

Grammatical Analysis and the
Clinician:

A Practical Guide

Lynne E. Hewitt

Bowling Green State University

Overview

- Grammatical analysis is a critical tool in assessment and intervention for developmental language disorders. Despite its central role in language practice, clinicians may feel underprepared to deal with descriptive syntax. We will take a tour of the morpho-syntax of the English language, including some cross-linguistic comparisons to illustrate key features of English. Shortcuts to aid in clinical efficiency will be provided, analysis of nonstandard English will be described, and key areas of grammar important to language development and literacy highlighted. See how functionalist linguistics can put the fun and meaning back into grammar.

Learning Outcomes

- After completing this session, participants will be able to:
 - apply descriptive and historical linguistic principles in distinguishing difference from disorder and understanding language change
 - identify early and late-developing elements of morphosyntactic structure of English sentences
 - apply grammatical analysis to assessment and intervention for developmental language impairment and language-based learning disabilities

What is grammar?

- A mechanism for taking strings of words and providing a framework for relating them meaningfully
 - Dog Cat Chase Quickly And Mouse Kill
 - The dog quickly chased the cat who had killed the mouse.
 - The cat killed the mouse quickly and chased the dog.
 - The mouse quickly killed the dog and the cat who had been chasing him.
 -

Two Main Functions of Grammar

- Referring
 - Allows you to make reference to specific entities
 - Example: determiner system of English
 - My sushi
 - The cat
- Predication
 - Lets you say things about them
 - The cat ate my sushi.

What Grammar is Not (IMHO)

- Innate, quasi-mathematical ability bearing no relation to communication
- Boring
- A weapon to make others feel inferior
- Harder than all other domains of language study

Functionalist Linguistics

- Presumption: language evolved for communication
 - Therefore, language structures should relate somehow to functional, communicative needs

Emergent Nature of Language

- Language is not a set of rules
 - $S \Rightarrow NP VP$
- Language is a set of solutions to problems.
 - How can I tell my mother why I don't want to go pick berries anymore?

What this means for grammar

- We've been approaching grammatical analysis from the wrong end
 - Structure is best uncovered by understanding what its function is
- Grammar cannot be static and unchanging
 - Phonological change drives lexical change
drives grammatical change....

Brief Historical Perspective

- Prescriptive linguistics
 - Axioms
 - There is a RIGHT way to say things...& a WRONG way
 - One purpose of education: learn the right, lose the wrong.
 - Changes from original, correct versions are always bad
 - If people can't tell when to use "who" and "whom" the end of civilization is nigh!
 - "Slang" and "Errors" are modern, deteriorations of true usage
 - First OED citation for "ain't": 1778
 - First OED citation for "nark" in the sense of "informer": 1859
 - Latin had the best grammar of all time
 - Too bad the Romans screwed things up...

A Prescriptive Website Example

- From www.grammarerrors.com:
- aren't I/am I not
- The expression *aren't I* is often used in place of *am I not*, particularly in conversational speech.
- **Example 1 (incorrect usage):** I'm going with you on vacation, *aren't I*? Although the use of this phrase is widespread, it is atrocious English that could be considered equivalent to *you is*, a phrase which most educated people abhor (although for some reason, these same people have no qualms about saying *aren't I*). The correct form of the sentence in Example 1 is as follows:
- **Example 2 (correct usage):** I'm going with you on vacation, *am I not*? If you read this sentence aloud, it probably sounds awkward and formal, perhaps even a bit hoity-toity. However, it is correct English. If the phrase *aren't I* is converted from a question to a statement, *I aren't*, it becomes obvious that is very grammatically incorrect.

Recipe for making a tag question in English

- Take one declarative sentence.
 - He eats apples.
 - They don't eat apples.
 - She has won the election.
 - He is a nurse.
- Identify the auxiliary.
 - If no auxiliary, use "do"
 - Be sure to agree in tense and number with main verb
 - If main verb is a copula, use that.
- Make it negative, if positive, and positive, if negative.
- Contract the negation marker.
- Identify subject.
 - If not a pronoun, pronominalize it, agreeing for gender and number
- Perform question inversion.
- Bake in a 98.6 degree Broca's area for 1 millisecond
- Tack resulting phrase on at end of sentence:
 - He eats apples, doesn't he?
 - They don't eat apples, do they?
 - She has won the election, hasn't she?
 - John is a nurse, isn't he?

Double-checking our recipe

*He eats apples, does he?

Note: this is not correct as a tag question, but could work with the right intonation as a rhetorical question.

*They don't eat apples, don't they?

Polarity of negation is wrong

*She has won the election, won not she?

Main verb instead of auxiliary

??John is a nurse, isn't John?

c.f.: Isn't John a nurse?

Tag Questions, take 2

- What about second person?
 - You like Hitchcock, don't you?
 - ✓ Works fine.
- What about first person?
 - I'm getting a raise.
 - *I'm getting a raise, amn't I?
- Problem: "am" is not contractible
- Solution: substitute a contractible auxiliary
 - I'm getting a raise, aren't I?

Another recipe for making a tag question: Super-easy version

- Tag questions in Hindi
 - Take a declarative sentence
 - Add the particle “na” to the end
 - Woh seb khaata hai.
 - He eats apples.
 - Woh seb khaata hai, na?
 - He eats apples, doesn't he?
 - Source of non-native error:
 - You eat apples, isn't it?

Prescriptivism in the Clinic

I have been giving the CELF3 for the past several years and have noted one consistent error that all students make on the "Repeating Sentences" subtest. On several items, the student is asked to repeat a sentence containing a relative clause beginning with the pronoun "who" (example: "The teacher who collects our lunch money is the new principal."). I consistently get a substitution of "that" for "who" - "The teacher that collects our lunch money is the new principal").

I have always scored this as an error, since I considered it a word substitution. However, the usage is so consistent that it made me wonder if it's more of a dialectical variation. I consulted our English department (high school level) who informed me that it is a very common grammatical error and most definitely not a dialectical variation. (They were adamant!)

Since it's not covered in the appendix that lists dialectical variations and since it's a substitution (which is considered an error), I have continued to score this as an error.

However, I'm beginning to wonder... every single student says "that" instead of "who." Is this considered a dialectical variation for purposes of test scoring?

From the Division 1 List, January 2006

Empirical Question: Is “That” a Modernism for “Who”?

- No.

- *B. Signification.*

- The general relative pronoun, referring to any antecedent, and used without inflexion irrespective of gender, number, and case. 1. 1. a. Introducing a clause defining or restricting the antecedent, and thus completing its sense. (The ordinary use: referring to persons or things.)*

- Sometimes replaceable by who (of persons) or which (of things), but properly only in cases where no ambiguity results: cf. 2, and see [WHO](#), [WHICH](#), rel. (For ellipsis of that, see 10.)*

- One example among many:

- 1382 [WYCLIF](#) *Matt.* iv. 16 The peple that dwelte in derknessis say grete ligt.

- “that”, rel. pr. *Oxford English Dictionary*, 2nd Ed., 1989.

- Oxford University Press. OED Online accessed Nov. 2006;

- [http://0-](http://0-dictionary.oed.com)

- [dictionary.oed.com/maurice.bgsu.edu/cgi/entry/50250347?query_type=word&queryword=that&first=1&max_to_show=10&sort_type=alpha&result_place=3&search_id=Ax4t-owdYq3-10340&hilite=50250347](http://0-dictionary.oed.com/maurice.bgsu.edu/cgi/entry/50250347?query_type=word&queryword=that&first=1&max_to_show=10&sort_type=alpha&result_place=3&search_id=Ax4t-owdYq3-10340&hilite=50250347)

Issues from Linguistic Typology

- Languages are very diverse
 - English oddities
 - Phonology
 - interdental POA, /r/
 - Grammar
 - Subject-Verb-Object word order
 - » Most common crosslinguistically: SOV
 - Not much going on in grammatical morphology
 - » Not much agreement
 - » Almost no case-marking
 - » We used to have more....

Why we need historical perspective

Hwæt! We Gardena in geardagum,
þeodcyninga, þrym gefrunon,
hu ða æpelingas ellen fremedon.
Oft Scyld Scefing sceapena þreatum,
monegum mægþum, meodosetla ofteah,
egsode eorlas.

In case you were wondering...

- Listen:
You have heard of the Danish
Kings
in the old days and how
they were great warriors.
Shield, the son of Sheaf,
took many an enemy's chair,
terrified many a warrior,
after he was found an orphan.
 - From *Beowulf*, tr. David
Breedon
 - [http://www.lone-
star.net/literature/beowulf/
beowulf.html](http://www.lone-star.net/literature/beowulf/beowulf.html)

Think that wasn't English?

[Efne] seofon beoð sufon;
twia seofon beoð feowertyne;
þriwa seofon beoð an & twentig; *

One seven is seven;
Two sevens are fourteen;
Three sevens are one and twenty

*See more at: *Hwaet! Old English in Context*, by
Catherine Ball.

<http://www.georgetown.edu/faculty/ballc/hwaet/hwaet06.html>

Descriptive Linguistics

- There is no one best grammar
 - Old joke: a language is a dialect with an army and a navy.
- Historical change is a reality
 - “Correct” grammar & usage are moving targets
 - “Disinterested” vs. “uninterested”
 - Decide “if”
 - “Since” to mean because?
 - We can’t disentangle *who* from *whom* because English lost case marking a long time ago
 - Exception: pronouns
 - And they’re hard for kids
 - » Me go.
 - » Him my friend.

Mission: Seek and Destroy Non-Standard Forms



New Mission: Teaching Language as it Is

- Teaching grammar in its historical context
- Making differences between home language & school language explicit
- But exposure to literate forms crucial
 - rarer grammatical and lexical forms
 - details of usage
 - pragmatics and discourse pattern shifts
 - Acquisition of written language has parallels with bilingualism

Good Websites for Grammar “Errors” in Writing

- University of Toronto Health Sciences Writing Centre Hit Parade of Errors
 - <http://www.utoronto.ca/hswriting/hitparade.htm> (accessed Nov. 3, 2006)
- The English Department Special Grammar Unit's 10 Most Wanted Grammar Errors
 - <http://ace.acadiau.ca/english/grammar/index.htm>

User-friendly Style & Grammar Handbooks

- Truss, L. (2003). *Eats, Shoots and Leaves: The zero tolerance approach to punctuation*. New York: Gotham Books.
- Good, C. E. (2002). *Whose grammar book is this anyway?* New York: Barnes & Noble Books.

Syntactic Development

- Early development issues
 - MLU in morphemes revisited
 - What I was taught:
 - Don't use MLU-m for kids over 48 mos and/or MLU of 4.0
 - Not a true measure of syntactic dev.
 - What is probably right:
 - MLU-m continues gradual upward trend through early adolescence (Leadholm and Miller, 1992)
 - Lower MLU-m in young school age children can signal language development problems (Hewitt et al., 2005)

Why MLU-m can be a valid tool

- Morphology
 - minimal units of meaning
 - often difficult to perceive
 - “of low phonetic substance” (Leonard & Montgomery, 1998)
 - Omission of morphemes deflates MLU-m
 - Omission therefore decreases syntactic complexity
 - Old argument: some more syntactically complex utterances are shorter than simple utterances
 - Countered by
 - » new theories of grammar (transformational grammar is out)
 - » longer utterances are more complex on average

MLU-m as a syntax measure, cont.

- children with lang. dis. slow to master morphology
 - special problems
 - inflected forms:
 - agreement, esp. 3rd person
 - » he goes; she pulls
 - » (Charest & Leonard, 2004)
 - Tense
 - » pull, pulls, pulled
 - » (Rice & Wexler, 1996)

Some Morphological Terms

- Open class
 - Content words
 - nouns, verbs, adjectives, adverbs
 - “Open” to lexical innovation
- Closed class
 - Function words/morphemes; grammatical morphemes
 - Determiners, prepositions, pronouns, tense, auxiliaries...
 - “Closed” to lexical innovation
 - E.g. failed attempt to introduce gender-neutral 3rd person pronoun into English

Some More Morphological Terms

- Inflection
 - Obligatory grammatical elements
 - Agreement markers—person, number
 - Tense
 - Aspect
 - Lot of other stuff in other languages
 - Case
 - Evidentials
 - Animacy
 - Classifiers

Some More Morphological Terms

- Derivational morphemes
 - Lexical building blocks
 - Not obligatory
 - Over time, derived forms get distant from origins
 - Awe; Awful; Awfully; Awesome!
 - Terror and terrific have totally parted company...
 - Used to create new words
 - Within a grammatical category:
 - » Happy (adj.) ☺ + Un = Unhappy ☹ (still an adj.)
 - OR
 - Moving the word to a new grammatical category
 - » Happy (adj.) ☺ + Ness = Happiness (Noun) ☺

Gray Areas

- The Lexical-Derivational-Inflectional Continuum (Bybee, 1985)
 - Language slowly builds up a grammar out of lexical pieces
 - Words → Derivational morphemes → Inflections
- Unclear that use of derivational morphemes = knowledge that they exist
 - Morphological awareness promoted by literacy, and vice versa (Carlisle, 2000)
- March of time erases morphological transparency
 - “bleaching”—morphemes lose their “semanticity” by being used over and over in similar contexts
 - Bathing suit
 - Connection with root word getting lost

How Language Can Build Up a Grammar Out of Spare Parts

- Why on earth is the past tense of go went?
 - Known as a *suppletive* paradigm
 - To go: general meaning, but often restricted to walking
 - Old English past tense was eode
 - To wend: specific meaning (winding or turning while going), but came to mean more generally to depart
 - Past tense: went
 - Slowly, past tense of wend lost restrictive meaning, and replaced older past tense of go, which is now lost
 - walk replaced older restrictive sense of go
 - Leaving us with wend still as a rare (more literary) form, retaining the restricted meaning
 - Lost its irregular past tense, and had to regularize
 - He wended his way home.

Ontogeny & Phylogeny

- Old theories of grammar emphasized static, unchanging principles innately specified
- Newer ideas (and data to support them) suggest much more fluid nature of grammar
 - More gray areas
 - More for kids to figure out
 - More role for kids' errors to influence grammatical change
 - E.g., English irregular past tense
 - Frequency of use predicts which verbs irregular
 - Rarer verbs regularize more rapidly
 - » Knelt? Kneeled? Dove? Dived?
 - Kids are champion overregularizers & innovators
 - » Language development is an engine helping to drive change

Noun phrase development

- Longer NP's as child matures
- Literate language has more elaboration in NP's
- Presence of verb (clausal) elements in NP indicates advanced development

Noun Phrase Analysis

- Things to analyze/measure
 - Presence of derivational morphemes
 - Overall length
 - The seven large tigers ate everyone in the village.
 - » 4 words in each noun phrase

Noun Phrase Analysis, cont.

- Position of modifiers
 - Prenominal modification
 - Determiners:
 - » the dishes; my dishes; a dish
 - Adjectives:
 - » the dirty dishes
 - Adverbs:
 - » the scandalously dirty dishes

Noun Phrase Analysis, cont.

- Postnominal modification
 - Prepositional phrases
 - the dishes in the sink
 - Relative clauses:
 - » the dishes that my mother gave me
 - » the students who cheated on the exam
 - Reduced relatives:
 - » the dishes my mother gave me
 - Nonfinite clauses:
 - » the dishes filled with fruit

Noun Phrase Analysis, cont.

- Nominal clauses
 - What I want you to do is wash the darn dishes!
- Others things to consider
 - Nouns are main linguistic resource for referring
 - Reference lies at syntactic-pragmatic interface
 - Use of determiners, relative clauses, etc.
 - Does child show awareness of listener's point of view?

Using Syntactic Argumentation to Assist in Analyzing Language

- How do you find a noun phrase or verb phrase?
 - Old way: Noun is a person, place, or thing.
 - Problem: rain is a thing, but “raining” is a verb. What is raining when it rains? Is it an action?
 - Better way: identify syntactic structures using syntactic tests

Syntactic argumentation, cont.

- Better tests for “nounhood” or “nounphrasehood”
 - Can it take a determiner?
 - a, an, the, possessive pronouns, demonstrative pronouns, quantifiers.
 - Side note: testing for “determinerhood”: determiners go first
 - » I want two green apples.
 - » *I want green two apples.
 - » She used more blue paint.
 - » *She used blue more paint.
 - If you make a passive sentence, what moves?
 - *The students who cheated on the exam* stole all the pencils.
 - All the pencils were stolen by *the students who cheated on the exam*.

Verb Phrase Development

- Predication, revisited
 - Two ways of looking at syntax
 - Relational structure
 - Grammatical relations
 - » How role in sentence affects NPs, verb agreement
 - » *He [Subj] hit him [Obj].*
 - Constituent structure
 - Phrase structure
 - » How words are grouped
 - » $S \Rightarrow NP VP$
 - » $NP \Rightarrow (Det)(adv)(adj)N(PP)(V)$
 - » ...

Verb Phrase Development, cont.

- Child's task to learn how to build up phrase structure AND to assign correct forms to sentence elements within that structure
 - Important constructs in English
 - Number
 - Person
 - Tense

Verb phrase development, cont.

- Clause structure
 - Easy approach
 1. Find all the main verbs.
 - Be sure to find only main verbs--exclude auxiliaries
 - Be, do, have as aux's
 - Modal aux's: will, can, could, may, might, should, ought, must
 2. Identify which are main verbs and which subordinate
 - Coordinate clauses make compound sentences
 - Conjoined by and, or, but
 - Count all others as subordinate
 - Note: I count infinitives as subordinate clauses
 - Also other nonfinite forms, e.g. participles
He likes eating apples.
 3. Total number of clauses=total number of main verbs

A quick way to find complex sentences

- Why do we have complex sentences, anyway?
 - One important reason: to talk about mental states, report psychological events
 - *I think that blue.
 - ✓I think that blue can be a fabulous color for drapes.
 - So, seek out psychological predicates
 - Think, know, believe, wonder, realize
 - Also sensory, sometimes
 - See, feel, hear
 - Other inherently complex predicates: verbs of telling
 - Say, tell, report

Analyzing the verb phrase, cont.

- Index of subordination
 - Total number of clauses to total number of t-units
 - t-unit equals main clause plus all subordinate clauses
 - Essentially gives ratio of main to subordinate clauses
 - No complex sentences = ratio of 1:1
 - Some normative data exist based on Loban (1976)
 - See Paul (2001)

Analyzing the verb phrase, cont.

- Development of complexity
 - Compounding
 - *He hit me and took my toys.*
 - Infinitives
 - *I want to have ice cream.*
 - Psychological predicates
 - *I think you're mean.*
 - Relative clauses
 - *I want the one that's up high.*
 - Embedded questions
 - *Shirley knows who Andre likes.*
 - Adverbial conjunctions
 - *Lisa ate before she came.*
 - *I can't go out until I finish my homework.*
 - *I would except I'm grounded.*

Analyzing the verb phrase, cont.

- Other aspects of complexity
 - Use of rarer forms
 - Perfective forms
 - He has eaten.
 - She had gone.
 - Also using perfectives as modifiers
 - » Chewed gum is icky.
 - “Past” modals
 - should, could, would

Analyzing the verb phrase, cont.

- Passive
 - “promotes” objects up to subjects
 - *Lucy kissed Charlie.*
 - *Charlie was kissed by Lucy.*
 - “demotes” subjects down to objects
 - Can demote all the *way down to nothing*
 - Charlie was kissed.

Passive, cont.

- Late acquired by children
- Useful in expository writing where active voice grammatical subject unimportant/not the point
 - *The effects of the explosion of Krakatoa could be felt many hundreds of miles away.*
 - » Doesn't matter who felt them

Analyzing the verb phrase, cont.

- Gerunds: Making nouns out of verbs
 - Hammering *is fun*.
- Pre- and post-posing elements
 - Sometimes for pragmatic effects, like topicalization or emphasis
 - As for Daryl, *he is simply hopeless with computers*.
 - Rarely do syntactic structures *need to be taught "from scratch"* (Scott, 1995, p. 450)
 - » Passive sentence with emphatic "do" and adverb fronted
 - » Compare:
 - » *Syntactic structures* rarely need to be taught *"from scratch"*.

Analyzing a hard sentence

To ask how we help children and adolescents with language impairments become proficient users of grammar is to ask one of the more central questions in language-teaching pedagogy today.

(Scott, 1995, p. 451)

- Number of clauses?

Analyzing a hard sentence, cont.

To ask how we help children and adolescents with language impairments become proficient users of grammar is to ask one of the more central questions in language-teaching pedagogy today.

- Clauses: 5
- Main clauses?:
 - 1
- Which verb is it?
 - is

Analyzing a hard sentence, cont.

- How do we know?
 - Exclude infinitives—nonfinite forms always subordinate
 - Exclude embedded question “how we help”
 - “Become” is embedded in “how we help”
 - “Is” is last verb standing

Analyzing a hard sentence, cont.

- *To ask how we help children and adolescents with language impairments become proficient users of grammar is to ask one of the more central questions in language-teaching pedagogy today.*
- Number of prepositional phrases:
 - 4

Analyzing a hard sentence, cont.

- *To ask how we help children and adolescents with language impairments become proficient users of grammar is to ask one of the more central questions in language-teaching pedagogy today.*
- Longest noun phrase:
 - *one of the more central questions*
 - *6 words*
- Runners up:
 - *adolescents with language impairments*
 - *proficient users of grammar*
 - *4 words each*
- Note heavy use of prepositional phrases as post-nominal modifiers

Analyzing a hard sentence, cont.

- Other cool stuff about this sentence
 - Fronted infinitival complement with embedded question
- To ask how we help children and adolescents with language impairments become proficient users of grammar *is to ask one of the more central questions in language-teaching pedagogy today.*
 - Compare:
 - One of the more central questions in language-teaching pedagogy today is *how we [can] help children and adolescents with language impairments become proficient users of grammar.*

Grammar Resources

Justice, L. & Ezell, H. (2002). *The syntax handbook*. Eau Claire, WI: Thinking Publications.

Nippold, M. (1998). *Later language development, 2nd Ed.*. Austin, TX: Pro-Ed.

Scott, C. & Stokes, S. (1995). Measures of syntax in school-age children and adolescents. *Language Speech & Hearing Services in Schools, 26*, 309-319.

What about intervention?

- Scott, C. (1995). A discourse approach to syntax teaching. In D. Tibbits (Ed.) *Language intervention beyond the primary grades* (pp. 435-463). Austin, TX: Pro-Ed.
 - Book out of print. ☹

References

- Bybee, J. (1985). *Morphology: A study of the relation between meaning and form*. Philadelphia, PA: John Benjamins.
- Carlisle, J. (2000). Awareness of the structure and meaning of morphologically complex words: Impact on reading. *Reading and Writing, 12*, 169-190.
- Charest, M. & Leonard, L. (2004). Predicting Tense: Finite Verb Morphology and Subject Pronouns in the Speech of Typically-Developing Children and Children with Specific Language Impairment. *Journal of Child Language, 31*(1), 231-246.
- Hewitt, L., Hammer, C., Yont, K., and Tomblin, B. (2005). Language sample analysis measures for children with SLI in Kindergarten. *Journal of Communication Disorders, 38*, 197-213.
- Leadholm, B.J., & Miller, J.F. (1992). *Language sample analysis: The Wisconsin guide*. Madison, WI: Wisconsin Department of Public Instruction.
- Leonard, L. & Montgomery, J. (1998). Real-time inflectional processing by children with specific language impairment: Effects of phonetic substance. *Journal of Speech, Language, and Hearing Research, 41*, 1432-1443.
- Loban, (1976). *Language development: Kindergarten through grade 12*. (Research Report #18). Urbana, IL: National Council of Teachers of English.
- Paul, R. (2001). *Language disorders from infancy through adolescence, 2nd Ed.*. St. Louis: Mosby.
- Rice, M.L. & Wexler, K. (1996). Toward tense as a clinical marker of specific language impairment in English-speaking children. *Journal of Speech and Hearing Research, 39*, 1239-1257.

Contact Information

Lynne E. Hewitt, Ph.D., CCC-SLP

Associate Professor

Department of Communication Disorders

Bowling Green State University

Bowling Green, OH 43403

lhewitt@bgsu.edu

419 372 7181