NORTHWESTERN NARRATIVE LANGUAGE ANALYSIS (NNLA) THEORY AND METHODOLOGY

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Working Document

Contents

Forward

The NNLA was developed in the Aphasia and Neurolinguistics Research Laboratory at Northwestern University over a twelve-year period. The method was developed as part of an NIH funded research project (R01-DC01948), which began in 1992. The purpose of the research project was to examine patterns of recovery, as well as the effects of treatment, for individuals with agrammatic, Broca's aphasia. This work required careful inspection of the patients' narrative abilities in order to detail their language deficit patterns and to examine changes over time.

The present version of the NNLA is intended to be of use to both clinicians and researchers interested in documenting the narrative ability of patients with aphasia. We have used the method with both fluent and nonfluent aphasic individuals and have found it to be equally useful for both types of aphasia. We also suggest that it can be used for children or adolescents with specific language impairments and other language disorders.

Over the years a number of individuals contributed to the NNLA. Early in its development Dr. Lewis Shapiro contributed significantly, assisting with coding of verb argument structure. Drs. Kirrie Ballard, Beverly Jacobs, Ligong Lee, Sandra Schneider, and Mary Tait also were involved in the early years, spending hour upon hour coding and discussing their analyses and assisting with revisions. Later Drs. JungWon Janet Choy, Miseon Lee, Lisa Milman, and Yasmeen Faroqi-Shah further helped to refine the method. Dr. Susan Edwards assisted with final editing and formatting, streamlining it to make it more user friendly and clinically relevant.

Appreciation is extended to the many people with aphasia who provided sample of their language for us to analyze. Without their contributions this comprehensive narrative analysis program would not have been possible. We hope that clinicians' and researchers' use of the NNSLA will help to quantify and, thus, improve aphasic individuals' ability to communicate.

Chapter 6. Narrative Transcription

PART I: TRANSCRIBING THE LANGUAGE SAMPLE

1. Naming Files and Wave Files

a) Subjects will be assigned an identifying number depending upon the experimental condition to which they have been assigned. This is number will be recorded on all audio and video tapes pertaining to that subject.
b) Files should be labeled by the subject's last name, first name, subject #, date of recording, and condition (e.g. baseline, probe session, etc) on the side of the file containing the recording.
c) Files should be opened using Praat.

2. Beginning the Transcription

a) LINE 1: Following a dollar sign, the person(s) being transcribed need to be indicated (e.g. Subject and family member, acquaintance or volunteer). Begin each name with a capital; separating names with a comma. The Subject is always identified as the first speaker; the other participant(s) follow.
b) LINE 2: Following a plus sign, identify the file number.
c) LINE 3: Following a plus sign, identify the speakers.
d) LINE 4: Following a plus sign, enter the date indicated on the tape.
e) LINE 5: Following a plus sign, indicate the counter number,on the tape recorded, where the transcription begins.
f) LINE 6: Following a minus sign, the marker 0:00 needs to be indicated to signal SALT when to begin timing the sample.
Example -

```
$ Subject, Examiner
+ S9E1NS7
+ Subject=John Smith, Examiner=Mary Smith
+ l0/22/93
 - 00:00:05
```

h) LINE 7: From this point on, the speaker must be identified prior to every utterance (**S** for **S**ubject, **F** for **F**amily member, etc). After the capital letter, leave a space and begin the transcription. Every new utterance must begin with a new line and speaker identification.

3. End Punctuation

All utterances must end with one of five punctuation marks.

Use . = to end a statement.
Use ! = to end an exclamatory remark
Use ? = to end all questions
Use > = to represent an abandoned or discontinued utterance
Use ^ = to represent an interrupted utterance.

****IMPORTANT !** *Use only one of these five punctuation marks per line. Do not use periods to mark abbreviations or any of the other symbols within the utterance. The only punctuations used within an utterance are commas (to designate pauses less than 2 sec.) and apostrophes.*

4. Ending the Transcript

End the transcript with:
-00:05:46

5. Utterance Segmentation

a) An utterance is a connected string of words expressing a thought. In all cases, utterance boundaries should be conservative; when in doubt, place boundaries to create shorter rather than longer utterances.

b) Use the following factors when determining utterance segmentation:

1. *Syntactic indicators*: A well-formed sentence is considered to be an utterance. However, an utterance may not necessarily be grammatically correct.
2. *Prosodic indicators*: Falling intonation suggests the end of an utterance.
3. Further instructions

a) A main clause and any embedded clauses are always coded as one utterance, regardless of prosodic indicators.

b) Conjoined clauses should be broken into two utterances, unless the following prosodic indicators indicate they should be coded as one clause: rising intonation at the end of the first clause and/or no pause either before or after the conjunction.

c) All phrases should be assigned to an utterance if possible. However, if the speaker produces strings of NP's with no discernable syntactic structure, the NPs should be assigned to separate utterances if there is a >2 sec pause between them.

c) Transcribe probes carefully. Transcribe each utterance verbatim. Although primary weight is given to syntactic and prosodic indicators, the overall pattern of a subject's production (e.g. pausal patterns, semantic paraphasias, fillers, etc) must be considered.

d) Sometimes speakers use conjunctions like "and", "or", and "'but" as fillers at the beginning or the end of an utterance. Maze these words as they do not add to the utterance. All non-linguistic fillers should be put into mazes. If three or more non-linguistic sounds serve as fillers transcribe no more than three of them.

Examples -

S (And uh) slipper glass.
S (But) Cinderella and prince marry.
S (Uh) shoe too little (too little).
S Prince said (uh uh uh) let's see fit.

6. Abandoned Utterances

a) If a speaker starts an utterance, abandons it, and then starts a new utterance, then it should be transcribed as follows:

S (And then) he swam into >
S He got stuck.

b) If the speaker revises or repeats only a part of the utterance, the abandoned words and fragments should be mazed and the utterance is left intact.

S (And then) he (swam in) swam (into uh) into a hole in the (bo sh sh) ship.

c) Additional criteria for dealing with repetitions and revisions:

1) If the beginning of an utterance is revised before any content words are produced, maze these words, e.g.:

S (Uh the) Cinderella was happy.

2) Maze the first token of a repeated string of words if the two strings are exactly the same, or are only one word different and have the same syntax, as follows:

S He (will be) will marry (uh) the young lady.
S (But but) because (uh they) the other (uh) lady/s (they do/n't want them to XX) they do/n't want her to go.

3) Consider the first token of a repeated string of words an abandoned utterance if more than one word is changed OR syntax is changed, e.g.:

S (Uh but uh) Cinderella (almost uh) almost (uh)>
S (But) the time was (uh) almost expired.

7. Interrupted Utterances

If another person starts talking, causing the speaker to stop his utterance before completing his thought, then that utterance should be marked as interrupted (^). An interrupted utterance is different from an abandoned utterance in that an *outside event* has caused the speaker to stop his utterance.

S He didn't want the^
E He sent the shirt back.

8. Comment Lines

Comment lines begin with (=). This allows you to begin a line anywhere in the transcript and add notes that will not be analyzed. They are used to explain pauses, interruptions, or unintelligible utterances. Use comment lines to flag any questions that you may have.

9. Spelling Conventions

"no" -	nope, nah
"uhuh" -	all non-linguistic versions of no (e.g. uh uh, nut ah)
"yea" -	yep, yeah, yah
"mhm" -	all non-linguistic versions of yes (e.g. uh huh, um hum)
"huh" -	all non-linguistic requests for information including 'hm'
"uh" -	er, ah, um, aa, oo
"ok" -	okay, kay
"going to" -	gonna
"got to" -	gotta
"want to" -	wanna
"them" -	em
"because" -	cuz
"until" -	till, til
"eh" -	meaning 'I don't know'

a) Do not expand contraction. "Wasn't" should not be changed to *was not* and "can't" should not be changed to *can not*. Ungrammatical speech such as "ain't" or "youns" should not be corrected.
b) Hyphenated words should appear as one word. for example "brother-in-law" should appear in the transcript as "brotherinlaw" or "son-of-a-gun" should appear as "sonofagun"

10. Pauses

a) ***Within Utterances*:** If a pause greater than 2 seconds occurs within an utterance, it should be coded at that point with a space and the time in 00:00 notation. Pauses under 2 seconds should be marked with a comma.
b) ***Between Utterances:*** If a pause greater than 3 seconds occurs between utterances, it should be noted on a pause line. These pause lines begin with a colon, followed by a space and the time in 00.00 notation. If two phrases occur and the pause between them is greater than 3 seconds, call the first incomplete, if the revision that follows is independent of the first phrase.

Examples -

S He (uh) 00:05 does have one.
S (Um) what's his name?
:00:13
S I think Cinderella.
S Bob went >
:00:05
S Bob ran away.

11. Unintelligible Words and Utterances

a) A single X refers to a single unintelligible syllable within an utterance.

b) A double XX refers to two or more unintelligible syllables within an utterance.
c) Neither a single X nor a XX can occur alone on a line. They may repeatedly appear within an utterance.
d) Three XXX marks a completely unintelligible utterance. It should occur alone on a line.
d) Use a comment line immediately after an utterance with one or more X's to render a reasonable guess as to what the unintelligible utterance may be.
e) When words which are mispronounced or reduced can still be identified, transcribe them according to conventional orthography.
Examples -

S I want to see fit X person
=sounds like her
S XXX
=impossible

12. Mazes

a)Non-meaningful words (e.g. ah, uh, um, etc.) go into mazes when they act as a false start, fillers, starters, or hesitations.
b) If a word or phrase is repeated several times within an utterance and it is clear that the speaker intended this for emphatic purposes, then the repetitions are not mazed.
Examples -

S I've been working and working and working.
S Cereal, cereal, cereal.
(In this example the speaker is trying to convey the fact that they are working a great deal and only eating cereal.)
versus
S I've been (woking work working) working.
S (Cer cereal) cereal.

c) Maze counting aloud.
Example -

S There's (one two three four) four houses.

d) If the speaker uses revisional phrases such as "I mean" or "or", maze them.
Examples -

S (The cat went I mean) the bird went in the hole.
S There's a (red or) yellow car stuck in the mud.

After all of the words, phrases and fragments are mazed, the remaining utterance should be reasonably complete.

13. Overlaps

Words and phrases are bracketed in angled brackets (< >) when speakers are talking at the same time. When this occurs, put angled brackets around the portion of each speaker's utterance that is overlapping. For every set of < > you have in one speaker's utterance, you must have a corresponding set in another speaker's utterance.
Example -

S We flew in on the Diamond Lily a <fighter plane>.
F <a fighter plane>.

14. Idiosyncratic Forms

Use a (%) immediately preceding a word that is used as an idiosyncratic form.
Example -
S Goes %tick %tick %tick.

15. Transcript Error Check using SALT

a) Once the transcript has been completed, save the file. To do this go to the Menu line and under File click on Save As. Under Save As, first go to the "Options" box and click on Text Only. Next go to the "Directories" box and click on [trancs]. Now name the file according to the subject number provided for you and the type and number of the sample being typed.
b) The file and word processing program is then exited, and the SALT program opened. Select option 1 (Single transcript interactive). Provide the name of the file that you want to analyze at the prompt (example C:\winword\trancs\s8e4ns4.doc).
c) The transcript will pass through an "error-check" which will scan the transcript for errors such as omitted punctuation, unmatched overlaps, etc.
d) This program will not detect content errors such as typos and/or coding errors. If errors are detected, ask for a print out and return to the word processing program to correct the errors. When the errors have been corrected, save again (text only) and re-enter the SALT program.

PART II: CODING BOUND MORPHOLOGY *

**Only Subject utterances are coded*

1. Plural Morphemes

a) Slash all instances of the plural morpheme in a given word.

Examples -

S Give me the card/s.
S Do you like to play card/s?
S Give me the marble/s.
S Give me lot/s of marble/s.

b) Do not slash where there is no singular form of the word.

Examples -

Clothing	*Other*	
bluejeans	downstairs	arts
glasses	its	honors
jeans	news	"quite a ways from here"
longjohns	oats	
overalls	series	
pants	sometimes	
shorts	States	
tights	upstairs	

If the "s" is missing from one of the above words in (b), transcribe it orthographically, flag the utterance (stem/*s) and note the pronunciation on a comment line (=).

2. Third Person Singular Present Tense Morphemes

a) Slash all instances of the third person singular present tense morphemes "/3s".

Example -

S Cinderella dance/3s at the ball.
S She fall/3s.

3. Past Tense Morphemes

a) Slash all past tense morphemes.

Example -

S I follow/ed the car.
S The man push/ed the woman.

b) *Do not* slash the morpheme in the following cases:

Example -

S She was a red haired woman.
S It was a big eyed animal.

4. Present Progressive Morpheme

a) Slash "/ing" whenever it is used.

Example -

S Go/ing to store.

5. Comparative and Superlative Morphemes

a) Slash all instances of comparative "/er" and superlative "/est" morphemes.
b) Do not slash "later" when it is used as a simple adverbial of time.
c) Do not slash "farther, farthest, further, and furthest".
d) Do not slash "better" or "best".

e) If the Subject uses an incorrect construction such as "worser" or "bestest", slash and indicate with an asterisk (*)(i.e. worse/*er or best/*est).

6. Possessive Morphemes

a) Slash all instances of a possessive morpheme "/z".
b) Do not slash the possessive pronouns (e.g., whose).
c) Do not slash "an hour's drive".
d) A noun may combine with both the plural and possessive morphemes and should be transcribed as such.
Examples -

S The four dog/s/z collar/s are leather.
S The man/s/z tree stand is well concealed.

7. Contractions

a) Slash all contractions.
b) Slash all instances of contracted negative forms except "ain't".
c) Transcribe "can't" as "can/n't", "won't" as "will/n't", "don't" as "do/n't".

8. Substituted Bound Morphemes

a) Indicate substitution of bound morphemes with an asterisk (i.e, /*ed, /*ing, /*z, etc).
b) When transcribing a word root and its bound morphemes, preserve the original spelling of both.
Examples -

waste	bat	cry
waste/ed	bat/ed	cry/ed
waste/ing	bat/ing	cry/ing
waste/3s	bat/3s	cry/3s
waste/s	bat/s	cry/s

9. Vocabulary

If you are unsure about whether a word is composed of one or two morphemes, check Oxford Learner's dictionary. If the word is hyphenated, treat it as one unit.

10. Bound Morphemes in Familiar Phrases

Do not slash any bound morphemes in song/story titles, place names. lyrics, poems, rhymes, movie titles, quoted familiar phrases, etc. If bound morphemes are missing form these utterance types, transcribe the word as it is heard, and add any additional information of the comment (=) line (e.g. Mother's Day, Dances with Wolves).

11. Miscellaneous Items

a) If the subject spells a word or uses a single letter, type each letter as a separate lexical item (i.e. L E O).
b) Abbreviations and acronyms are typed in units (i.e. TV and AM).

Chapter 7. Coding Language Samples

This chapter details procedures for coding narratives, once they have been transcribed, using the NNLA. The system is designed to be flexible, allowing clinicians/researchers to code selected aspects of language production.

Coding Levels

The NNLA includes five coding levels, each of which is coded sequentially. The five levels include the (I) utterance level, (II) sentence level, (III) lexical level, (IV) bound morpheme level, and (V) verb level.

Utterance level (I). The first coding level involves assignment of an utterance code that denotes whether the utterance is a sentence, a non-sentence, or a sentence fragment. In addition, sentences are coded as grammatical or ungrammatical.

Sentences level (II). The second coding level involves further elaboration of utterances coded as sentences. Sentence level codes denote (a) the complexity of the sentence, (b) the structure of the sentence, such as whether it is an active sentence or an object cleft, (c) the number of embedded elements in the sentence, and (d) the type of embedding.

Lexical level (III). The third level involves coding all words contained within each utterance by form class, e.g., nouns, verb, and determiners.

Bound morpheme level (IV). The fourth level involves assignment of codes to all inflectional morphemes contained within the utterance (e.g., tense, agreement and plural form markers).

Verb level (V). The final coding level requires assignment of verb codes. This level involves coding verbs by a) verb type, b) argument structure, and c) verb morphology (i.e., a verb morphology index is entered for each verb produced). Each verb produced within an utterance, whether it is a main (matrix) verb or verb within an embedded clause, is coded sequentially.

Entry of Codes

Each transcribed and segmented utterance is coded separately, with codes entered on a separate line for each level. While clinicians/researchers will often want to analyze narratives at all levels, in some cases only certain levels of analysis will be of interest. When levels are not coded, a blank line is entered as follows.

Complete coding of all levels:

He drank the milk

<I>	[s]	Utterance code
<II>	[ss][as][e0]	Sentence codes

<III> [pros][v][deto][n] Lexical codes
<IV> [ired] Bound morpheme codes
<V> [op2xy][xs][yo][vmi1]. Verb codes

Bound morpheme level omitted:

He drank the milk
<I> [s] Utterance code
<II> [ss][as][e0] Sentence codes
<III> [pros] [v] [deto] [n] Lexical codes
<IV>
<V> [op2xy][xs][yo][vmi1]. Verb codes

Lexical and bound morpheme codes omitted.

He drank the milk
<I> [s] Utterance code
<II> [ss][as][e0] Sentence codes
<III>
<IV>
<V> [op2xy][xs][yo][vmi1]. Verb codes

General Coding Conventions

All codes are entered within brackets at each level, e.g., [s] = sentence. In addition, the NNLA uses codes to denote flawed, omitted, inappropriately included, or legally omitted elements as listed below:

* Elements or structures that are flawed are preceded by **(*)**, e.g., [*s] = flawed sentence), [*vmi2] = flawed verb morphology index, [*ob3xyz] = flawed argument structure.

Flawed verb tense results in both a flawed sentence and flawed verb morphology

They **is** fine
<I> **[*s][g]**
<II> [ss][as][e0]
<III> [pros][v][a]
<IV>
<V> [copyp][ys][p]**[*vmi1].**

Flawed argument structure results in flawed sentences and flawed argument structure

Cinderella wore
<I> **[*s]**[g]
<II> [ss][as][e0]

<III> [n][v]
<IV> [ired]
<V> **[*ob2xy]**[xs][-yo][vmi1].

- Obligatory elements or structures that are omitted are preceded by (-), e.g., [-xs] = a missing argument in the subject position. Omission of verb arguments is represented in the verb level (V) whereas omission of lexical items such as determiners, auxiliaries, prepositions is represented in the lexical level (III).

Sent this book
<I> **[*s]**[g]
<II> [ss][as][e0]
<III> [v][deto][n]
<IV> [ired]
<V> **[*op3xy][-xs]**[yo][vmi1].

Cinderella wore dress
<I> [*s][g]
<II> [ss][as][e0]
<III> [n][v]**[-deto]**[n]
<IV> [ired]
<V> [ob2xy][xs][yo][vmi1].

+ Elements or structures that are inappropriately included are preceded by a (+), e.g., [+yo] = inclusion of an additional theme in the object position.

Cinderella came a party
<VI> [*s][g]
<VII> [ss][as][e0]
<VIII> [n][v][deto][n]
<IX> [ired]
<X> [ob1y][ys][+yo][vmi1].

Elements or structures that are legally omitted are preceded by (#), e.g., [#xs] = legal omission of the agent in the subject position.

Believe me
<I> [s]
<II> [ss][i][e0]
<III> [v][proo]
<IV>
<V> [cxy]**[#xs]**[yo][vmi1].

In cases of conjoined verb phrases when two verbs share the same Agent, both verbs are coded for the presence of proper arguments. Similarly, when two verbs share the same theme, the theme is coded for both verbs. Finally, in the case of sentences in which elements have

moved from their canonical position, such as in object wh-questions, the moved element (i.e., who) carries the role of theme and, therefore, all verb arguments are considered present in the syntax.

Cinderella cried and [**Cinderella**] sobbed
(Note. Bracketed [**Cinderella**] is legally omitted in production.)
<V> [ob1x][xs][vmi1][ob1x]**[#xs]**[vmi1]**.**

I saw the dress you bought [**the dress**]
(Note. Bracketed [**the dress**] omitted in production.)
<V> [cxy][xs][yo][vmi1][op3xy][xs]**[#yo]**[vmi1].

Utterance Level Coding (Level I)

Codes used at the utterance level are listed in Table 1. Note that there are eight possible utterance codes. For each utterance in the transcribed sample, one of these codes is chosen and entered on the utterance line (I). If the utterance is coded as a sentence, either unflawed ([s]) or flawed ([*s]), then all the other levels are coded. If the utterance is coded as a non-sentence ([ns]), then coding proceeds to the lexical level. This allows for all lexical items produced to be included in summary word counts, even though the words were not produced in sentences. Bound morpheme and verb codes do not need to be assigned to these uttereances. Finally, if an utterance is assigned any of the remaining codes ([es],[fos],[uu]), no further coding is required.

Table 1. Utterance level codes.

Sentence [s]	Formulaic [fos]
Flawed sentence [*s]	Unintelligible [uu]
grammatically flawed sentence [g]	Interjection [ij]
semantically flawed sentence [m]	Extended interjection [eij]
abandoned utterance [au]	
Non-sentence [ns]	

Utterance Code Descriptions

[s] Sentence. Utterances assigned [s] must be grammatical sentences. They must contain a verb in each clause and have no grammatical errors.

I enjoyed the party.
It took me a long time to find him.

[*s] Flawed sentence. When sentences are flawed or incomplete they are given a flawed sentence code ([*s]). A verb must be present; however, verb arguments or other sentential elements may be missing, there may be grammatical morphology errors, etc. Flawed sentences are further coded for the type of flaw. Grammatically flawed sentences are given the code [g], while semantically flawed sentences are given the code [m]. Pronoun errors are given the code [g] if the result violates grammatical binding principles (e.g., *Cinderella dressed himself*) and [m] if the result is grammatical but referentially incorrect (e.g., *Cinderella met them*, where 'them' refers to the prince). Abandoned utterances are given the code [au]. If an abandoned utterance also contains a grammatical and/or semantic error, [au] can be assigned alongside [g] and/or [m].

Zack fixed
<I> [*s][g] (missing argument)

He like do it himself
<I> [*s][g] (omitted verb morphology)

And put
<I> [*s][g] (missing argument)

He put the shoe in the toes
<I> [*s][m] (semantic error)

She changed pumpkin into party
<I> [*s][g][m] (missing determiner and semantic error)

Plus she has on
<I> [*s][au] (abandoned utterance, otherwise well-formed)

(And so but s uh Cinderella uh no) stepmother (uh) lock/ed up (uh uh) Cinderella because (uh) not want to (uh) find (I do/n't know)
<I> [*s][au][g] (abandoned utterance with multiple grammatical errors)

[ns] Non-sentence. Utterances that do not contain a verb are coded as [ns]. This includes single words or phrases that are grammatically correct.

The man and girl and birds
George Bush

[fos] Formulaic utterance. This code is used for stereotypical sentences that occur with high frequency in normal discourse. Utterances assigned [fos] are not coded further for lexical, bound morpheme, or verb detail.

That's right
I think so
Yea

[uu] Unintelligible. The utterance is unintelligible. This code is used for an utterance that is transcribed as XXX. Utterances coded as [uu] are not coded further.

[ij] Interjection. Interjections, which are mazed during transcription (see Chapter 6), are coded on the utterance code line. When elements within the maze are fragments, use the code [ij].

I'm going (uh today no no) tomorrow
<I> [s][ij]

[eij] Extended interjection. Interjected elements contained within mazes that can be considered a sentence (i.e., they contain a verb) are coded as [eij]. Typically elements within the [eij] are not coded for their lexical, morphological or verb detail. However, the elements can be extracted and coded if this is of interest to the examiner.

I'm going (what's it called) tomorrow
<I> [s][eij]

Sentence Level Coding (Level II)

Once utterance level codes are entered, each utterance coded as an [s] or [*s] is further considered with regard to (a) whether it is syntactically simple or complex, (b) the sentence type, (c) the number of embedded clauses, and (d) the type of embedding.

Table 2. Sentence level codes.

Complexity	
simple sentence [ss]	complex sentence [cs]
Sentence type	
active canonical sentence [as]	subject wh-question[wqs]
passive sentence [pa]	object wh-question [wqo]
object cleft sentence [ocl]	adjunct wh-question [wqj]
subject cleft [scl]	yes-no question [yn]
imperative [i]	prosodic question [pq]
conjoined [con]	tag question [tq]
Number of embeddings	
0 no embedded clauses [e0]	3 three embedded clauses [e3]
1 one embedded clause [e1]	
2 two embedded clauses [e2]	
Embedded clause type	
complement clause [cc]	infinitival relative clause [ir]
subject clause [sc]	adjunct clause [ac]
relative clause [rc]	

Sentence code descriptions

(a) Complexity.

First, for each sentence a code is entered to denote whether the sentence is simple ([ss]) or complex ([cs]).

[ss] Simple sentence. Sentence produced in canonical form and which do not contain any embedded clauses are coded as [ss]. This code applies to conjoined sentences produced in simple active voice.

I enjoyed the meeting.
He didn't come.
John went to the party and Mary went home.

[cs] Complex sentence. Complex sentence are sentences produced in non-canonical form (theme or verb moved before agent), such as passives, object wh-questions and object cleft sentences or those that contain one or more embedded clauses, such as those listed below.

The boy was chased by the girl.	(passive)
Who did the boy chase?	(object wh-question)

I enjoyed the book [that you gave me]. (sentence with embedded clause)
He didn't come [when I was there]. (sentence with embedded clause)
I saw the boy [who the girl chased]. (sentence with embedded clause)

Complex active structures that do not have specific sentence types codes, such as subject-verb inversion (e.g., *So were the two sisters*) and topicalization (e.g., *Her the shoe did fit*) are coded as [cs][as].

(b) Sentence Type Codes

Next the sentence is coded for sentence type for the matrix clause. Sentence type codes are entered for all utterances coded as either a simple sentence or a complex sentence. If a sentence can be considered more than one type, enter all applicable types. For example, "The sisters and Cinderella were invited by the queen." would be coded as both a conjoined [con] and passive [pa] sentence type. Sentence type codes are described below.

[as] active sentence. Active canonical sentences are declarative sentences produced in subject-verb-object order. Note that the designation as an active sentence is not dependent on verb tense, e.g., past tense verbs can occur in active sentences. Further, active sentences can contain embedded clauses.

He likes the girl.
She liked the man.
She enjoyed going to the party.

[pa] passive sentence. Sentences are coded as passive if (a) the subject of the sentence is a theme or patient argument and the agent is in a by-phrase, e.g. *The boy was chased by the girl*., (b) if the subject of the sentence is a theme or patient argument and the agent is in a legally omitted *by*-phrase as in truncated passives, e.g., *The boy was chased*. Note that sentences coded as passive cannot have an adjectival interpretation, e.g. in *The boy was scared*, *scared* is a predicate adjective and so the sentence is coded as [as] with the copula as the main verb.

The woman was frightened by the dark. (passive)
The carriage was followed. (truncated passive without the *by*-phrase)

Passive sentences can also be formed with the auxiliary *get* and a past participle (e.g., *get killed*). If a *get*-phrase has the potential to combine with a by-phrase (e.g., *got killed by lightning)*, the sentence should be coded as [pa]. However, some common phrases from the Cinderella story (e.g., *get married, get dressed*) cannot be used with by-phrases (**got married by the priest, *got dressed by the mice)*. If the *get*-phrase cannot occur with a by-phrase, code it as [as] rather than [pa].

[ocl] object cleft sentence. Cleft sentences are sentences in which the canonical sentence such as, Cinderella kissed the prince, has been divided (or "clefted") into two clauses: It was the prince and who Cinderella kissed. Cleft sentences focus on one constituent of the original sentence, placing it after it was (or it is). In object cleft sentences, the focus is on the object.

It was **the prince** who Cinderella kissed.
It was **her carriage** that the horses pulled.

[scl] subject cleft sentence. Subject cleft sentences are cleft sentences in which the focus is on the subject of a canonical sentence. Hence, the subject is placed after the focus clause, it was.

It was **Cinderella** who kissed the prince.
It was **the horses** that pulled the carriage.

[i] imperative sentences. Imperative sentences are sentences which are used to issue orders. (e.g. Be quiet.) Subjects are omitted in imperative sentences.

Go to the ball.
Come give me your hand.

[con] conjoined sentence. Conjoined sentences are those in which two sentences are joined to form one. These include (a) sentences with two conjoined clauses, each with its own main verb, including questions such as: *Are you coming or going*? (b) sentences consisting of two conjoined noun phrases or adjectival phrases, and (c) sentences with two verbs with a single subject.

He is a prince and she is nothing.
He will go and get the shoe.
Cinderella and the stepsisters were invited.
Cinderella was sweeping and cleaning.
Will Cinderella sweep or clean today?

[wqs] subject wh-question. These are wh-questions in which the wh-word replaces the subject.

Who found the invitation?
What ruined the party?

[wqo] object wh-question. These are questions in which a wh-word replaces the object of the verb.

What did the horses pull?
Who did the stepmother hate?

[wqj] adjunct wh-question. These are questions in which a wh-word replaces an adjunct clause as in *where* or *when* questions.

When did the prince find the shoe?
Where did the prince look for Cinderella?

[yn] yes-no question. These questions are those that can be answered by yes or no. These question types involve verb movement, i.e., subject-auxiliary inversion. Conjoined sentences in question form are also coded [yn], such as *Are you coming or going?*

Are you coming?
Can you wait for me?
Is this the way to the ball?
Is this right or wrong?

[pq] prosodic question. These questions are conveyed only by rising intonation, and not subject-auxiliary inversion.

You are coming?
Cinderella is going?

[tq] tag question. Questions that contain a declarative comment, followed by a tag. The tag is not coded for verb-argument structure or lexical class.

You are not serious, are you?
He is not going to come, is he?

[eq] echo question. These are questions in which the wh-word appears in canonical position, i.e., it is not moved to the front of the sentence.

John said what?
He is coming when?

(c) Embedding

Number of Embedded clauses. Next, each sentence is coded for the number and type of embedded clauses contained in it. In normal speech, embedded clauses must contain a verb in order to count as a clause, however, when coding aphasic speech clausal verbs may be missing or ill-formed, e.g. *Sister is angry because jealous* or *She want to go but she can't the money*. When coding the number of embeddings, the coder simply counts the number produced in the sentence being coded and enters [e] followed by the number tallied, e.g., [e2] = a sentence with two embedded clauses.

[e0] No embedded clause. This code is entered for all simple sentences.
I enjoyed the meeting.
This is fun.

[e1] One embedded clause
I saw the book [that you placed here].
I enjoyed [your talking to me like that].
I enjoyed [going to the party].

I want [to get it].

[e2] Two embedded clauses

I thought [you said [you were coming]].
The person [who called] was not the person [who came].

(d) Type of Embedded Clause. Once the number of embeddings has been determined, each is coded by the type of embedded clause in the order in which it occurs in the sentence. If the embedded clause is missing a verb, indicate this with an asterisk.

The sister is angry **because jealous**
<II> [cs][as][e1]**[*ac]** (indicating flawed adjunct clause)

There are several types of embedded clauses and codes for them. These are described below.

[cc] Complement clause. Complement clauses are clausal constructions that serve as a complement to some lexical item. Complements are non-adjunct constituents which are subcategorized for by a lexical head and form the nucleus of a category with a lexical head. In the noun phrase *the idea that the queen will find a bride for the prince*, the clause *that the queen will find a bride for the prince* is a complement of the noun *idea* (it is a noun-complement clause). In *I think that Cinderella will dance*, the clause *that Cinderella will dance* is a complement of the verb *think* (it is a verb-complement clause). Gerundive clauses and infinitival clauses are also are coded as complement clauses when they are used as complements.

I like the idea [that the queen will find a bride for the prince].
Cinderella was ready [to leave for the ball].
I think [that Cinderella will dance]
Cinderella likes [dancing with the prince].
Cinderella likes [to dance with the prince].

[sc] Subject clause. Subject clauses are required to fill the verb's external argument (subject position).

[That he won] was not surprising.
[For him to win] surprised everyone.

[rc] Relative clause. Relative clauses modify an element within the matrix clause. For example in *The hat that John wore was big*, the relative clause (*that John wore*) acts to modify, or to provide more information about the subject of the sentence or the head of the relative clause (i.e., the hat). In some cases, the complementizer or wh-word is elided, or is omitted, resulting in a reduced-relative clause, e.g. *The man [I know] left*, rather than *The man [that I know] left*.

The horse [that she saw] was standing by the carriage.
The boy [who saw you] was my friend.
The birds ate the fruit [that I gave them].
I gave you the reason [why I didn't come].

Headless relatives, in which there is no overt syntactic head in the matrix clause which the relative clause is modifying, are coded as follows: Code the matrix verb and assign the unexpressed syntactic head the [#] code in the argument code, to indicate that it is legally omitted. The relative clause then receives the normal coding as [rc], and is not otherwise distinguished from headed relative clauses.

I like **what you like**
<I> [s]
<II> [cs][as][e1]**[rc]**
<III>
<IV>
<V> [cxy][xs][#yo][vmi1][cxy][xs][#yo][vmi1]

[ir] infinitival relative clause. These clauses contain an infinitival verb, and like normal relative clauses have a gap with a dependency within the matrix clause. However, they do not include a wh-word.

They have lots of work [to do].
I bought it [to clean with].

[ac] adjunct clause. This category includes any non-matrix clause that is not part of the argument structure of the verb. Adjunct clauses are usually used to express time, location, manner or purpose, etc.

He called me [before you came].
It took me a long time [to understand him].

Lexical Level Coding – (Level III)

This level of analysis identifies the grammatical class of all the words produced in each utterance. Codes for both open class words, e.g., nouns, verbs, adjectives and adverbs, and closed class words, e.g., determiners, prepositions, are included. Optionally, words can be coded as either open class or close class items if the examiner is only interested in the ratio of open to closed class items, and not interested in analyzing the different types of lexical items produced. Words such as *yes, well, no, sure, please, thank you, hello, right, ok,* etc. and idiosyncratic forms such as *oops*, *whoosh*, etc. are not given a lexical item code. Lexical codes are entered in the order in which they occur in the utterance.

Sam enjoyed going to the party.
<III> [n][v][v][prep][det][n]

Paraphasic (word substitution) errors also are coded at the lexical level. These codes are inserted next to the lexical code for the paraphasic error. A summary of lexical codes is included in Table 3.

Cinderella thought of the **watch.** [watch substituted for time]
<III> [n][v][prep][det][n]**[sp]**

Table 3. Lexical level codes.

Open class word [op]	Pronoun [pro]
Noun [n]	Subject [pros]
Verb [v]	Object [proo]
Adjective [a]	Prepositional phrase [propo]
Adverb [ad]	Possessive pronoun [ppro]
	Reflexive pronoun [rpro]
Closed class [cl]	
Auxiliary [aux]	
Complementizer [comp]	Quantifier [q]
Conjunction [conj]	To [to]
Determiner [det]	Wh word [wh]
Subject [dets]	
Object [deto]	Paraphasias
Prepositional phrase [detpo]	Semantic paraphasia [sp]
	Phonological paraphasia [pp]
Modal [mod]	Neologism [np]
Negation [neg]	Mixed paraphasia [mp]
Particle [prt]	
Preposition [prep]	
Unintelligible word [uw]	

Lexical Codes code each word of the sentence. Depending on the analysis that is required, the words can be coded either as open and closed class, or as lexical categories such as nouns, verbs, complementizers etc.
The words are coded as +, - can precede each lexical code to indicate that a lexical item has been omitted or has been incorrectly added.
For pronouns, particles and prepositions, * can also be used when a pronoun, particle or preposition is incorrectly used.

Cinderella lost his slipper
<III> [n][v][*ppro][n]

The fairy godmother turned the mouse for the coachman
<III> [dets][a][n][v][deto][n][*prep][detpo][n]

Lexical Code Descriptions

[op] Open class. Open class words include nouns, verbs, adjectives and adverbs. When using the [op] code, individual codes designating word class are not used.

[cl] Closed class. Closed class words include auxiliaries, complementizers, conjunctions, determiners, modals, negation, particle, preposition, pronouns, quantifiers, infinitival marker and wh-words. When using the [cl] code, individual codes designating word class are not used.

Sam enjoyed going to the party
<III> [op][op][op][cl][cl][op]

Open Class Code Descriptions

[n] Noun. Noun-noun compounds such as *cable TV* are coded as [n][n]. A few nouns are listed in the dictionary as having an adverbial function (e.g*., tomorrow*). They are given a lexical code consistent with their use in the utterance. Gerunds (words with verbal morphology (e.g., *-ing*) that function syntactically as nouns) are coded as nouns.

Tomorrow is a new day. (Tomorrow is a noun)
<III> **[n]**[v][deto][a][n]

I'm going tomorrow. (Tomorrow is an adverb)
<III> [pros][aux][v]**[ad]**

Cinderella had to do all the washing and cleaning.
<III> [n][mod][v][q][deto][n][conj][n]

[a] Adjective. Adjectives are a class of words which denote states (e.g. *happy, warm, red*). They are used to modify nouns. Adjectives can be predicative or attributive

Cinderella is **pretty** (Pretty is a predicative adjective)

<III> [n][v]**[a]**

She wore a **beautiful** dress (Beautiful is an attributive adjective)
<III> [pros][v][deto]**[a]**[n]

[ad] Adverb. Adverbs are a class of words which typically indicate manner (e.g. *fast*) or degree (e.g. *very*). Adverbs also co-occur with motion verbs to indicate the direction or goal of motion (e.g., *back, away, home,* prepositions such as *in* when occurring without a noun phrase). They are used to modify verbs, adjectives and sentences.

She worked **diligently**
<III> [pros][v]**[ad]**

She is **very** nice to her stepmother
<III> [pros][v]**[ad]**[a][prep][ppro][n]

Suddenly, the pumpkin changed into a coach
<III> **[ad]**[dets][n][v][prep][detpo][n]

Cinderella went **back home**.
<III> [n][v]**[ad][ad]**

Cinderella ran **in.**
<III> [n][v]**[ad]**

Closed Class Code Descriptions

[aux] Auxiliary. Auxiliary verbs are verbs that are used to help form verb phrases but cannot do so independently. These include *be, do, have* etc.

She **was** running down the steps
<III> [pros]**[aux]**[v][prep][detpo][n]

The shoes **did** not fit.
<III> [dets][n]**[aux]**[neg][v]

She **had been** crying.
<III> [pros]**[aux][aux]**[v]

[comp] Complementizer. Complementizers are used to introduce complement clauses and relative clauses. These include *for, if, whether* and *that*.

I think **that** you are beautiful
<III> [pros][v]**[comp]**[pros][v][a]

She wore the dress **that** the mice made
<III> [pros][v][deto][n]**[comp]**[dets][n][v]

[conj] Conjunction. Conjunctions are used to conjoin structures. These include *and, or*, and *but*. Conjunctions such as *because, while, during*, *like* etc. also introduce clauses. Note that *and, but, so* and *then* in sentence initial positions should be mazed and not coded.

Cinderella was nice **but** her stepsisters were evil
<III> [n][v][a]**[conj]**[ppro][n][v][a]

Because the fairy godmother helped Cinderella
<III> **[conj]**[dets][a][n][v][n]

[det] Determiner. Determiners are used to modify nouns in noun phrases and include *the, this, that* and *a*. A determiner is always followed by a noun in normal speech. For all determiners that are arguments, code the grammatical function i.e, [dets] for a determiner modifying a subject, [proo] for a determiner modifying an object, and [propo] for a determiner modifying a noun in a prepositional phrase.

A slipper was lost at **the** ball
<III> **[dets]**[n][aux][v][prep]**[detpo]**[n]

(And then) Cinderella lost **a** shoe
<III> [n][v]**[deto][**[n]

[mod] Modal. Modals combine with main verbs to indicate the speaker's attitude towards the actuality of an utterance (e.g. doubt, desire, contingency, possibility). Modals are invariant with respect to tense and agreement marking. These include *will, shall, can, may, must, should, could, would*. Phrases that are used as modals such as *had to, be going to, be able to, get to* are coded as modals although they are comprised of multiple words.

Cinderella **should** go to the ball
<III> [n]**[mod]**[v][prep][detpo][n]

Cinderella **had to** clean the house
<III> [n]**[mod]**[v][deto][n]

[neg] Negation. Negation turns an affirmative statement (e.g. *She is nice*.) into its opposite (e.g. *She is not nice*). Both uncontracted forms e.g., *not*, and contracted forms, e.g., *-n't* are coded [neg].

The shoe did**n't** fit
<III> [dets][n][aux]**[neg]**[v]

[prt] Verb particle. Some verbs in English combine with a preposition, an adverb, or an adverbial particle, to make a phrasal verb, such as *wake up, hand in*. The prepositions, adverbs and adverbial particles that combine with verbs to make phrasal verbs are called verb particles. The particles often combine non-compositionally with the verb (i.e., the meaning of the verb and particle is unpredictable from the meaning of each) and often can be separated from the verb.

Cinderella cleaned **up** the mess
<III> [n][v]**[prt]**[deto][n]

The stepsisters tried the shoe **on**
<III> [dets][n][v][n]**[prt]**

[prep] Preposition. Prepositions such as *in, on, to, with*, etc. link nouns, pronouns and phrases to other words in a sentence. A preposition usually indicates the temporal, spatial or logical relationship of its object to the rest of the sentence, e.g. *on the table, in an hour*.

Cinderella must leave **before** midnight
<III> [n][mod][v]**[prep]**[n]

[pro] Pronoun. A pronoun is a word which replaces a noun or another pronoun, i.e. *he, him, they, it*, etc. Pronouns include *that* and *this* used without a following noun. For all pronouns that serve as verb arguments, code the grammatical function i.e, [pros] for pronoun in subject position, [proo] in object position, and [propo] in a prepositional phrase.

He danced with **her**
<III> **[pros]**[v][prep]**[propo]**

It was raining
<III> **[pros]**[aux][v]

This was Cinderella's shoe
<III> **[pros]**[v][n][poss][n]

[ppro] Possessive pronoun. A possessive pronoun indicates that the pronoun is acting as a marker of possession, i.e., *his, her, hers, my, mine, ours, yours, their, theirs*, etc. Possessive pronouns often serve as determiners.

Her stepsisters tried on the shoe
<III> **[ppro]**[n][v][prt][detn][n]

The shoe was **hers**
<III> [dets][n][v]**[ppro]**

[rpro] Reflexive pronoun. A reflexive pronoun is a pronoun that refers back to the subject, i.e., *myself, himself, herself*, etc.

Cinderella looked at **herself** in the mirror
<III> [n][v][prt]**[rpro]**[prep][detpo][n]

[q] Quantifier. Quantifiers are words that express quantity. These include uses of *all*, *many, some, every, each,* numerals (*two, three)*, and quantificational pronouns (*someone, everyone*).

Two mice were turned into horsemen
<III> **[q]**[n][aux][v][prt][n]

She wanted **some**
<III> [pros][v]**[q]**

[to] Infinitival marker. The most common form of an infinitive in English is the to-infinitive in which the verb is used with the particle *to*, such as in *to walk, to cry*. The *to* used in the to-infinitive is called the infinitival marker.

Cinderella wanted **to** go to the ball
<III> [n][v]**[to]**[v][prep][detpo][n]

To know her is **to** love her
<III> **[to]**[v][proo][v]**[to]**[v][proo]

[wh] Wh-word. Wh-words , such as, *who, when, where, why, whom, how, which, whose, how come*, etc., are used to ask questions. Some of these words can also be used in relative clauses.

What would she wear
<III> **[wh]**[mod][pros][v]

He wanted to find the girl **who** lost the slipper
<III> [pros][v][to][v][deto][n]**[wh]**[v][deto][n]

Paraphasic Error Codes

[sp] Semantic paraphasia. Semantic paraphasias are single word substitution errors that are semantically related to the target word.

Cinderella rode in a **car (**for **carriage)**
<III> [n][v][prep][detpo][n][**sp**]

[pp] Phonological paraphasia. Phonological paraphasias are single word substitution errors containing at least 50% of the phonemes found in the target word (e.g., *gar* for *car*; *penstili* for *pencil*).

The **pairy** (for **fairy**) godmother visits Cinderella
<III> [dets][n][**pp**][n][v][n]

[np] Neologistic paraphasia. Neologistic paraphasias are substitution errors, in which a nonword replaces an open class word. Neologistic paraphasias contain less than 50% of the phonemes of the target word.

Sister **plits** (for **tear**) dress
<III> [n][v][**np**][n]

[mp] Mixed paraphasia. Mixed paraphasias are single word substitution errors that have phonological overlap (at least (50%)) with the target word, but cross word boundaries, i.e., *marriage* for *carriage*. Mixed paraphasic errors are not semantically related to the target word. See paraphasia (in glossary)

Cinderella was locked in the **doom** (for **room**)
<III> [n][aux][v][prep][det][n][**mp**]

Missing lexical items and arguments (see Level 5) should be coded. If many elements of a phrase or sentence are missing, only those that you can confidently reconstruct should be coded.

S Stepsisters and stepmama really bad
<III> [-dets][n][conj][n][-v][ad][a] (missing determiner and verb)

S Cinderella can go because (uh) dress
<III> [n][mod][v][conj][n] (embedded clause too impoverished to be reconstructed)

Bound Morpheme Level Coding (Level IV)

Codes are given for all inflectional morphemes produced in a sentence. These codes are entered in sequential order corresponding to their position in the utterance. The various codes are listed in Table 4. Verbal morphology codes (i.e. [3s], [ed], [ired], [en], [iren], [ing]) should only be used for verbs. Bound morphemes on adjectives (i.e. *–ed* on *a well-rounded character*), modals (i.e. *would*) should not be coded. However, modals that carry tense and agreement (i.e., *have to, be going to, be able to*, and *get to*) are coded at this level.

Table 4. Bound morpheme codes.

Third person singular [3s]	Plural [pl]
Past tense [ed]	Irregular plural [irpl]
Irregular past tense [ired]	Possessive marker [poss]
Present participle [ing]	Comparative [er]
Past participle [en]	Superlative [est]
Irregular past participle [iren]	

[3s] Third person singular. The 3rd person singular-*s* morpheme attaches to the verb and marks subject-verb agreement in the present tense for third person singular (he/she/it).

The king plan**s** a big party
<IV> [**3s**]

[ed] Past tense. The past tense marker *–ed* attaches to the verb and is the standard morpheme used to indicate that an action occurred in the past.

They danc**ed** and danc**ed**
<IV> [**ed**][**ed**]

[ired] Irregular past tense. An inflected verb form specifying that the action has already occurred (in the past) and that is marked in an exceptional way (ie. not by 'ed').

The fairy godmother **gave** Cinderella a beautiful gown
<IV> [**ired**]

[ing] Present participle. The present participle *-ing* morpheme attaches to a verb to create a nonfinite (untensed) verb form. The present participle typically follows the verb *be*.

The prince was look**ing** for Cinderella
<IV> [ired][**ing**]

[en] Past participle. This code is used to denote past participles that are derived in a conventional manner, ie. by adding *-ed* to the bare verb form. In normal speech the past participle typically follows the auxiliary verb *have* or *be*.

Cinderella had **danced** all night
<IV> [ired][**en**]

[iren] Irregular past participle. This code is used to denote past participles that are derived in an unconventional manner (ie. not with *–ed*). This includes participles derived by adding *–en* (e.g., *eaten)*. In normal speech the past participle typically follows the auxiliary verb *have* or *be*.

Cinderella had **lost** her slipper
<IV> [ired][**iren**]

[pl] Plural. This code is used for the plural *-s* morpheme. This morpheme attaches to a noun and is the standard morpheme used to indicate plurality.

The stepsister**s** were very mean
<IV> [**pl**][ired]

[irpl] Irregular Plural. This code is used to denote plural nouns that are marked in an unconventional manner (ie. not with 's').

The **mice** all wanted to help Cinderella
<IV> [**irpl**][ed]

[poss] Possessive marker. The possessive *'s* morpheme attaches to nouns and indicates ownership.

Cinderella**'s** feet were very small
<IV> [**poss**][irpl][ired]

[er] Comparative. The *-er* comparative morpheme is appended to an adjective and specifies a comparative relationship between nouns.

Cinderella is nic**er** than her stepmother
<IV> [**er**]

[est] superlative. The *-est* superlative marker is appended to an adjective and specifies a superlative comparison between a noun and other members of a class.

It was the happi**est** day
<IV> [ired]**[est]**

When bound morpheme has been substituted with another, code the morpheme as added. Do not code one error with two error codes

The pumpkin was change**s** to a coach
<IV> [ired][+3s]

When the error is regularizing an irregular form, mark the absence of the irregular.

The mouse**s** were her friends
<IV> **[-irpl]**[ired][pl]

Verb Level Coding (Level V)

All verbs produced within each sentence, including those in main (matrix) clause and in embedded clauses, are give verb type codes. First the verb type is entered together with the argument structure of that verb type (regardless of whether or not all arguments are produced). Next all verb arguments produced are coded. Verb arguments are indicated using conventional notations (x = agent, y = theme, z = recipient, s' = sentential complement). Grammatical functions such as subject and object are coded along with argument notations (xs = agent as subject, yo = theme as object).

If an argument is omitted, the verb-argument structure is considered flawed and the verb code is preceded by an (*). However, arguments need not be grammatically intact at the phrasal level, for example the determiner of the NP/DP may be omitted. (The omission of the determiner is coded as being omitted (-) in the lexical level (III) and not the verb level (V)).

John put book on the shelf
<I> **[*s]**[g]
<II> [ss][as][e0]

<III> [n][v]**[-deto]**[n][prep][detpo][n]
<IV>
<V> [ob3xyz][xs][yo][zpp][vmi1]

John put the book
<VI> **[*s]**[g]
<VII> [ss][as][e0]
<VIII> [n][v][deto][n]
<IX>
<X> **[*ob3xyz]**[xs][yo]**[-zpp]**[vmi1]

The complete list of verb types appears in Table 5; examples of the most common verb types appear below. For assistance in determining verb type, refer to the verb list in Appendix B. Also see Chapter 3.

Table 5. Verb and verb argument structure codes.

Verb type codes	
Obligatory one place [ob1x][ob1y]	Optional two place [op2x][op2y][op2xy][op2yx][op2yp]
Obligatory two place [ob2xy][ob2yx][ob2yp]	Optional three place [op3x][op3y][op3xy][op3xz][op3yz][op3yp][op3xyz][op3xzy][op3xyp]
Obligatory three place [ob3xyz][ob3xzy][ob3xyp]	Complement [cx][cy][cxy][cxz][cyx][cyp][cxs'][cys'][cxys'][cxzs'][cyps'][cxyz][cxzy][cxyp]
Copula [copyp][copys']	Phrasal Verb [ph]
Verb argument codes	
Agent ([x]) as subject [xs]	Goal ([z])in prepositional phrase [zpp]
Agent ([x]) in object position [xo]	Goal ([z]) as noun phrase [znp]
Agent ([x]) in *by* phrase [xpa]	Sentential complement [s']
Theme/Patient ([y]) as subject [ys]	Predication phrase [p]
Theme/Patient ([y]) as object [yo]	Adjunct [j]
Theme/Patient ([y]) in *by* phrase [ypa]	

Verb Type Code Descriptions

[ob1] Obligatory one-place verb. These verbs are intransitives, requiring only one argument – an external argument, produced in the subject position. The external argument can be an agent ([ob1x]) as in unergative intransitive verbs (e.g., *sleep*) or a theme ([ob1y]) as in unaccuative verbs (e.g., *fall*).

The queen **slept**
[ob1x]

Cinderella **fell**
[ob1y]

[ob2] Obligatory two-place verb. These verbs assign two arguments - an external argument and a theme ([ob2xy]).

The prince **followed** Cinderella
[ob2xy]

The birds **amused** Cinderella
[ob2yx]

The cake **tasted** good
[ob2yp]

[ob3] Obligatory three-place verb. These verbs assign three arguments - usually an agent, a theme, and a goal ([ob3xyz]).

John **put** the glass on the table
[ob3xyz]

Sarah **lent** Mary a dress
[ob3xzy]

[op2] Optional two-place verb. These verbs assign both an agent and a theme argument, however, they may be produced with both arguments ([op2xy]) or with just the agent ([op2x]). Alternating unaccusative verbs such as *melt* are coded as optional verbs with two arguments.

We all **eat**
[op2x]

The icing **melted**
[op2y]

The hot weather **melted** the icing on the cake
[op2xy]

We all **eat** apples
[op2xy]

[op3] Optional three-place verb. These verbs assign three arguments, an external argument and two internal arguments. However, production of the second and/or third argument is not

required, thus these verbs may be produced as either [op3xyz] or [op3xy]. Some op3 verbs also allow alternation of the internal arguments thus may be produced as [op3xzy].

The prince **sent** an invitation to everyone
[op3xyz]

The prince **sent** everyone an invitation
[op3xzy]

The queen **sent** it
[op3xy]

Cinderella **fit** the shoe
[op3xy]

The shoe **fit**
[op3y]

The shoe **fit** on Cinderella's foot
[op3yz]

The fairy godmother **turned** the pumpkin into a carriage
[op3xyz]

The carriage **turned** into a pumpkin
[op3yz]

[c] Complement verb. Complement verbs can take clausal complements as one of their arguments. They may also occur with additional internal arguments, e.g., goal arguments [cxzs']. They may also appear without complement clauses, assigning an external argument and/or a theme [cxy], goal [cxzy]/[cxyz] or a predicate phrase [cyp'].

I **know** that she is coming
[cxs'] (external argument and clausal complement)

Cinderella **wanted** to go
[cxs'] (external argument and clausal complement)

The pain **felt** like it would never end
[cys'] (theme and clausal complement)

I **told** Bill that he should leave
[cxzs'] (external argument, goal, and clausal complement)

I **showed** her that she was wrong

[cxzs'] (external argument, goal, and clausal complement)

It **felt** like the pain would never end.
[cs'] (clausal complement; expletive subject not selected by the verb)

I **showed** her the slipper
[cxzy] (external argument, goal, and theme)

I **know**
[cx] (external argument)

The perfume **smells** good
[cyp] (theme and predicate phrase)

Cinderella **got** ready
[cyp] (theme and adjective phrase)

Cinderella **got** in the carriage
[cyp] (theme and prepositional phrase)

[cop] Copula. The copula, *be*, takes a theme and a predicate noun phrase, adjective, or prepositional phrase ([copyp]), or a sentential clause ([copys']).

The man **is** a prince
[copyp]

The prince **is** happy
[copyp]

John **is** in the house
[copyp]

The truth **is** that Cinderella left her slipper on the steps
[copys']

[ph-] Phrasal verb. If a verb combines with a particle (e.g., *wake up*, *get up*), precede the verb type code with *ph* to denote a phrasal verb as shown below. The phrasal verb can be any of the verb types (ob1, ob2, op2, ob3, op3, c). The verb type does not necessarily depend on the verb that is used for the phrasal verb. For instance, *get* is a complement verb ([cxy]), but *get up* is an optional two-place verb ([phob2xy]).

He **woke up** early
[phop2x]

Cinderella and the prince **fell in love**

[phob1y] ('in love' together is considered a particle)

Cinderella **tried** the dress **on**
[phob2xy]

Verb Argument Code Descriptions

Once the verb type code is entered, each argument produced is coded and entered individually following the verb type code. Any adjuncts produced also are coded (for a description of adjuncts and tests to determine whether a phrase is an adjunct or an argument of the verb, see below). The coding of individual arguments [x] and [y] following the verb code indicates both thematic role and grammatical function, e.g. agent in subject position [xs], agent in object position [xo] agent in the *by* phrase of a passive sentence [xpa], theme in object position [yo] or in subject position [ys]. Coding of the goal indicates whether this argument occurs as a NP or a PP [znp] or [zpp]. The status of each argument and adjunct is coded to indicate whether it is intact, flawed [*], illegally missing [-], legally omitted [#], or illegally added [+]. Arguments (and adjuncts) in which phrasal level errors occur, e.g., when a determiner is deleted, are not considered flawed. Semantic errors are also not coded as flawed as these are coded at the lexical level.

[x] The [x] code refers to the agent or experiencer theta-roles. Agents typically are responsible for the action denoted by the verb, i.e., the participant doing the action. Experiencers refer to the person who is experiencing a psychological state e.g., *the children* in *The children admired the clown*. They almost always appear as subjects ([xs]), except in the passive, where they appear within a *by*-phrase ([xpa]). Experiencers also appear in the object position ([xo]) in some psych verbs such as amuse, e.g., *The clown amused the children*. In this sentence the children are experiencing the amusement. In *get*-phrases that cannot occur with a *by*-phrase (e.g., *get married*), the subject argument is coded as [xs].

The prince put the shoe on her foot
<V> [ob3xyz]**[xs]**[yo][zpp]

The shoe was easily placed on her foot **by the prince**
<V> [ob3yzx][ys][zpp]**[xpa]**

Cinderella admired the prince
<V> [ob2xy]**[xs]**[yo]

The prince amused **Cinderella**
<V> [ob2xy][ys]**[xo]**

Cinderella and the prince got married.
<V> [op2x]**[xs]**

[y] The [y] code refers to the theme/patient. The Theme/Patient refers to the role which receives the action of the verb and is typically in the object position (**[yo]).** Theme objects may be expressed either as noun phrases or prepositional phrases. In some cases the theme may appear as the subject ([ys]), as in unaccusative verbs such as *melt*, *amuse*-type psych verbs, perception verbs such as *taste* and *smell*, in passive sentences, and in copular sentences. In *get*-phrases that can combine with a by-phrase (e.g., *get killed*), the subject argument is coded as [ys].

He followed **the carriage**
<V> [ob2xy][xs]**[yo]**

Cinderella looked at **the prince**
<V> [op2xy][xs]**[yo]**

The carriage melted after the ball
<V> [ob1y]**[ys]**

The prince amused Cinderella
<V> [ob2yx]**[ys]**[xo]

The perfume smells good
<V> [cyp]**[ys]**[p]

He is happy
<V> [copyp]**[ys]**[p]

The stepsisters were invited to the ball
<V> [op3xyz]**[ys][**#xpa][zpp]

Cinderella was amused by **the prince**
<V> [ob2yx][xs]**[ypa]**

He got killed
<V> [ob2xy][ys][#xpa]

[z] The [z] code refers to the goal/recipient of the action of the verb. In many cases, this role occupies the position of the indirect object. In alternating three-place verbs such as *give,* [z] can be expressed in either the direct object or indirect object position.

She gave some seeds **to the birds**
<V> [ob3xyz][xs][yo]**[zpp]**

She gave **the birds** some seeds
<V> [ob3xzy][xs]**[znp]**[yo]

[s'] The [s'] code refers to any sentential argument which occurs with complement verbs and copula verbs.

She said **that the man went home**
<V> [cxs'][xs]**[s']**

I want **him to go**
<V> [cxs'][xs][s']

The fact is **that the prince liked Cinderella**
<V> [copys'][ys][s']

[p] The [p] code is used for predicate adjectives, predicate noun phrases and predicate prepositional phrases that are subcategorized by the verb, but are not arguments of the verb. These usually occur with copular verbs, but may also occur with other verbs as shown below.

He is **happy**
<V> [copyp][ys]**[p]**

This sandwich tastes **good**
<V> [cyp][ys]**[p]**

[j] The [j] code refers to any adjunct phrase. Adjuncts are not subcategorized by the verb, nor are they arguments of the verb and, therefore, are not required in the syntax. Adjuncts usually occur in non-argument prepositional phrases. Because they are not part of the verb argument structure representation, adjuncts are not coded within the verb code. Single adverbs, e.g., as in *He ate slowly*, do not receive a [j] code; these are only given a lexical code. If there is a referential NP or noun in a sentence which is extraneous and is not the argument of any verb then it is coded as [*j], that is, as an ill-formed adjunct.

He fixed the car **in the garage**
<V> [op3xy][xs][yo]**[j]**

Boy cut bread **knife**
<V> [ob2xy][xs][yo]**[*j]**

Verb Morphology Complexity (the vmi).

The Verb Morphology Index (vmi) is an index of the morphological complexity of the verb. This refers to the presence of overt morphological markers, both free and bound. The vmi code is determined by assigning points for the presence of certain aspects of the verb group (see Table 6) using the following scoring system (adapted from Chomsky, 1957). For conjoined sentences containing two or more verbs, a vmi is given for each verb. If the verb group is not well-formed, include an asterisk at the beginning.

Table 6. VMI codes

[vmi1]	[*vmi1]
[vmi2]	[*vmi2]
[vmi3]	[*vmi3]
[vmi4]	[*vmi4]
[vmi5]	[*vmi5]
[vmi6]	[*vmi6] etc.

Tense/Aspect. One point if tense/aspect is appropriately marked. It may either be inflected (e.g., *He goes*), uninflected (e.g., I *go*) or aspectual (e.g., I am *going*). Modals and auxiliaries receive no point for tense.

He **goes** **[vmi1]**
He **goed** **[*vmi1]**
Go **[vmi1]**

Auxiliary verb. One point if an auxiliary verb is present, e.g., *have, get* or *be*, including the passive use. For conjoined sentences containing two or more verbs, a point for the auxiliary given for both verbs.

He **is going** **[vmi2]**
She **is cleaning** and **scrubbing [vmi2][vmi2]**

Modals. One point if a modal is present, e.g., *can, could, shall, should*, *will*, *would*. For conjoined sentences containing two or more verbs, a point for the modal is given for both verbs. Modals do not receive points for tense.

I **can go** **[vmi2]**
I **could go** **[vmi2]**
I **will go** and **get** it **[vmi2][vmi2]**

Infinitival marker. One point if an infinitival marker is present, i.e., *to.* For conjoined sentences containing two or more verbs, a point for the infinitival marker is given for both verbs.

I want **to go** **[vmi2]**
I want **to go** and **find** her. **[vmi2][vmi2]**

Negation. One point if a negative marker is present, e.g., *not*, *never*, *n't*.

I **did not go** **[vmi3]**

Verb particle. One point if a verb particle is present. Particles can be prepositions (*by, in*, etc.) and adverbs (*down, up,* etc.).

He **woke up** **[vmi2]**

Examples of vmi codes

She **should have stayed** home [vmi3]
She **should have been punished** [vmi4]
She **could not have been treated** more poorly. [vmi5]
The sisters **should not have been riled up**. [vmi6]
She **shouldn't have been given up on** at the party [vmi7]

Points should be assigned only for morphological markers actually produced by the participant (i.e., do not assign points for missing elements).

Cinderella **was riding** to the ball. [vmi2]
Cinderella **riding** to the ball. [*vmi1]

If a verb phrase contains two of the same type of morphological marker, a point is assigned for each.

They got to be there. [vmi2] (one modal)
They were going to get to be there. [vmi3] (two modals)

Appendix A

Verbs by Type

One place verbs

A 1–place verb is a verb which takes one argument, such as the verb *stay*. *The boy* is an argument of the verb *stay* in the sentence *The boy stayed.*

Unergative verbs (ob1x)

cry	sneeze
go	snore
laugh	stand
live	stay
nod	swim
prosper	talk
relax	wait
rest	weep
sleep	wink

Unaccusative verbs (ob1y)

appear	flow
arrive	hover
come	implode
die	prevail
disappear	revolve
emerge	rise
evolve	surge
expire	vanish
fall	

Two place verbs

A 2-place verb is a verb which can take two arguments, such as the verb *wipe. Cinderella* and *the floor* are the two arguments of the verb *wipe* in the sentence *Cinderella wiped the floor.* Alternating unaccusative verbs such as *break* are coded as optional 2-place verbs. When used transitively, as in *Thomas broke the vase*, they receive the code [op2xy]; when used intransitively, as in *The vase broke*, they receive the code [op2y].

Obligatory two place verbs

attract	collect	erase	polish	tickle
become	contain	fix	press	unlock
belong	cover	hire	reject	wear
betray	cut	kill	repair	weigh
bless	delete	mark	ruin	wipe
build	destroy	murder	shove	
carry	disturb	pat	startle	
catch	do	pinch	stir	

Optional two place verbs

attack	drop	melt	shut	yell
bend	expand	miss	sing	
bite	explode	move	sniff	
blow	fight	open	spill	
bounce	grow	ride	spin	
break	hurt	roll	strike	
chime	knock	run	swallow	
clean	listen	scream	travel	
crack	look	sew	walk	
crash	lose	shatter	wash	
dance	marry	shave	watch	
drive	meet	shrink	work	

Three place verbs

A 3-place verb is a verb which can take three arguments, such as the verb *put*. *Jason*, *the cookies* and *in the drawer* are the three arguments of the verb *put* in the sentence *Jason put the cookies in the drawer*.

Obligatory three place verbs

lend
give
pile
put

Optional three place verbs

borrow	hide	read
bring	invite	sell
call	leave	send
change	load	spend
deliver	lock	take
dress	name	throw
feed	pick	turn
fit	pour	write

Complement verbs

A complement verb is a verb which can take a clause as one of its internal arguments. They can also take an external argument as well as a theme or a predicate.

accept	find	learn	remember	try
allow	finish	let	say	understand
appear	forget	like	see	want
appreciate	get	look	seem	wonder
argue	grasp	love	show	
begin	guess	make	smell	
care	happen	need	start	
decide	have	offer	stop	
discuss	hear	order	surprise	
enjoy	help	pray	teach	
explain	know	realize	tell	

Copulas

The copula is the verb *be* (*am, is, are*) when used as a link between the subject and a noun phrase, an adjective phrase or a prepositional phrase with which it forms a predicate.

Phrasal verbs

A phrasal verb is a verb which is combined with a particle, such as *give up* and *get up* etc.

APPENDIX B

Glossary

Active sentence

Verbs can be in either the active or passive voice. Voice shows the relationship between the verb and the noun phrases. In an active sentence, the person or thing that performed the action is the subject of the verb as in the sentence, *The children wrote the letter*.

Adjunct

A term used to denote an optional constituent typically used to specify the time, location, manner or purpose in which an event took place. (e.g. *to the stadium* is an adjunct in the sentence, *We went to the stadium*.)

Agent

A term used to describe the semantic (thematic) role, which a particular type of argument plays in a given sentence. The agent typically denotes a person or thing that deliberately causes some state of affairs to come about, hence *John* is the agent in the sentence, *John smashed the bottle*. The terms actor and causer are sometimes used in a similar sense. See also Argument/Argument Structure, Thematic roles.

Argument/ Argument structure

An **argument** is a term describing the role played by elements in sentences which are necessary for the verb to occur. For instance, in the sentence *John kicked the ball*, *John* and *the ball* are arguments of the verb since both *John* and *the ball* are necessary for the sentence to be grammatical, e.g., **Kicked the ball* and **John kicked* are both ungrammatical sentences. Arguments can take the thematic role of the agent, theme or goal. Arguments are either *internal* or *external* to the verb. Complements (or object) are internal objects since they are positioned internally within V-bar; whereas, subjects are external arguments since they are positioned outside V-bar. Hence, in *John kicked the ball*, *John* is the external argument and *the ball* is the internal argument.

The **argument structure** of the verb is the frame in which a verb can occur. For instance, the verb *kick* occurs with two arguments, the agent (someone doing the kicking) and the theme (the thing being kicked) as in the sentence *John kicked the ball*. On the other hand, the verb *put* occurs with three arguments, the agent, the theme and the goal in the sentence *John put the money in his wallet*.

Aspect

Aspect indicates whether the action or state of a given verb is complete or not. There are two types of aspect: incomplete (progressive aspect) as in: *She is sleeping*., and complete (perfect aspect) as in: *They have brushed their teeth*.

Auxiliaries/Auxiliary verb

Auxiliary verbs are verbs that are used to help form verb phrases but cannot do so independently. These include *be, do, have,* etc. as in the sentence, *I do like eggs*, *I have seen him.* Auxiliaries can be negative as in, *I don't like eggs*, and can be used in question forms as in, *Does he go to school? Did* he sleep last night? Who *did* the prince like? *Do* and *does* are used for questions and negatives http://www.usingenglish.com/glossary/negative.html in the simple present tense as in *Does he go to school?* And *I don't like eggs*. *Did* is used in the simple past tense as in *I didn't sleep*. *Be* is used with the present participle in the progressive aspect as in *I am watching t<V>* It is also used with the past participle in the passive voice as in *The door was closed by the wind*. *Have* is used with the past participle to form the perfective aspect as in *I have been to France*.

Bound morpheme

See Morphemes.

By-phrase

In sentences in the passive voice, the theme argument of the verb is used as the subject of the verb. In contrast, the agent can be expressed in a by phrase (*by the truck*) in a sentence such as, *The car was hit by the truck*.

Canonical

A term used to denote 'usual', 'typical', or 'normal' structure of sentences. In English, the canonical order of elements in sentences is subject + verb + object (SVO), with the typical order of arguments being agent + verb + theme + goal, the agent being the subject and the theme and goal being the objects. When the sentence occurs in this order, the sentence is called a canonical sentence as in the sentence, *Alice washed the dishes*.
On the other hand, when arguments occur in a 'non-typical' order, the sentence is called a non-canonical sentence as in the passive sentence with NP-movement (A movement), *My wallet was stolen by a pickpocket* where the order is theme + verb + agent, or the object extracted wh-question, *Who did the teacher compliment? i*n which the order is theme + agent + verb.

Clause

A clause is defined in traditional grammar as an expression which contains a subject and a predicate.

There are several types of clauses. Clauses can be divided into main clauses (or matrix clauses) and embedded clauses. The main clause of a sentence is an independent clause that can stand alone (e.g., *He ate the cake*), or a clause that is not subordinate and expresses the focal predication when occurring in a complex sentence (e.g., the think clause in the sentence, *She thinks [that you are lying]*). On the other hand the lying clause (*that you are lying*) in the sentence, *She may think that you are lying* is positioned internally within some other phrase or clause and is hence an embedded clause. There can be different types of embedded clauses. There can be subject clauses, complement clauses, relative clauses and adjunct clauses depending on the function of the embedded clause within the sentence. Subject clauses are embedded clauses that fill the subject

position in the sentence, such as in *[That John won] surprised everyone*. Complement clauses are clausal constructions that serve as a complement to some lexical item. Complements are non-adjunct constituents which are subcategorized for by a lexical head and form the nucleus of a category with a lexical head. In the noun phrase *the idea that the queen will find a bride for the prince*, the clause *the queen will find a bride for the prince* is a complement of the noun *idea* (it is a noun-complement clause). In *I think that Cinderella will dance*, the clause *that Cinderella will dance* is a complement of the verb *think* (it is a verb-complement clause). Relative clauses are clauses that modify nouns or pronouns and begin with a relative pronoun such as in *Shawn ate the cookie [that Susan dropped]*. Adjunct clauses are clauses which do not fill argument positions and modifies the time, place and manner of the sentence such as in *I voted [before I left for work]*.

Clauses can either be finite clauses or infinite clauses, Finite clauses contain an inflected verb as in the sentence, *He said that [the changes were for the better]*, while nonfinite clauses contain a verb in its infinitive or gerundive form as in the sentence, *He wanted [to go home]*.

Closed class words

A category of words which rarely, if ever, has new words added to it, such as prepositions, determiners, pronouns, conjunctions. Closed class words serve primarily grammatical functions in sentences.

Comparative.

The 'er' comparative morpheme is appended to an adjective and specifies a relationship or comparison between two nouns, as in, bigg***er,*** kind***er,*** strong***er***.

Complement

Complements are non-adjunct constituents which are subcategorized for by a lexical head and form the nucleus of a category with a lexical head. In the noun phrase *the idea that the queen will find a bride for the prince*, the clause *the queen will find a bride for the prince* is a complement of the noun *idea* (it is a noun-complement clause). In *I think that Cinderella will dance,* the clause *that Cinderella will dance* is a complement of the verb *think* (it is a verb-complement clause).

Complement verb

A verb that can take a clause as one of its arguments, such as *think*. In the sentence *I thought [John came from Michigan]* the verb *think* takes the sentential complement *John came from Michigan* as its object.
See Appendix II for a list of complement verbs.

Complementizer

This term is used to denote a particular category words that introduce a clause, such as *that/if/for/whether*, as used in sentences such as *I think that you should apologize*, *I doubt if she realizes*, *They're keen for you to show up*.

Coordination

Coordination refers to the connecting of words, phrases or clauses.

Conjoining

Conjoining refers to the act of connecting words, phrases or clauses.

Conjunction

A conjunction is a word like *and*, *but*, *or*, etc., which connects words, phrases or clauses.

Constituent

A structural unit –i.e. an expression which is one of the components out of which a phrase or a sentence is built up. For example, the various constituents of a prepositional phrase (PP) such as *into the carriage* are the prepositions *into*, the noun *carriage.*

Copula

A copula is a verb that connects the subject to the predicate such as the verb *be* in the sentence, *I am a student*. They are sometimes called 'linking verbs'. See Appendix II for a list of copula verbs.

Coreference

Two noun phrases that refer to the same referent. For example, in the sentence *The man shaved himself*, *the man* and *himself* refer to the same person.

Dependency

Having referential dependency. An element which does not have an inherent referent receives reference from an antecedent that it is coreferenced with. For example, in the sentence *The man shaved himself*, *himself* receives reference by being coreferenced with *the man*. Also, in sentences involving movement, such as *Who did the boy kiss* ___?, there is a referential dependency between the empty trace position and the element (*who*) that has been moved from that position so that the empty trace position receives reference from *who*.

Determiners

A determiner is used with a noun and restricts the meaning by limiting the reference of the noun. Determiners include articles (*a, the*) and demonstrative adjectives (*this, those as in this tape, those books*).

Discourse

Linguistic units composed of several sentences.

Ellipsis/ Elliptical sentence

Ellipsis is a process by which an expression is omitted in order to avoid repetition. For example, in a sentence such as *I will do it if you will do it*, we can ellipse/elide (i.e. omit) the second occurrence of do it to avoid repetition, and hence say *I will do it if you will*; the resulting sentence is an elliptical structure.

Embedded clause/verb embedding

An embedded clause is a clause which is positioned internally within some other phrase or clause. For example, in a sentence such as *He may suspect that I hid them*, the *hid* clause (=*that I had them*) is embedded within the *suspect* clause.
See also Clause

Experiencer

A term used in the analysis of semantic/thematic roles to denote the entity which experiences some emotional or cognitive state –e.g. *John* in *John felt unhappy*. See Theta roles.

External argument

Subject. See also Argument/Argument structure.

Finite vs. nonfinite verbs

The finite forms of a verb are the forms where the verb shows tense, person or number as in *I go, she went, They are going*. Non-finite verb forms have no person, tense or number. The infinitive and present and past participles are the non-finite parts of a verb as in *to do*, *doing*, *done*.

Formulaic utterance

Overused expressions that have become automatic.

Free standing morphemes

See Morphemes.

Functional category

Closed class morphosyntactic elements (i.e., elements that are not considered open class items). These constituents are headed by grammatical elements such as complementizers, verb inflections, and determiners

Gerund (Adj. gerundive)

The '*-in*g' form of a verb (e.g. *walking, running*), but the resulting word does not serve as a main verb or clausal verb in the sentences. The syntactic properties of gerunds are intermediate, between verbs and nouns, e..g. *Stealing is against the law*.

Gerundive Clause

Nonfinite clause containing a gerund, e.g.The clause, *visiting the small town* in the sentence, *Janet remembers visiting the small town.*

Goal

Theta role specifying the destination of the action.
e.g. *Eleanor gave the apple to the horse*.
See also Theta roles, Arguments/ Argument structure.

Grammatical morpheme

See Morpheme.

Head

The key syntactic element which gives a phrase its syntactic identity.
e.g. Verb (V) is head of Verb Phrase (VP); Prepostion (P) is head of Prepostion Phrase (PP).

Infinitive

The base or unmarked form of a verb (lacks tense marking), e.g. *live, go, be*.

Infinitive clause

A clause with a verb that lacks tense marking. In English the verb in infinitival clauses is often preceded by *to*, e.g. I want [*Shakira to sing one of her old songs*]., *I didn't see* [*the player leave the field*].

Inflection

A bound morpheme that provides additional grammatical information. For example, '*s*' appended to any noun to indicate a plural form, '*ed*' appended to regular verbs to indicate past tense.

Interjection (extended)

Emotive words such as *yum, ouch, yuk, wow*. These words occur in isolation, that is, they do not interact syntactically with other classes of words.

Internal argument

An object, indirect object, or phrase that is necessarily associated with a verb
See also Argument/Argument structure

Main Verb

The verb in the main clause. Also referred to as the matrix verb.

Matrix Clause

A clause that is independent and can stand on its own (contrast with subordinate or dependent clause). Also referred to as the main or root clause. See also Clause.

Matrix head

The subject of the main clause.

Matrix verb

The verb in the main clause. Also referred to as the main verb

Maze

Words or productions that do not contribute to the syntax or meaning of the target utterance. Mazes may include false starts, repetitions, fillers, hesitations, reformulations, and editorial comments (eg. *He gave her the <u>um um you know</u> slipper)*

Modals

A class of auxiliaries (i.e., *will, shall, can, may, must, should, could, would*) that are invariant with respect to tense and agreement marking. Modals identify the speaker's attitude towards the actuality of an utterance (e.g. doubt, desire, contingency)

Morpheme

A morpheme is the smallest unit of meaning in a language. Free morphemes exist independently as a single word e.g. *cup*, while bound morphemes must be attached to other words as prefixes, suffixes, infixes and circumfixes, e.g. the plural marker, -*s* in *cups*. Morphemes can also be classified as lexical or grammatical. Lexical morphemes are single words that can be classified into traditional word classes (noun, verb, adjective, adverb, and preposition). Grammatical morphemes can be free or bound and convey grammatical information. Examples of grammatical morphemes include determiners and verb inflections. When grammatical morphemes occur as free units, they are also referred to as function words.

NP (Noun Phrase)

A phrase that is headed by a noun and optionally includes a determiner, adjectival phrase, and/or preposition phrase.

Neologism

See Paraphasia.

Object cleft

A sentence in which the object/object clause is moved from its canonical position (following the verb) to a pre-verbal position, e.g. *It was the thief that the artist chased*.

Open class words

These include nouns, verbs, adjectives, and adverbs. Open class words can be added continuously to a language.

PP (prepositional phrase)

A phrase headed by a preposition, e.g., *in the house*

Paraphasia

Single word substitution. **Phonological paraphasias** (also called literal paraphasias) refer to erroneous responses that sound like the target word e.g. '*carrlige* for '*carriage*. Substituted words must contain at least 50% of the phonemes contained in the target word. **Semantic paraphasias** occur when a word from the same semantic category is produced in, place of the target word e.g. '*car'* for '*carriage*. **Neologistic paraphasias** are non-word substitutions in which more than 50% of the phonemes produced are not contained within the target word. **Mixed paraphasias** are those in which phonemic substitutions result in production of real words, e.g., *marriage* for *carriage*.

Particle

A word or morpheme that serves a grammatical function, but that can not be categorized into traditional parts of speech (noun, verb, adjective, adverb, preposition). In English most particles are verb particles. Some verbs in English combine with a preposition, an adverb, or an adverbial particle, to make a phrasal verb, such as wake up, hand in. The prepositions, adverbs and adverbial particles that combine with verbs to make phrasal verbs (i.e. *up, in*) are called verb particles. The particles can be separated with the verb by a noun

Participle

Nonfinite forms of verbs (excluding infinitives). In English the present participle is contructed by adding *-ing* to the verb, as in, *laughing, eating*. The past/passive participle is constructed by adding *-ed* or *-en* to verbs, as in, *laughed, eaten*.

Past Tense Marker

The past tense *-ed* marker is the standard morpheme used to indicate than an action occurred in the past. For example, *-ed* is used to mark past tense in the following sentence: *They danc**ed** and danc**ed***.

Patient

Theta role specifying the entity that has undergone a change of state expressed by the verb. Like items that serve the theta role of theme, patients are usually are object NPs, however, themes do not undergo a change of state., e.g., *The sun melted **the ice*** (*the ice* is a patient); *The boy followed **the weather report*** (*the weather report* is a theme). Note that in the present coding system we do not distinguish between patients and themes; all such NPs are coded as theme.

Phoneme

The basic sound units of a language.

Phonological paraphasia

See Paraphasia.

Phrase

A group of words – or a single word - that forms a syntactic unit. For example, in the sentence *He ate a red apple*., both he and a red apple as well as the sentence *He ate a red apple are phrases*.

Plural morpheme

A morpheme that is attached to nouns to indicate more than one. The regular plural is formed by adding *-s* to nouns, e.g. *stepsister**s**, horse**s**, ladie**s***. Plural nouns may also be indicated with irregular forms (ie. not with 's') e.g. *mice*, *feet*.

Possessive marker

The possessive marker *-'s* attaches to nouns and indicates ownership, as in the sentence, *Cinderella**'s** feet were very small*.

Post-verbal position

Post-verbal position refers to position following the verb in a sentence. In English, in canonical sentences, the object is placed post-verbally like *John* in *Mary kissed John*.

Pre-verbal position

Pre-verbal position refers to position preceding the verb in a sentence. In English, the subject generally occurs pre-verbally as *Mary* in *Mary kissed John*.

Predicate

The predicate of a clause is the core part of the clause not including the subject; such as *bought a book* in the sentence *Peter bought a book*. A predicate noun is a noun that forms the main part of the predicate such as *a teacher* in *Peter is a teacher*. A predicate adjective is an adjective that forms the main part of a predicate, such as *tall* in *Peter is tall.*

Preposition

A grammatical function word that precedes a noun phrase and defines the role of that noun phrase in the action or happening expressed in the sentence (e.g. *on, by, from, to* etc.).

Prosodic Question

A question distinguished from a statement solely by an intonation pattern, as in *You met him yesterday?*There is no subject-auxiliary inversion in prosodic questions.

Quantifier

As a noun modifier, a quantifier expresses the quantity of the noun. Quantifiers can be used with both countable and mass nouns. Some common quantifiers in English are *some, much, many, every, a lot* etc.

Recipient

The semantic role of a noun phrase that refers to an entity that is receiving something; such as *to Mary* in *John gave an apple to Mary.*
See also Thematic roles.

Referential NP

A noun phrase that is understood as referring to one or more identifiable entities. For example, *these lions* in the sentence *These lions are dangerous*. is a referential noun phrase; but *lions* in *Lions are dangerous.* is a generic, rather than referential, noun phrase.

Reflexive

Reflexive pronouns are used to show that a noun phrase refers to the same person or thing as another noun phrase in the same clause. Reflexive pronouns in English all end in *–self* or *–selves*.

Subject Cleft

In a subject cleft sentence, the subject of a sentence is inserted between *it is (was, will be)* and *who (that),* as in *It was the boy who stole the car*. This sentence is the cleft version of *The boy stole the car*.

Subject-auxiliary inversion

Reversing the order of subject and auxiliary verb, such as in forming questions in English as in *Is he coming*? This is formed from the declarative sentence *He is coming*.

Superlative.

The superlative is a form of an adjective indicating a relationship or comparison between a noun and other members of a class by affixation of *–est*. i.e., loud*est*, kind*est*, fast*est*.

Thematic roles

Also called semantic roles, they designate the contributions that entities make to the "plot" described in a sentence. For example, in the sentence *Peter showed a picture to Jill*., *Peter* has the semantic role of agent, *a picture* is a theme (or patient), and *Jill* is a recipient.

Theme

A thematic role referring to the direct object of an action. See Thematic roles.

Third person singular morpheme.

The third person singular morpheme *–s* is attached to the verb and is used to mark subject-verb agreement in the present tense for third person singular (he/she/it), as in the sentence, *The king plan**s** a big party*.

Transitive verb

A transitive verb is a verb which requires a direct object; such as the verb *see* in *They see the lake*.

Unaccusative verb

A verb which has a non-agent – a theme or a patient - in subject position, as in *The cup broke into pieces.* Like the passive, the theme of the sentence can be analyzed as having been moved from the grammatical object position to the grammatical subject position. Unlike the passive, however, the movement of the theme to the subject position is not accompanied by a change in the verb form from active to passive. The verb form used is the same as the form that would be used if the grammatical subject were the agent, or logical subject, of the sentence.

Appendix C:

Coding Practice

1. He drank the milk.
   <I> **[s]**
   <II> [ss][as][e0]
   <III> [pros][v][deto][n]
   <IV> [ired]
   <V> [op2xy][xs][yo][vmi1]
2. I enjoy/ed the meeting.
   <I> [s]
   <II> [ss][as][e0]
   <III> [pros][v][deto][n]
   <IV> [ed]
   <V> [cxy][xs][yo][vmi1]
3. Sent this book.
   <I> [*s][g]
   <II> [ss][as][e0]
   <III> [-pros][v][deto][n]
   <IV> [ired]
   <V> [*op3xy][-xs][yo][vmi1]
4. I like what you like.
   <I> [s]
   <II> [cs][as][e1][rc]
   <III> [pros][v][wh][pros][v]
   <IV>
   <V> [cxy][xs][#yo][vmi1][cxy][xs][#yo][vmi1]
5. He woke up early.
   <I> [s]
   <II> [ss][as][e0]
   <III> [pros][v][prt][ad]
   <IV> [ired]
   <V> [phob1x][xs][vm2]
6. There were three people in the room.
   <I> [s]
   <II> [ss][as][e0]
   <III> [pros][v][q][n][prep][detpo][n]
   <IV> [ired][irpl]
   <V> [copy][yo][j][vmi1]
7. There was a girl named Cinderella.
   <I> [s]
   <II> [ss][as][e0]
   <III> [pros][v][deto][n][a][n]

<IV> [ired]
<V> [copy][yo][vmi1]

8. It was the boy who the girl kiss/ed.
<I> [s]
<II> [cs][as][e1][ocl]
<III> [pros][v][deto][n][wh][dets][n][v]
<IV> [ired][ed]
<V> [copy][yo][vmi1][ob2xy][xs][#yo][vmi1]

9. John put the glass on the table.
<I> [s]
<II> [ss][as][e0]
<III> [n][v][deto][n][prep][detpo][n]
<IV> [ired]
<V> [ob3xyz][xs][yo][zpp][vmi1]

10. That look/s good.
<I> [s]
<II> [ss][as][e0]
<III> [pros][v][a]
<IV> [3s]
<V> [cyp][ys][p][vmi1]

11. We all eat.
<I> [s]
<II> [ss][as][e0]
<III> [pros][q][v]
<IV>
<V> [op2x][xs][vmi1]

12. The sun melt/ed the ice.
<I> [s]
<II> [ss][as][e0]
<III> [dets][n][v][deto][n]
<IV> [ed]
<V> [op2xy][xs][yo][vmi1]

13. John sent the money to Mary.
<I> [s]
<II> [ss][as][e0]
<III> [n][v][deto][n][prep][n]
<IV> [ired]
<V> [op3xyz][xs][yo][zpp][vmi1]

14. John sent Mary the money.
<I> [s]
<II> [ss][as][e0]
<III> [n][v][n][deto][n]
<IV> [ired]
<V> [op3xzy][xs][znp][yo][vmi1]

15. The perfume smell/3s good.
<I> [s]

<II> [ss][as][e0]
<III> [dets][n][v][a]
<IV> [3s]
<V> [cyp][ys][p][vmi1]

16. Cinderella sweep floor.
<I> [*s][g]
<II> [ss][as][e0]
<III> [n][v][-deto][n]
<IV> [-3s]
<V> [op2xy][xs][yo][*vmi1]

17. John put book.
<I> [*s][g]
<II> [ss][as][e0]
<III> [n][v][-deto][n]
<IV> [ired]
<V> [*ob3xyz][xs][yo][-znp][*vmi1]

Appendix D

Sample Coded Transcripts

HEALTHY NORMAL INDIVIDUAL

S (um) Cinderella go/3s to live with her wicked stepmother
<I> [s]
<II> [cs][as][e1][ac]
<III> [n][v][to][v][prep][ppro][a][n]
<IV> [3s]
<V> [ob1x][xs][vmi1][ob1x][#xs][j][vmi2].
S (uh) they treat her terribly and she do/3s all the menial chore/s
<I> [s]
<II> [ss][as][con][e0]
<III> [pros][v][proo][ad][conj][pros][v][q][deto][a][n]
<IV> [3s][pl]
<V> [ob2xy][xs][yo][vmi1][ob2xy][xs][yo][vmi1].
S (um) One day along come/3s an announcement from the castle that the prince is hold/ing a ball
<I> [s]
<II> [cs][as][e1][cc]
<III> [q][n][ad][v][deto][n][prep][detpo][n][comp][dets][n][aux][v][deto][n]
<IV> [3s][ing]
<V> [ob1y][yo][vmi1][ob2xy][xs][yo][vmi2].
S The two stepsister/s are obviously go/ing to attend
<I> [s]
<II> [ss][as][e0]
<III> [dets][q][n][mod][ad][v]
<IV> [pl][ing]
<V> [op2x][xs][vmi2].
S So they all go to water tower to check in for ball gown/s
<I> [*s][g]
<II> [cs][as][e1][ac]
<III> [ad][pros][q][v][prep][-detpo][n][n][to][v][prt][prep][n][n]
<IV> [pl]
<V> [ob1x][xs][j][vmi1][phop2x][#xs][j][vmi3].
S Cinderella is not allowed to come along but she is required to help them with theirs and it all go/3s very badly
<I> [s]
<II> [cs][as][con][e2][cc][cc]
<III> [n][v][neg][a][to][v][ad][conj][pros][v][a][to][v][proo][prep][propo][conj][pros][q][v][ad][ad]
<IV> [3s]
<V> [copyp][ys][p][vmi2][ob1y][#ys][vmi2][copyp][ys][p][vmi1][cxy][#xs][yo][j][vmi2][ob1x][xs][vmi1].
S In the meantime however not to be outdone the fairy godmother show/3s up (everyone need/3s a fairy godmother)
<I> [s]

<II> [cs][as][e1][ac]
<III> [prep][detpo][n][ad][neg][to][aux][v][dets][n][n][v][prt]
<IV> [iren][3s]
<V> [phob2xy][#ys][#xpa][vmi3][phop2x][xs][vmi2].
S She arrive/3s on the scene, (uh) properly produce/3s a ball gown
<I> [s]
<II> [ss][as][con][e0]
<III> [pros][v][prep][detpo][n][#conj][ad][v][deto][n][n]
<IV> [3s][3s]
<V> [ob1y][ys][j][vmi1][ob2xy][#xs][yo][vmi1].
S (um), pumpkin old horse, many little mice are turn/ed into coach great steed and footman
<I> [*s][g]
<II> [cs][pa][con][e0]
<III> [-dets][n][-conj][-dets][a][n][q][a][n][aux][v][prep][-detpo][n][-detpo][a][n][conj][-detpo][n]
<IV> [irpl][en]
<V> [op3xyz][ys][zpp][#xpa][*j][vmi2].
S (And) Cinderella get/3s to go to the ball with, the one caveat
<I> [s]
<II> [ss][as][e0]
<III> [n][mod][v][prep][detpo][n][prep][detpo][q][n]
<IV> [3s]
<V> [ob1x][xs][j][j][vmi3].
S She got to be home by midnight because at midnight everything turn/3s back to what it was
<I> [s]
<II> [cs][as][e2][ac][rc]
<III> [pros][mod][v][ad][prep][n][conj][prep][n][q][v][ad][prep][wh][pros][v]
<IV> [3s][ired]
<V> [copyp][ys][p][vmi2][op3yz][ys][zpp][vmi1][copyp][ys][#p][vmi1].
S Go/3s to the ball
<I> [s]
<II> [ss][as][e0]
<III> [v][prep][detpo][n]
<IV> [3s]
<V> [ob1x][#xs][j][vmi1].
S Has a great time
<I> [s]
<II> [ss][as][e0]
<III> [v][deto][a][n]
<IV>
<V> [cxy][#xs][yo][vmi1].
S Meet/3s the prince and charm/3s him
<I> [s]
<II> [ss][as][con][e0]
<III> [v][deto][n][conj][v][proo]
<IV> [3s][3s]

<V> [op2xy][#xs][yo][vmi1][ob2yx][#ys][xo][vmi1].
S (But) has to leave abruptly when she suddenly realize/3s it/'s almost the stroke of midnight
<I> [s]
<II> [cs][as][e2][ac][cc]
<III> [mod][v][ad][wh][pros][ad][v][pros][v][ad][deto][n][prep][n]
<IV> [3s]
<V> [op3x][#xs][vmi2][cxs'][xs][s'][vmi1][copyp][ys][p][vmi1].
S On the way out (as a matter of fact) the pumpkin the mice and the great steed who used to pull a plow all turn/ed back to their original selves including herself except for the one glass slipper which she has left behind
<I> [s]
<II> [cs][as][con][e2][rc][rc]
<III> [prep][detpo][n][ad][dets][n][dets][n][conj][dets][a][n][wh][mod][v][deto][n][q][v][ad][prep][ppro][a][n][prep][rpro][prep][prep][detpo][q][n][n][wh][pros][aux][v][ad]
<IV> [irpl][ed][irpl][iren]
<V> [op2xy][#xs][yo][vmi2][op3yz][ys][zpp][j][vmi1][op3xy][xs][#yo][vmi2].
S The prince is crestfall, and simply has to find the love of his life who dance/ed and ran (I hate it that/'s worse than kiss and tell)
<I> [s]
<II> [cs][as][con][e1][rc]
<III> [dets][n][v][a][pp][conj][ad][mod][v][deto][n][prep][ppro][n][wh][v][conj][v]
<IV> [ed][ired]
<V> [copyp][ys][p][vmi1][cxy][#xs][yo][vmi2][op2x][#xs][vmi1][op2x][#xs][vmi1].
S (So she go/3s off or) he go/3s off on a mission to find the love of his life by check/ing to see who can wear the glass slipper left behind of all of his subject/s
<I> [s]
<II> [cs][as][e5][ac][ac][cc][cc][rc]
<III> [pros][v][ad][prep][detpo][n][to][v][deto][n][prep][ppro][n][prep][v][to][v][wh][mod][v][deto][n][n][v][ad][prep][q][prep][ppro][n]
<IV> [3s][ing][iren][pl]
<V> [ob1x][xs][j][vmi1][cxy][#xs][yo][vmi2][cxs'][#xs][s'][vmi1][cxs'][#xs][s'][vmi2][ob2xy][#xs][yo][vmi2][op3xy][#ys][#xpa][vmi1].
S (Well) when he arrive/3s at the wicked stepmother/z house (um) the two wicked stepdaughter/s try like hell
<I> [s]
<II> [cs][as][e1][ac]
<III> [wh][pros][v][prep][detpo][a][n][n][dets][q][a][n][v][prep][n]
<IV> [3s][poss][pl]
<V> [ob1y][ys][j][vmi1][cx][xs][vmi1].
S (but you know) it/'s hard to get a size nine and a half into a size two shoe
<I> [s]
<II> [cs][as][e1][cc]
<III> [pros][v][a][to][v][deto][n][q][conj][detpo][q][prep][detpo][n][q][n]
<IV>
<V> [copyp][ys][p][vmi1][cxyz][#xs][yo][zpp][vmi2].

S However even though they/'ve lock/ed Cinderella up, she find/3s her way into the, fitting, put/3s on the slipper run/3s off with the prince and live/3s happily ever after until (of course) the divorce lawyer enter/3s in the room

<I> [s]
<II> [cs][as][con][e2][ac][ac]
<III> [ad][ad][conj][pros][aux][v][n][prt][pros][v][ppro][n][prep][detpo][n][v][prt][detpo][n][v][ad][prep][detpo][n][conj][v][ad][conj][dets][n][n][v][prep][detpo][n]
<IV> [en][3s][3s][3s][3s][3s]
<V> [phop2xy][xs][yo][vmi3][cxy][xs][yo][vmi1][phob2xy][#xs][yo][vmi2][op2x][#xs][j][vmi1][ob1x][#xs][vmi1][op2x][xs][j][vmi1].

NONFLUENT APHASIC INDIVIDUAL

S (Okay uh) stepmother and (two one) two (uh) want to (uh uh uh) work/ing because (uh uh Cinderella I mean uh) stepmom not like (uh uh) work/ing

<I> [*s][g][m]
<II> [cs][as][con][e3][cc][ac][cc]
<III> [-dets][n][conj][q][-n][v][to][v][conj][-dets][n][-aux][neg][v][v]
<V> [+ing][ing]
<V> [cxs'][xs][s'][vmi1][*op2x][-xs][*vmi2][cxs'][s'][*vmi2][op2x][#xs][vmi1].

S (And uh so uh) evil (uh oh dear uh)

<I> [ns]
<II>
<III> [a]
<IV>
<V> >

S Cinderella (uh) want/3s to (uh) orphan and (uh) want/3s to go (uh) family

<I> [*s][g][m]
<II> [cs][as][con][e1][cc]
<III> [n][v][to][-det][n][conj][v][to][v][-prep][-detpo][n]
<IV> [3s][3s]
<V> [*cxs'][xs][-s'][vmi1][*j][cxs'][#xs][s'][vmi1][ob1x][#xs][vmi2][*j].

S (And so uh) stepmother choose (uh uh) Cinderella

<I> [*s][g]
<II> [ss][as][e0]
<III> [-dets][n][v][n]
<IV> [-3s]
<V> [cxy][xs][yo][*vmi1].

S (And of course uh) Cinderella not know (uh uh) hard worker

<I> [*s][g][m]
<II> [ss][as][e0]
<III> [n][-aux][neg][v][a][n]
<IV>
<V> [*cxy][xs][-s'][*j][*vmi2].

S (And) stepmother (uh uh) lazy
<I> [ns]
<II>
<III> [n][a]
<IV>
<V> .
S (And so uh uh mother) stepmother (uh w uh) Cinderella (uh uh) hard worker
<I> [ns]
<II>
<III> [n][n][a][n]
<IV>
<V> .
S (And and uh also I notice uh) look/3s like (uh) animal/s (uh)
<I> [s]
<II> [ss][as][e0]
<III> [v][prep][n]
<IV> [3s][pl]
<V> [cyp][#ys][p][vmi1].
S Cinderella (uh) pretty friendly (uh uh) animal/s
<I> [ns]
<II>
<III> [n][ad][a][n]
<IV> [pl]
<V> .
S (And uh) animal/s (uh) help Cinderella
<I> [*s][g]
<II> [ss][as][e0]
<III> [-dets][n][v][n]
<IV> [pl]
<V> [cxz][xs][znp][vmi1].
S (And uh and uh uh) prince (pr pr uh uh uh pa uh) ball
<I> [ns]
<II>
<III> [n][n]
<IV>
<V> .
S (And uh uh) Cinderella want/3s to (uh) go
<I> [s]
<II> [cs][as][e1][cc]
<III> [n][v][to][v]
<IV> [3s]
<V> [cxs’][xs][s’][vmi1][ob1x][#xs][vmi2].
S (And) stepmother said (uh) no because (uh) you got to work
<I> [*s][g]
<II> [cs][as][e2][cc][ac]

<III> [-dets][n][v][neg][conj][pros][mod][v]
<IV> [ired]
<V> [cxs'][xs][s'][vmi1][op2x][xs][vmi2].
S (And also) look/3s like Cinderella handy
<I> [*s][g]
<II> [cs][as][e1][*cc]
<III> [v][prep][n][-v][a]
<IV> [3s]
<V> [cys'][#ys][s'][vmi1].
S (Uh uh) dress (I think)
<I> [ns]
<II>
<III> [n]
<IV>
<V> .
S (Uh) Cinderella (uh) make/3s a dress
<I> [s]
<II> [ss][as][e0]
<III> [n][v][deto][n]
<IV> [3s]
<V> [cxy][xs][yo][vmi1].
S (And uh step uh) stepmother (uh uh) she/'s destroy/ed the (uh uh)
<I> [*s][g][au]
<II> [ss][as][e0]
<III> [-det][n][pros][aux][v][deto][-n]
<IV> [en]
<V> [ob2xy][xs][yo][vmi2] >
S (And so uh) Cinderella (uh) now not (uh uh) dress
<I> [ns]
<II>
<III> [n][ad][neg][n]
<IV>
<V> .
S (But uh go) godmother (uh uh) present/3s X (uh) magic
<I> [*s][g]
<II> [ss][as][e0]
<III> [-dets][n][v][-deto][n][-n]
<IV> [3s]
<V> [op3xy][xs][yo][vmi1].
S (And) a beautiful dress and wand
<I> [ns]
<II>
<III> [det][a][n][conj][n]
<IV>
<V> .
S (And so uh uh and) coach

<I> [ns]
<II>
<III> [n]
<IV>
<V> .
S (Uh godfa) mother (uh uh uh) coach
<I> [ns]
<II>
<III> [n][n]
<IV>
<V> .
S (And uh uh uh) man (uh I do/n't know what/'s the name uh uh) coach (uh) ride/ing
<I> [*s][g]
<II> [ss][as][e0]
<III> [-dets][n][+n][-aux][v][-n]
<IV> [ing]
<V> [op2xy][xs][*j][*vmi1].
S (And uh and so uh) Cinderella can go because (uh) dress
<I> [*s][g]
<II> [cs][as][e1][*ac]
<III> [n][mod][v][conj][n]
<IV>
<V> [ob1x][xs][vmi2].
S (And uh let/'s see uh but oh) god (fa) mother (uh) said you got to midnight (uh uh uh) because (uh I guess uh uh) godmother (uh) that/'s magic that/'s it
<I> [*s][g][m]
<II> [cs][as][e2][cc][ac][con]
<III> [-dets][n][v][pros][v][*prep][n][conj][+n][pros][v][n][pros][v][proo]
<IV> [ired]
<V> [cxs'][xs][s'][vmi1][cyp][ys][p][vmi1][copyp][ys][p][vmi1][copyp][ys][p][vmi1].
S (So uh uh and also uh also by the way uh uh) glass slipper/s
<I> [ns]
<II>
<III> [n][n]
<IV> [pl]
<V> .
S (And uh and uh so uh) prince and (uh) Cinderella dance/ing (uh uh) ball
<I> [*s][g]
<II> [ss][as][e0]
<III> [-dets][n][conj][n][-aux][v][-prep][-detpo][n]
<IV> [ing]
<V> [op2xy][xs][*j][*vmi1].
S (And but uh) Cinderella (uh) heard (uh) midnight (uh uh) clock
<I> [*s][g]
<II> [ss][as][e0]
<III> [n][v][+n][-deto][n]

<IV> [ired]
<V> [cxy][xs][yo][vmi1].
S (And uh and uh) Cinderella remember/ed that and run away because I (uh) maybe dress (uh) terrible
<I> [*s][g]
<II> [cs][as][con][e1][*ac]
<III> [n][v][proo][conj][v][ad][conj][+pros][conj][-dets][n][-v][a]
<IV> [ed][-ired]
<V> [cxy][xs][yo][vmi1][op2xy][#xs][*vmi1].
S (And uh but) Cinderella slip/ed sort of
<I> [s]
<II> [ss][as][e0]
<III> [n][v][ad]
<IV> [ed]
<V> [ob1y][ys][vmi1].
S (And uh) prince got (uh uh) shoe/s
<I> [*s][g]
<II> [ss][as][e0]
<III> [-dets][n][v][-deto][n]
<IV> [ired][pl]
<V> [cxy][xs][yo][vmi1].
S (And uh uh) duke (uh uh uh) prince said find (uh uh uh) shoe/s fit
<I> [*s][g]
<II> [cs][as][e2][cc][cc]
<III> [+n][-dets][n][v][v][-wh][-dets][n][v]
<IV> [ired][pl]
<V> [*j][cxs'][xs][s'][vmi1][cxs'][#xs][s'][vmi1][*op3xyz][xs][-znp][vmi1].
S (And uh uh) go forward
<I> [s]
<II> [ss][i][e0]
<III> [v][ad]
<IV>
<V> [ob1x][#xs][vmi1].
S (And uh uh so) duke said okay because (uh) you got to obey that
<I> [s]
<II> [cs][as][e1][ac]
<III> [-dets][n][v][conj][pros][mod][v][proo]
<IV> [ired]
<V> [cxy][xs][yo][vmi1][op2xy][xs][yo][vmi2].
S (And uh) because (uh uh) prince like/3s (uh) Cinderella
<I> [*s][g]
<II> [ss][as][e0]
<III> [conj][-dets][n][v][n]
<IV> [3s]
<V> [cxy][xs][yo][vmi1].
S (Uh) magic (uh)

<I> [ns]
<II>
<III> [n]
<IV>
<V> .
S (And so but s uh Cinderella uh no) stepmother (uh) lock/ed up (uh uh) Cinderella because (uh) not want to (uh) find (I do/n't know)
<I> [*s][g][au]
<II> [cs][as][e2][ac][cc]
<III> [-dets][n][v][prt][n][conj][-pros][-aux][neg][v][-pros][to][v]
<IV> [ed]
<V> [op3xy][xs][yo][vmi2][*cxs'][-xs][s'][*vmi2][*cxy][-xs][-yo][vmi2] >
S Maybe (uh) Cinderella (uh) stepmother figure/ed out (I do/n't know why)
<I> [*s][g][m]
<II> [ss][as][e0]
<III> [conj][n][+n][v][prt]
<IV> [ed]
<V> [*j][*cxy][xs][-yo][vmi2].
S (But uh uh) lock/ed it because (uh I do/n't know)
<I> [*s][g][au]
<II> [cs][as][e1][*ac]
<III> [v][proo][conj]
<IV> [ed]
<V> [*op3xy][-xs][yo][vmi1]>
S (But uh so uh uh) duke (uh) house (uh) Cinderella and ask/ed stepmofather (uh) that/'s people that/'s it
<I> [*s][g][m]
<II> [cs][as][con][e1][cc]
<III> [-dets][n][-v][-prep][-detpo][n][-prep][n][conj][v][-deto][n][pp][pros][v][-deto][n][pros][v][proo]
<IV> [ed]
<V> [cxzs'][#xs][znp][s'][vmi1][copyp][ys][p][vmi1][copyp][ys][p][vmi1].
S (Well no uh uh) Cinderella and got to (uh) say (uh) duke said (well uh) I want to see (surrend) Cinderella
<I> [*s][g][m]
<II> [cs][as][con][e2][cc][cc]
<III> [n][+conj][mod][v][-n][-det][n][v][pros][v][to][v][n]
<IV> [ired][ired]
<V> [*cxy][-xs][-yo][vmi2][cxs'][xs][s'][vmi1][cxs'][xs][s'][vmi1][cxy][#xs][yo][vmi2].
S (And) of course (uh) fit/3s (uh)
<I> [*s][g]
<II> [ss][as][e0]
<III> [ad][v]
<IV> [3s]
<V> [*op3y][-ys][vmi1].

S (And uh uh) duke thank god (uh) found it
<I> [*s][g]
<II> [ss][as][e0]
<III> [-dets][n][v][proo]
<IV> [ired]
<V> [cxy][xs][yo][vmi1].
S (And uh prince/s uh uh) prince/*s and Cinderella marry/ed
<I> [*s][g]
<II> [ss][as][con][e0]
<III> [-dets][n][conj][n][v]
<IV> [+pl][ed]
<V> [op2x][xs][vmi1].