Grammar Guide
for
Speech-Language Pathologists

STEPS TO ANALYZING COMPLEX SYNTAX

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Introduction
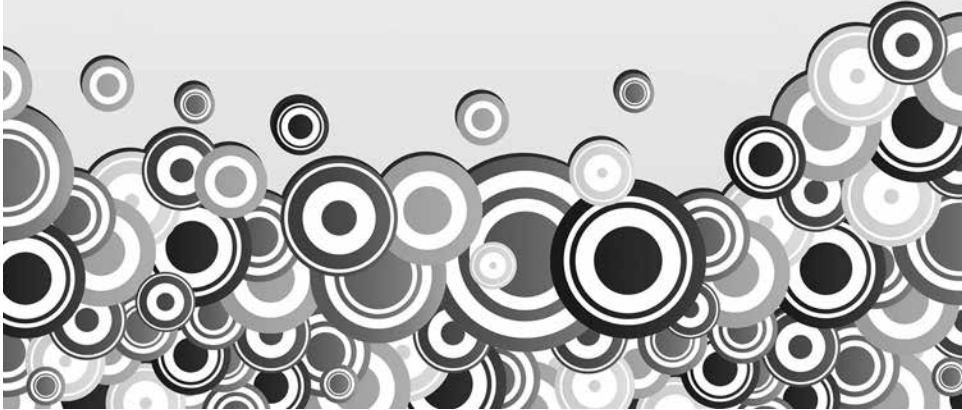
Purpose

This book is entitled *Grammar Guide for Speech-Language Pathologists: Steps to Analyzing Complex Syntax*. It was written primarily for students who are becoming speech-language pathologists (SLPs) and who plan to work with preschool children, school-age children, adolescents, or adults who have spoken and written language deficits. In particular, this includes clients who have developmental language disorder (DLD), a condition that is often overlooked or misdiagnosed (McGregor, 2020) but is nevertheless characterized by difficulty in acquiring syntax, morphology, and vocabulary. This book is appropriate also for SLPs who would like to review English grammar to prepare for assessment and intervention activities.

Throughout this book, we refer to *Systematic Analysis of Language Transcripts* (SALT; Miller et al., 2019), a software program that greatly facilitates the process of analyzing a client's spoken or written language sample. SALT is a user-friendly program that is relatively easy to learn, and once a sample has been transcribed and entered into the program, SALT automatically calculates many key variables, saving valuable time for busy SLPs. It also has normative data for conversational, narrative, expository, and persuasive discourse. Moreover, once an SLP knows how to identify different types of words, morphemes, phrases, and clauses,

and understands how they function—the focus of this book—SALT can quantify those elements in the client's language sample, providing valuable information for identifying a language disorder, pinpointing deficits, planning intervention, and documenting growth.

Consider Rico, a 13-year-old boy who attends the sixth grade at a public middle school in Los Angeles. Rico is passionate about cooking and is quite skilled at making elaborate desserts such as chocolate soufflés, French apple cake, and cheesecake brownies. His goal is to become a chef in a high-end restaurant in Los Angeles and eventually to open a cooking school and teach others. For these reasons, Rico is motivated to complete high school and wants to attend a community college where he can study culinary arts.

However, Rico's grades are poor and he has difficulty expressing himself, even when talking about topics he understands well. For example, his older sister reports that when Rico tried to explain to her how to make a good pie crust, he struggled to pull up the names of common cooking utensils (e.g., pastry cutter, serrated paring knife, spatula, whisk) and to pronounce their names correctly (e.g., oven thermometer, aluminum pan, parchment paper). In addition, during assigned group discussions at school, Rico's science teacher reports that he uses mostly short, simple sentences and that he often hesitates, revises his words, or simply gives up and stops talking.

As the SLP at Rico's middle school, you are faced with several critical questions: First, does Rico actually have a language disorder? If so, how do you know, and how will you document and measure the extent of his difficulties with verbal expression, including his challenges with syntactic and lexical development? Most importantly, how will you plan evidence-based treatment, implement intervention, and monitor his progress over time?

A common reaction to these questions is to begin by administering a norm-referenced standardized language test, such as the Clinical Evaluation of Language Fundamentals–Fifth Edition (CELF-5; Wiig et al., 2013) or the Test of Adolescent and Adult Language–Fourth Edition (TOAL-4; Hammill et al., 2007). Although tests such as the CELF-5 and the TOAL-4 can provide useful information, they do not tell us how the client actually uses language to communicate in the real world for real purposes, nor do they offer much guidance for planning intervention. On the other hand, a language sample—appropriately elicited, transcribed, analyzed, and interpreted—can provide this type of naturalistic information. It can also help identify specific deficits or weaknesses in language that need to be addressed.

In Rico's case, the SLP could begin by eliciting conversational and expository language samples. The conversational sample could be used to establish rapport with Rico and learn about his family, friends, pets, and school experiences. Then, the expository sample could provide an opportunity for Rico to talk about a more challenging topic, which potentially could elicit higher-level language skills by stimulating more complex thought (Nippold, 2021). For example, Rico could be asked to explain how to make a superb chocolate soufflé from start to finish, a process that would involve talking about the ingredients, steps, procedures, and key strategies needed to ensure the finished product has excellent taste and texture. The two language samples could then be transcribed, entered into SALT, and analyzed to determine if Rico has a language disorder and, if he does, what aspects of language are impacted.

For example, to measure syntactic development, we could examine Rico's mean length of communication unit (MLCU) and clausal density (CD), and to measure his lexical development, we could examine the number of different words (NDW) he employs. Verbal productivity could be measured by examining the total number of communication units (TCU) and number of total words (NTW) he produces, and verbal facility could be measured by examining maze words as the percentage of total words (MAZE). Once we quantify his language skills in these areas, we can then move forward and plan intervention to address the identified deficits. For example, if during the expository task, Rico struggled to use appropriate cooking vocabulary (e.g., nouns, adjectives, verbs, adverbs) and to produce complex sentences, intervention could target the use and understanding of relevant words and phrases (e.g., vanilla extract, semisweet chocolate, add the sugar, combine the ingredients, beat slowly), gradually incorporating these units into simple sentences (e.g., "Combine the melted chocolate, vanilla, and water") and later into complex sentences that contain at least one subordinate clause (e.g., "After you combine the melted chocolate, vanilla, and water, gradually add the sugar and beat, using an electric mixer").

However, many SLPs do not employ language sampling on a regular basis, chiefly because they believe it takes too much time (Pavelko et al., 2016). Nevertheless, as mentioned earlier, SALT can save time once the SLP understands how to use it, and can identify different types of words, phrases, and clauses the client produces or does not employ. Additionally, some SLPs express uncertainty about the process of language sampling itself—especially with older children, adolescents, and adults—and are less familiar with the details of later language development and what

to expect at different ages. Books that are written for SLPs and that incorporate relevant research findings are available on these two topics: language sampling and later language development. For example, a book entitled *Language Sampling With Children and Adolescents: Implications for Intervention, 3rd Ed.* (Nippold, 2021) contains tasks and guidelines for eliciting, transcribing, and analyzing conversational, narrative, expository, and persuasive language samples using SALT. It also includes normative data for each genre and discusses how to apply the findings when planning evidence-based language intervention. Similarly, another book entitled *Later Language Development: School-Age Children, Adolescents, and Young Adults, 4th Ed.* (Nippold, 2016) provides detailed coverage of typical development beyond age 5 in areas such as the literate lexicon, derivational morphology, figurative language (e.g., idioms, proverbs, metaphors), humor and sarcasm, reading and writing, and conversational, narrative, and expository discourse. Another issue that discourages some SLPs from conducting language sampling on a regular basis is that their understanding of complex syntax is less extensive than what is necessary to analyze a sample productively. Hence, this book is devoted to addressing this issue in detail.

The Importance of Complex Syntax

Complex syntax is an important topic for SLPs because, as language specialists, we are responsible for helping our clients—whether they are children, adolescents, or adults—to communicate more effectively. As discussed in Chapter 3, complex syntax emerges during the toddler years, but it continues to develop during the preschool, school-age, and adolescent years and into early adulthood. In a protracted process, individuals gradually learn to use the appropriate words, morphemes, phrases, clauses, and sentences to express their thoughts and emotions with accuracy, clarity, and efficiency (ACE). When this happens, people are empowered to gain more control over their lives, to safeguard their personal well-being, and to excel in a variety of social, academic, and vocational endeavors where strong communication skills are essential to success.

Consider a situation where a city council is holding a meeting to discuss the presence of contaminated air, water, and soil in several neighborhoods, caused by unscrupulous local factories. Efforts to remedy this long-standing and contentious problem have repeatedly

failed. When citizens are invited to share their views at the meeting, those who cannot communicate with ACE will be unable to articulate their valuable knowledge and experiences and may be shouted down or out-talked by their more verbal counterparts who represent the unethical polluting factories. As a result, those with poor language skills may be forced to continue living with serious environmental hazards unless other citizens who can communicate with ACE are willing to advocate for them by making statements such as the following:

> We request [MC]* that the city council updates [NOM] our city's land use regulations and that it implements [NOM] stronger policies to protect [INF] the public health by preventing [GER] local factories, processing plants, and other companies from contaminating [GER] the air, water, and soil of all neighborhoods in our community.

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*Note: Each clause in the sentence has a special code. Although the different clause types are explained elsewhere in this book, it is helpful to know that the codes represent the following types of clauses: MC = main clause; ADV = adverbial clause; NOM = nominal clause; REL = relative clause; GER = gerundive clause; INF = infinitive clause; PRT = participial clause.

Additionally, the Appendix to this chapter provides a list of spelled-out acronyms frequently used throughout this book. The reader is invited to refer to this list as needed.

This complex sentence of 45 words and six clauses is packed with information, delivered in a clear and efficient manner, and understandable to most citizens at the meeting. This is not to argue that SLPs should train their clients to speak in such a complex way. Rather, the point is that when SLPs understand how different types of words, morphemes, phrases, clauses, and sentences function to express complex thoughts, they are better able to assist their clients to improve their language skills and to communicate more effectively—with ACE!

This book follows a sequence referred to as *steps to analyzing complex syntax*—words, morphemes, phrases, clauses, and sentences—and generally moves from smaller and simpler to larger and more complicated units. As highlighted by Figure 1–1, it also refers to the fact that understanding one item in the sequence requires an understanding
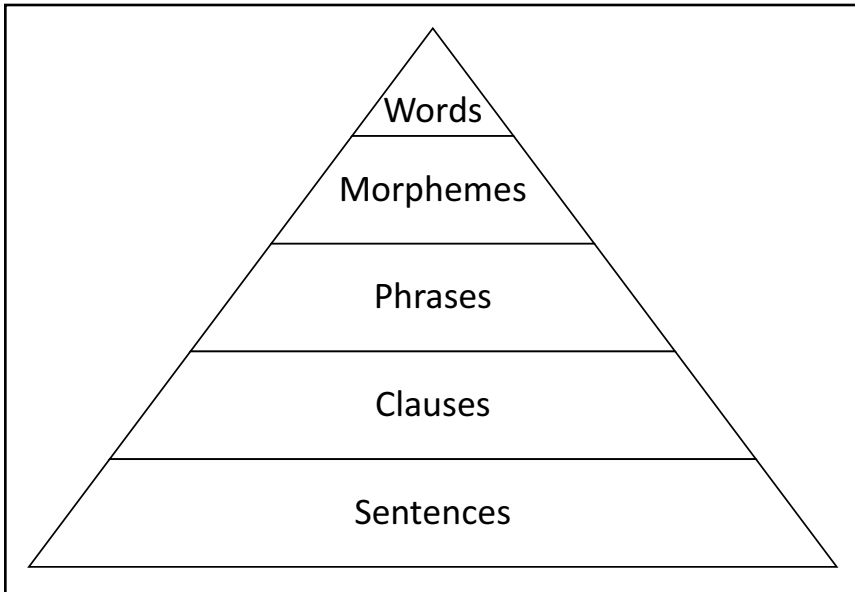
Figure 1–1. Steps to analyzing complex syntax.

of what came before it. In other words, knowing what a *phrase* is requires knowing what *words* and *morphemes* are; knowing what a *clause* is requires knowing what a phrase is; and knowing what a *sentence* is requires knowing what a clause is. By arranging the content of the book in this manner, readers can gradually build a solid foundation in grammar. In addition, to assist the reader in this process, the chapters contain sets of exercises with answer keys that provide the opportunity to interact with the material and to test one's understanding of the main concepts.

Content of the Chapters

Following this introduction (Chapter 1), Chapter 2 discusses the **nature** of complex syntax and introduces different types of clauses and units of measurement, information that is essential for analyzing sentences. It also describes maze behavior, explains why it should be monitored, and explains the role of genre in the production of complex sentences. Chapter 3 describes the **development** of complex syntax during childhood, adolescence, and into adulthood. It also emphasizes