Grammar and Syntax

Developing School-Age Children's Oral and Written Language Skills

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CHAPTER 2

The Development of Grammar and Syntax: Foundations From First Words Through the Preschool Years

This chapter describes the typical grammatical and syntactic forms that children learn to understand and produce. Figure 2–1 guides this chapter's description of the components of form. Form is realized as a language's grammar, that is, the rules for constructing phrases, clauses, and sentences. A speaker's grammatical competence involves following the grammatical rules for effectively employing the elements of form to construct complex words and sentences that convey deep structures and surface structures. Speakers enact the properties of the seven grammatical categories of English in order to encode meaning through the manipulation of syntax. These grammatical categories are explained. Table 2–3 guides the explanation of the syntactic growth that occurs during this developmental period. Development of form can be measured, in part, by length of utterance. Language impairment may be characterized by insufficient development and generalization of the regularities of syntactic patterns or by insufficient use of productive variations in syntactic constructions. As form development matures, speakers develop interpropositional devices, including the phrase elaborations that are integral to forming clauses and complex sentences. Clauses are combined by the processes of coordination, complementation, embedding, and relativization. More sophisticated use of free and bound morphemes is acquired. Deficits in form may be involve impaired syntactic comprehension and use of the grammar and syntax needed for academic achievement.

Anticipation Guide

After reading this chapter, readers will be able to answer the following questions:

- What are structural linguistics and generative grammar?
- What are the grammatical categories?
- What is the order of emergence of morphological forms and syntactic forms?
- What are the main categories of content?
- What are content categories and how are they used by SLPs?
- What are three measures of length and complexity of utterances and how do they compare in their clinical utility?
- What are the manifestations of an impairment of earlier developing syntax and morphology?
- What skills are attained during later syntactic and morphological development?
- What are some of the features of African American English morphology and syntax?
- What are the manifestations of impaired syntax and morphology in older children and adolescents? What is the impact of impaired syntax and morphology on learning to read and write and using language as a means for learning?
- What are the primary etiologies of impairments in syntax and morphology that affect school success?

This chapter provides a summary of the elements of language form and structure. SLPs possess foundational knowledge of the complexities of language form (ASHA, 2004, 2016), which guides their accurate determination of the nature of a child's language impairment and their recommendations for attainable objectives. Clinical knowledge involves a fairly detailed background in how linguists characterize morphology and syntax, including the terminology used in the study of the linguistic structure of English. Included in this chapter is a summary of structural linguistics and generative grammar, two of the theories that underlie how form and syntax are acquired. The beginning of this chapter discusses relevant theory and detailed information on English morphology and syntax. Then, extensive developmental information is given, pertaining to preschool, school-age, and adolescent expectations for language form.

Language Form

Every language has form, referred to as its ***grammar***. A grammar encompasses the totality of the language's phonological, semantic, morphological, and syntactic patterns. Within the study of form, words are classified as parts of speech: nouns, verbs, adjectives, and so on. Grammatical competence is predicated upon using a finite number of elements—primarily parts of speech, affixes, and sentence patterns—to construct an infinite number of sentences. Figure 2–1 depicts the components of form: phonology, morphology, and syntax.

The phonological structure of language contributes to grammatical form. As Figure 2–1 indicates, phonemes and syllables provide language with segmental form. Spoken phonology provides suprasegmental form, which is characterized by prosody, intonation, syllable stress, word stress, pauses between words, and the phrasing patterns of utterances.

The semantic language system interacts with the grammatical system to yield use of language form. Inspection of Figure 2–1 reveals that lexicon is listed as an aspect of form, although a lexicon is commonly considered to be a semantic storehouse of words. The reason for this apparent contradiction is that when form is the focus of study, lexical elements (words) are regarded as a component of form, not as semantic content. The lexicon is embedded within the component of form that includes morphology, because a lexicon consists of ***free morphemes*** (true words that have no affixation) and free morphemes that have ***bound morphemes***

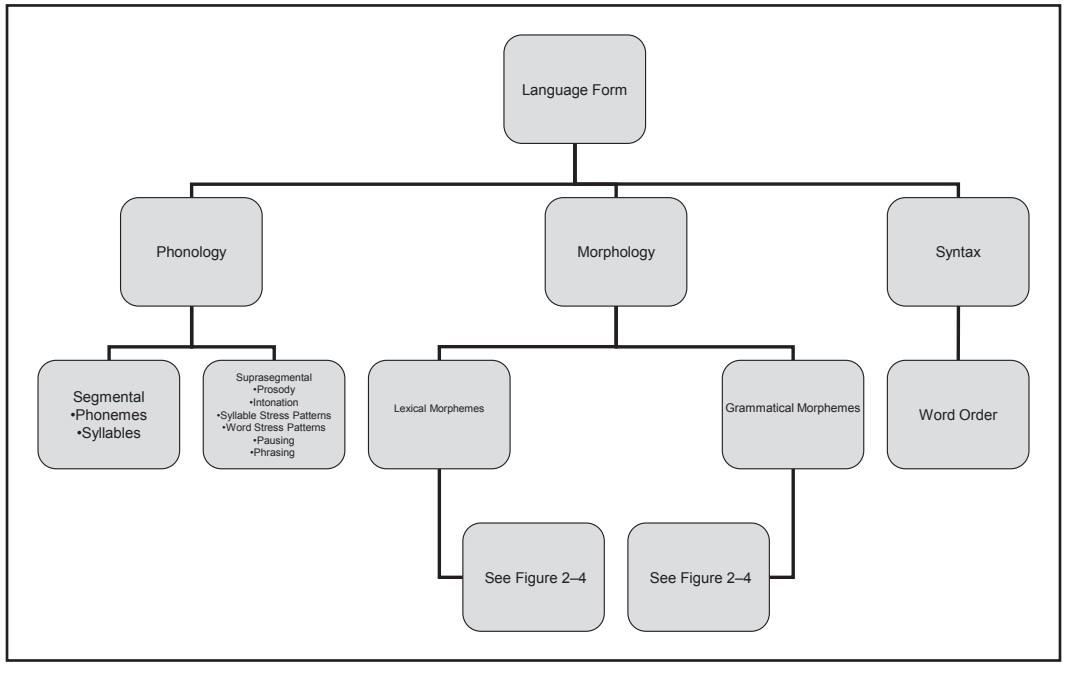

Figure 2–1. Language form. Adapted from Bloom, L., & Lahey, M. (1978). *Language development and language disorders*. John Wiley & Sons.

(affixes) attached. *Lexical morphology* is concerned with word formation rules (Kiparsky, 1982). It is not a contradiction to say that, when semantic content is the focus of study, a lexicon serves the semantic purpose of imparting linguistic meaning and that, when form is the focus, lexical items are elements of the form and structure of utterances. It is merely a matter of which perspective is adopted. Grammatical morphology is concerned with how language users manipulate words and parts of words to produce phrases and sentences. The focus is on how these manipulations reveal a speaker's knowledge of the rules of language form. In the study of language form, there is little regard for how words are used to impart meaning, other than to *focus on how the ordered arrangement of words in phrases and sentences conveys meaning*.

Structural Linguistics and Generative Grammar

Historically, *structural linguistics* attempted to account for how speakers can produce an infinite variety of sentences. To the early 20th-century structural linguists, notably Saussure in 1916 (1983), language is a "self-contained, non-referential system" with "necessary and universal structural features" (Hicks, 2004, pp. 43–44). Every language has a system of rules for inflecting words, conjugating words, and building multiword phrases and sentences. All that is necessary for learning language is for speakers to learn the rules for manipulating grammatical elements. The job of the structural linguist is to codify every rule that exists in every language.

To that end, structural linguistics attempted to account for the entirety of languages' *syntactic universals*: the principles of the world's languages' phonological, morphological, and syntactic systems. Chomsky (1965, 1968; see also Searle, 1972) considered the structural linguists' analyses of corpora of phonemes and morphemes to be efficient systems for codifying any language's finite number of phonemes and morphemes. However, Chomsky was not satisfied that structural linguistic codifications of word order could sufficiently explain human acquisition and use of syntax. Given that each language is governed by a set of fairly convergent and invariant patterns involving word order and morphological manipulation of words, Chomsky attempted to describe how speakers can construct an unlimited variety of unique sentences. Chomsky accounted for this linguistic creativity by theorizing that formal grammar is an unconscious and innate rule-governed language system that allows language users to generate and comprehend an unlimited number of language constructions. Chomsky searched for sets of rules that allow speakers to generate all possible sentences but concluded that sentences' rules actually represent two syntactic levels that speakers manipulate. All messages have a ***deep structure***, which conveys the ideas that the message is really about. Messages have a ***surface structure***, which is how a message is phrased by the grammatical structures that a speaker employs. In many communicative instances, a surface structure can be manipulated and paraphrased in a number of ways but still convey the same deep structure. For example, the deep structure "I want some coffee" could be spoken using that sentence form or as "coffee," "can I have some coffee," "can I get a cup of coffee," "please may I have some coffee," "a coffee would do nicely now," "if it's not too much trouble, could we break for coffee now," and any number of other

surface structure constructions. Sometimes a surface structure has more than one deep structure meaning, as an old cartoon humorously portrayed. The sentence *The duck is ready for dinner* is illustrated in one panel as an eager bird nibbling grain but in another panel as a sumptuous platter for human consumption featuring roasted fowl. The caption can be applied to both pictures by using the same surface structure, but the deep structure of the caption as applied to each picture conveys an entirely different meaning. In short, syntax is not an isolated linguistic skill. The surface structure of a message manipulates syntactic form and semantic content to achieve the semantic and pragmatic meaning of its deep structure.

Chomsky's work (1965, 1968) discussed at length how the use of deep structures and surface structures entails additional innate cognitive properties that go beyond knowledge of a set of syntactic rules. *Children hear numerous surface structures, but they come to grasp the meaning of the deep structure behind these various statements*. Children can understand the underlying meanings of differently constructed grammatical messages at an early age. Chomsky posited the principle of *learnability*: Children all over the world learn the syntactic structures of their languages and speak in sentences in just a few years. Intact human minds have a mental representation of syntax—humans are "hardwired" to use sentences. Chomsky maintained that human beings can innately and intuitively use patterns of words in rule-governed ways to generate syntactic constructions. *The patterns and rules are the* ***generative grammar*** *of a given language—the components that speakers use to generate syntactic constructions*. A speaker's grammatical competence involves following the grammatical rules for effectively employing the elements of form to construct complex words and sentences that convey deep structures and surface structures.

Grammaticality

Basing their views on Chomsky's theories, generative linguists (e.g., Pinker, 2007) support the "mentalist" notion that native speakers of a language have an innate, intuitive sense that guides the acquisition of grammatical elements and the formation of sentences. Speakers unconsciously or covertly judge whether the sentences they hear and say are well formed or not. These judgments allow young children to acquire form by matching their linguistic constructions to the patterns and rules used by the speakers around them. ***Grammaticality*** *means that speakers can acquire the patterns and rules of their linguistic community*.

To some people, the term "grammar" implies correctness of form—"grammar" brings to mind sixth-grade worksheets for practicing how to use parts of speech and diagram sentences. Grammaticality, however, means that speakers have the "language instinct" (Pinker, 2007) to internalize the rules governing the syntactic and morphological constructions that they hear. Patterns and rules vary across linguistic communities, and not all young children are exposed to the same usages of the lexicon, syntax, and morphology. *The linguistic community's patterns become the speaker's innate language*. Language communities vary the surface structure forms to convey the same deep structure meanings. For instance, the deep structure is the same for "Scott don't got no children" as "Scott doesn't have any children," although the surface features vary. If a child can learn the patterns of

form that are in use in his or her linguistic community, the child evidences a sense of grammaticality.

To linguists, "grammar" is a neutral term. The form of language that speakers use reflects the rules and patterns that have evolved in communities over time. ***Descriptive grammar*** refers to the patterns and rules that speakers use, without judging their correctness or appropriateness (Angell, 2009). ***Dialect*** is also a neutral term. A dialect is a speech or language variation that arises from the regional and/or social backgrounds of speakers (ASHA, 2003; Reaser et al., 2017). In contrast, ***prescriptive grammar*** entails teaching and using the phonological, semantic, morphological, and syntactic patterns that conform to a language's standard rules and patterns. In the United States, prescriptive grammar is generally referred to as ***General American English*** (GAE), ***Standard American English*** (SAE), or ***Mainstream American English*** (MAE). Speakers whose linguistic communities use linguistic patterns that differ from GAE/SAE/MAE are said to have a ***language difference. Code-switching*** is a means for a speaker to consciously change linguistic patterns to adopt the elements of standard form that are in use in certain communities, including schools, universities, the political arena, the mainstream media, and in commerce and industry. Code-switching between dialects or languages to conform to a communicative context can be complex and challenging, both cognitively and linguistically, and may provoke emotions and feelings pertaining to a speaker's cultural self-identity. Kent (2004) summarized the importance of reducing language bias and allowing for various options. Choices include: (1) helping a child acquire GAE/SAE/MAE forms, (2) working on form development within the patterns used by the child's dialect, or (3) helping a child learn to code-switch.

ASHA (2003, 2014, 2017) provided and has continually updated an official statement on the knowledge and skills that SLPs need to have in order to provide culturally and linguistically appropriate services. In short, SLPs are expected to gather resources to learn as much as possible about typical speech-language development in a child's linguistic community, culture, and communication environment.[1] Differential diagnosis of language impairment versus language difference includes determining how a child's language differs from the language patterns that he hears spoken around him. The central diagnostic question is whether the child's language demonstrates an insufficient representation of the community's language system. The children's difficulties would emerge as difficulties learning the forms common to their communities' dialects, rather than as difficulties learning the GAE forms that they may or may not hear spoken around them.

Language learning issues are differentiated from any linguistic, dialect, or cultural differences and from issues related to bilingualism, English language learning (ELL), or ***bidialectal*** confusions. To provide a full speech-language report, a child's attainments in language and learning are carefully reported as being associated with or unrelated to the characteristics of other diagnoses, for example, specific learning disability, specific language impairment, and so on.

SLPs determine the appropriate languages or dialects to use in the treatment and management of a child's language impairment. The linguistic standards of

[1]Suggested readings pertinent to grammar and syntax in linguistically diverse populations are provided at the end of this chapter.

the child's community or communication environment are considered when determining goals, objectives, interventions, and criteria for dismissal from speech-language therapy.

Syntactic Competence and Performance

Chomskian theories of syntactic competence accounted for how speakers acquire knowledge of the patterns and rules of language form. Language, as an intellectual faculty of the human mind, is predicated upon grammaticality. In this view, *form precedes function*: When a child develops single words and then multiword constructions, the child's linguistic purposes will be enacted, and communication may ensue. Grammatic competence (which is intellectual) leads to grammatic performance, which is demonstrated by speaking in sentences that follow linguistic rules (Slobin, 1966).

Syntactic analysis of language is not essentially concerned with how speakers use words to convey semantic meaning or to enact pragmatic intent. Syntactic theory stands in contrast to the *functional linguistics* view of pragmatics (Halliday, 1973, 1975) (see Chapter 3). The functional linguistic view is that communicative competence precedes linguistic competence (Hymes, 1971). Children first begin to communicate preverbally by enacting pragmatic intent, such as reaching, pointing, or grabbing objects. *Function precedes form*, in that children can request, greet, share, show feelings, and enact other intents nonverbally or by using sounds, babbling, jargon, or just a few true words. Performance can precede competence, in that the child who experiences functional communication in a social field will attend to language and develop the cognitive-linguistic aptitude to acquire the linguistic structures in use around him or her. Linguists who proposed a functional explanation for grammar explored how discourse shapes linguistic structure (Halliday, 1973, 1975; Skarakis-Doyle & Mentis, 1991). Within interactional settings, there are semantic and pragmatic motivations for grammar; speakers arrange the elements of form in order to make a point. Figure 2–2 depicts the two contrasting views on the emergence of syntax. In the "structural" column on this figure, form precedes function. In the "functional" column, function precedes form.

Gleitman (1990) and later Finch and Chater (1992) and Fisher et al. (2010) speculated that children acquire syntax in part through a cognitive process known as ***bootstrapping***, a phenomenon of learning that applies when a learner has to learn new categories of meaning, organization, or form when he or she has no prior learning to build upon—a kind of learning from scratch. The learner must infer the relevant categories, concepts, and rules. To learn syntax, children manipulate concepts about language form and structural rules so that syntactic elements stay in category. For example, a child may learn to say "I saw a bear. He was brown" but must learn not to say, "I saw a he." In theory, the child is bootstrapped into using "he" to fill some categorical slots but not others because the child identifies not only words but the positions of words in a sentence. Bootstrapping suggests that the process of combining words into phrases and sentences is inherently meaningful to children and that bootstrapping is a process of generalizing the "combinatorial behavior" of words (Fisher et al., 2010, p. 143). Children learn plausible words to place into the categorical slots in sentences. Intuitively learned *distributional rules* help guide sentence formation. Fisher et al. (1994, p. 337) proposed that

Structural	Functional
A speaker calls upon the elements of form → syntax orders words into acceptable patterns that form sentences → that serve pragmatic purposes in communication	A speaker has a pragmatic impetus to communicate → then calls upon the elements of form → syntax orders words into acceptable patterns that form sentences

Figure 2–2. Structural and functional views of syntax.

children use "structural and situational evidence" and observe "contingencies for word use." Children are "armed with sophisticated perceptual, conceptual, and pragmatic knowledge" that is used to establish "word-to-world pairings." This would suggest that children are bootstrapped into syntax via their awareness of the contextual pragmatic purpose of a message and the array of semantic elements that can be linked together to impart an intended meaning (because form provides meaning; also, meaning determines form). Perceptual elements needed would include intonation, word stress, and prosody, and conceptual knowledge would include logic, reasoning, and perhaps contextual, categorical, and/or temporal relationships that affect the meaning of the message. These elements inform the deep structure and the surface structure of the message. Employing these perceptual, conceptual, semantic, and structural elements within a linguistic context, it is possible for a speaker to differentiate when to say, "Who lives in the white house?" from when to say, "Who lives in the White House?"

Defining and Describing Morphology

Morphology involves the structure of word forms. Morphological competence is an important part of a speaker's sense of grammaticality. Patterns for morpheme usage allow speakers to form plurals, mark verb tenses, conjugate verbs, derive words by applying affixes (prefixes and suffixes), mark the possessive case, use contractions, understand the construction of two-word verbs (e.g., hang on, hang out, hang up, hang in, hang around), and form compound words (hangover).

Free Morphemes and Bound Morphemes

A *lexeme* is a single word, for instance, "look." Any form a word can take is itself a lexeme—"looks," "looked," and so on. "Look" is the *lemma* or the canonical form of the lexeme—the unconjugated, unin-