set of rules
    Answer: b   (p. 33)

17. A theory of language capable of specifying acceptable and unacceptable sequences in a language is said to have:
    a. explanatory adequacy
    b. descriptive adequacy
    c. observational adequacy
    d. linguistic productivity
    Answer: c   (pp. 33-34)

18. A theory of language that specifies the relationships among various sequences in the language is said to have:
    a. observational adequacy
    b. explanatory adequacy
    c. descriptive adequacy
    d. linguistic productivity
    Answer: c   (pp. 33-34)

19. A theory of language that explains the role of linguistic universals in evolution is said to have:
    a. observational adequacy
    b. descriptive adequacy
    c. explanatory adequacy
    d. linguistic productivity
    Answer: c   (pp. 33-34)

20. The underlying meaning of a sentence is referred to as its:
    a. phrase structure
    b. deep structure
    c. surface structure
    d. universal grammar
    Answer: b   (p. 34)

21. A sentence uttered by a speaker corresponds to its:
    a. phrase structure
    b. deep structure
    c. surface structure
    d. syntax
    Answer: c   (p. 34)

22. Which of the following is an example of deep structure ambiguity?
    a. They are eating apples.
    b. Flying planes can be dangerous.
    c. John is easy to please.
    d. The child thinks the man left.
    Answer: b   (p. 35)

23. Transformational rules differ from phrase-structure rules in that:
    a. they "rewrite" constituents into one or more constituents
    b. they apply to entire strings, not just constituents
    c. they do not involve deletion of grammatical information
    d. all of the above
       Answer: b   (p. 35)

24. The relation between *phoned* and *up* in the sentence *John phoned the woman with the curly hair up* is handled within transformational grammar by the:
    a. passive transformation
    b. particle-movement transformation
    c. deep structure
    d. surface structure
       Answer: b   (pp. 35-36)

25. The derivational theory of complexity held that the psychological complexity of a sentence was closely related to the:
    a. number of phrase-structure rules in its derivation
    b. number of transformational rules in its derivation
    c. number of recursions in its derivation
    d. number of particle movements in its derivation
       Answer: b   (pp. 37-38)

26. In contrast with transformational grammar, lexical theories place:
    a. greater emphasis on constituent structure
    b. greater emphasis on individual words
    c. greater emphasis on syntax
    d. greater emphasis on morphology
       Answer: b   (p. 39)

27. Bresnan's lexical-functional grammar:
    a. postulates case relations in deep structure
    b. replaces transformational rules with more complete lexical entries
    c. assumes that lexical encoding places a heavy burden on working memory
    d. explains how we can produce and comprehend novel sentences
       Answer: b   (p. 39)

28. Experiments that show that subjects use transformational rules and structures when processing sentences provide evidence for:
    a. reciprocity
    b. linguistic productivity
    c. deep structure ambiguity
    d. the psychological reality of grammar
       Answer: d   (p. 40)

29. Jackendoff used the examples of *a parent* and *apparent* to emphasize that:
    a. we cannot determine word boundaries on phonological grounds alone
    b. ambiguity is more widespread in language than is commonly realized
    c. transformational rules are needed along with phrase-structure rules to provide a complete grammatical theory
    d. the frequency of a word has a significant effect on how easily it is retrieved
    Answer: a   (p. 41)

30. According to Hauser, Chomsky and Fitch (2002), the difference between the faculty of language in the broad sense (FLB) and the faculty of language in the narrow sense (FLN) is that:
    a. FLN only includes recursion, and so is unique to humans
    b. FLB only includes recursion, and so is unique to humans
    c. FLB contains no components that support human language
    d. FLN contains no components that support human language
    Answer: a   (p. 42)

31. Which is NOT true of the null-subject parameter?
    a. It has two values, subject and no subject
    b. It is set to different values in different languages
    c. It addresses whether a language permits constructions without a subject
    d. It resolves syntactic, but not structural, ambiguity
    Answer: d   (p. 42)