

Basic Terms, Evidence for Structure

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1 Some Basic Issues

- descriptive vs prescriptive grammar
- historical vs synchronic grammar
- Sources of Data
 - native speaker judgements
 - corpora
 - What can go wrong? What are the limitations?

1.1 Grammaticality

An expression can be ill-formed ('odd') for many reasons:

- (1) a. You won't get nothing for dinner if you don't come in and clear up your mess.
- (2) a. He is intelligenter than even you.
b. I wrote to Mary and a postcard.
- (3) a. This noodles is overcooked.
b. That deer are happy to be in this park.
- (4) a. Kim is a living dead person.
b. I know the earth is flat, even though it isn't.
- (5) a. I order you to answer.
b. I order you to know the answer.
c. I order you to have long hair.
- (6) a. My toothbrush is pregnant again, and she is trying to kill me.
b. My toothbrush is pregnant again, and it is trying to kill me.
c. My toothbrush is pregnant again, and he is trying to kill me.
- (7) a. The horse raced past the barn fell.
- (8) a. Green sleep colourless ideas furiously.
b. Colourless green ideas sleep furiously.
- (9)
- (10) 'Twas brillig, and the slithy toves
Did gyre and gimble in the wabe;
All mimsy were the borogoves, And the mome raths outgrabe.
(From 'Jabberwocky' by Lewis Carroll)

2 Structure (Phrase/Constituent Structure)

- Syntax is the study of how words can be combined.
- The structure of phrases ('phrase structure' or 'constituent structure').
- First key point: English sentences are not just bags of words – *structure* is important.

2.1 Word Order

- The simplest kind of structure involves *word order*.

- Word order is obviously important
- The following contain the same words, but do not mean the same:
 - (11) a. The March Hare woke the Doormouse.
 - b. The Doormouse woke the March Hare.
 - Who is doing the waking, and who became awake? and why?
- Similarly:
 - For two words there are two logically possible orders ($2*1$)
 - For three words there are six logically possible orders ($3*2*1$)
 - For four words there are 24 logically possible orders ($4*3*2*1$)
 - But only three grammatical sentences of English can be constructed out of *the dog ran* and *away*:
 - (12) a. The dog ran away.
 - b. Away the dog ran.
 - c. Away ran the dog.
 - d. *Dog the ran away.
 - e. *Dog ran the away.

2.2 Word order is not enough

- For example, one constraint is that *the* must appear before *dog*, but that is not enough:
 - (13) *The away ran dog.
- We can see another example if we try to describe how to form interrogatives in English. Consider (14):
 - (14) Sam can play the piano.

2.3 English Interrogatives (1)

- Move the second word to the front.
 - (15) a. Sam *can* play the piano.
 - b. *Can* Sam Δ play the piano?
 - (16) a. Sam's *sister* can play the piano.
 - b. * *Sister* Sam's Δ can play the piano?
 - c. *Can* Sam's sister Δ play the piano?
 - (17) a. Sam *plays* the piano.
 - b. * *Plays* Sam Δ the piano?
- There are different *kinds* of word.

2.4 English Interrogatives (2)

- Move the first *auxiliary verb* to the front
 - (18) a. Sam's sister *can* play the piano.
 - b. *Can* Sam's sister Δ play the piano?
 - (19) a. Sam's sister who *can* play the piano has left.
 - b. * *Can* Sam's sister who Δ play the piano has left.
 - c. [Sam's sister who can play the piano] *has* left.
 - d. *Has* [Sam's sister who can play the piano] Δ left.
- Move the first auxiliary that comes *after the subject* (i.e. invert the subject and the first auxiliary verb)
- Rules of English syntax are *structure sensitive*.

3 Heads, Dependents (Arguments, Adjuncts)

3.1 Heads

- ‘Canonical’ (i.e. typical) phrases have a *head* – a word or phrase that determines their grammatical properties
 - a preposition in a prepositional phrase (PP)
 - a noun in a noun phrases (NP)
 - a verb in a verb phrase (VP)
 - an adjective in a an adjective phrase (AP)
 - ...
- The *head* of a phrase is the word (or phrase) that determines its grammatical properties,
- in particular: the distribution of the phrase (where it can occur)
- what other words or phrases can occur with it in a phrase
 - We will say it ‘licenses’ or ‘subcategorises’ other phrases.

3.2 Arguments/Complements

- Many words have co-occurrence restrictions – if they are present other kinds of expression are required or forbidden. Compare:
(20) a. *Sam devoured.
b. Sam devoured it.
c. *Devoured.
d. *Devoured it.
e. *Sam devoured on it.
f. *Sam devoured it the food.
- Similarly:
(21) a. Sam relies on Kim.
b. *Sam relies.
c. *Relies.
d. *Relies over Kim.
e. *Sam relies over Kim.
f. *Sam relies over Kim on Kim.
- Similarly:
(22) a. Sam put [it] [on the desk].
b. *Sam put [on the desk].
c. *Sam put [it].
d. *Sam put.
e. *Sam put [it] [the book] [on the desk].
- Similarly:
(23) a. Sam promised [Kim] [that she would be on time]
b. *Sam promised [Kim] [whether she would be on time]
c. ...
- The obligatory expressions are called *arguments* (sometimes ‘complements’), as distinct from *adjuncts* (sometimes ‘modifiers’)
 - In (24) *Sam* and *it* are arguments of *devour*:
(24) a. Sam devoured it.
 - *devour* requires two arguments, both NPs.
 - *rely* requires two arguments: and NP and a PP with *on*.
 - *put* requires three arguments, both NPs and a ‘locative’.
- Compare, in (25), all the underlined expressions can be omitted:
(25) Apparently Sam devoured it very rapidly in the sitting room in front of the TV with a plastic fork yesterday at 3:00 because she was hungry.

3.3 Arguments

- typically obligatory (but there are optional arguments)
- limited in number (typically extra arguments cannot be added)
- the form depends on the head (e.g. *rely on*)
- (so changing the head can affect grammaticality)
- cannot be re-ordered freely
- their semantic role depends on the head:
 - (26) a. The children feared the ghosts. (*The children* indicates an experiencer)
 - b. The children frightened the ghosts. (*the children* indicates an actor or agent)
- Heads 'license' arguments.

3.4 Adjuncts

- typically optional
- potentially unlimited in number
- can be ordered relatively freely
 - (27) a. Sam devoured it very rapidly in the sitting room.
 - b. Sam devoured it in the sitting room very rapidly.
 - c. ... in front of the TV with a plastic fork.
 - d. ... with a plastic fork in front of the TV.
 - e. ... because she was hungry yesterday.
 - f. ... yesterday because she was hungry.
- Semantic role is independent of the head, e.g.
 - a *because* adjunct indicates a cause
 - a *with* adjunct indicates an instrument
 - etc.
- can occur with any head (with some restrictions, e.g. adverbs modify verbs, adjectives modify nouns)

3.5 Semantic basis

- At the heart of the distinction is something semantic:
- e.g. with a verb, the arguments correspond to the participants in the sort of event or situation the verb describes, for example:
 - a dying event necessarily involves one participant
 - a killing event requires two
 - a giving event requires three
 - a buying event requires four
- whereas adjuncts describe surrounding circumstances (where, when, how, why)
- But as usual, this is sometimes obscured by the syntax
- How many participants are there in a raining, snowing, or hailing event? English syntax requires an argument (a 'dummy' *it*):
 - (28) a. It rained.
 - b. *Rained
 - (29) a. It hasn't snowed.
 - b. *Snowed.
- There is not much semantic difference between *devouring*, *eating*, and *dining* (they are all kinds of eating), but they require/allow different numbers and kinds of argument:
 - (30) a. Sam dined/ate/*devoured (at 3:00 AM).
 - b. Sam *dined/ate/devoured her dinner (at 3:00 AM).
 - c. Sam dined/*ate/*devoured on caviar (at 3:00 AM).

3.6 Optional Arguments

- Sometimes a verb allows what are best regarded as ‘optional’ arguments, e.g. *eat*. While it is true that we can omit the second argument of *eat*, as in (31b), the existence of ‘something’ is understood even in (31b). So it is generally agreed to be an ‘optional argument’.
(31) a. Sam ate something at 3:00.
b. Sam ate at 3:00.
- The alternative would be to treat it as an adjunct, but then we would have to explain why an NP like *something* cannot appear (as an adjunct) with any verb, and why we can’t have (say) *of something*: *Eat* seems to be licensing *something*, so it is most easily analysed as an optional argument.

4 Testing for Constituent Structure

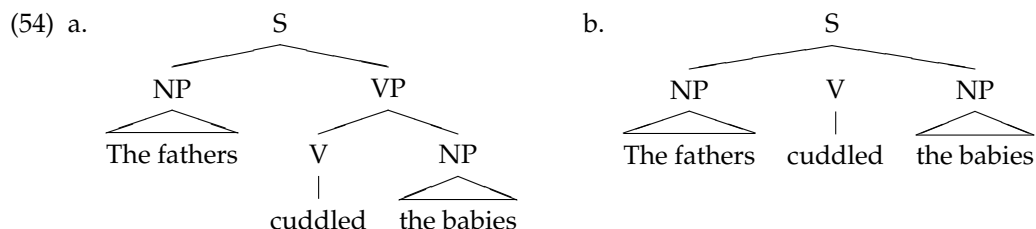
- There is evidence for structure (sentences are not just bags of words);
- How can investigate this structure? (The ‘phrase structure’ or ‘constituent structure’ of clauses and other phrases) Are there tests?
- Standard tests:
 - Substitution, e.g. by a pronoun or other pro-form
 - Sentence fragment/Unit of sense
 - Movement
 - Coordination
 - Omission/ellipsis
- Substitution
 - Consider (32):
(32) The person at the front desk will place a stamp showing today’s date in your book.
 - Obviously, a phrase consisting of a single word must be unit, so if we can *substitute* a string of words with a single word, that is some evidence that the string of words is a constituent:
(33) a. The person at the front desk will place a stamp showing today’s date in your books.
b. She will place a stamp showing today’s date in your books.
(34) a. She will place a stamp showing today’s date in your books.
b. She will place one/it in your books.
(35) a. She will place one/it in your books.
b. She will place one/it there.
 - This suggest the following are constituents (phrases, units, etc.)
(36) [The person at the front desk] will place [a stamp showing today’s date] [in your books].
 - Compare:
(37) a. The person at the front desk will place a stamp showing today’s date in your books.
b. *She front desk will place a stamp showing today’s date in your books.
(38) a. The person at the front desk will place a stamp showing today’s date in your books.
b. *The person at the front desk will place a stamp showing today’s it/there your books.
 - If a string of words can be substituted by single word (or other phrase), it is evidence that it is a constituent.
 - Here we have used pro-forms (the pronouns *she*, *it*, *one*, and the pro-form *there*), but we could have used other forms, e.g. the interrogative forms *who*, *what*, *which* N, *when*, *where*, *how*, *why*, and looked at the possible fragment answers:
(39) a. The person at the front desk will place a stamp showing today’s date in your books.
b. Who will place a stamp showing today’s date in your books?
c. The person at the front desk.
(40) a. The person at the front desk will place a stamp showing today’s date in your books.
b. Which person will place a stamp showing today’s date in your books?
c. The person at the front desk.

- (41) a. The person at the front desk will place a stamp showing today's date in your books.
 b. What will the person at the front desk place _____ in your books?
 c. A stamp showing today's date.
- (42) a. The person at the front desk will place a stamp showing today's date in your books.
 b. Where will the person at the front desk will place a stamp showing today's date?
 c. In your books.
- If a string of words can be used as a sentence fragment, it is evidence that it is a constituent.
- Movement
 - Phrases are single units of structure – so we expect them to appear in different positions.
 - The simplest case of this involves pre-posing for emphasis (often contrastive emphasis) in so-called 'Topicalisation':
 - (43) a. We perform some miracles immediately, impossible tasks take longer.
 b. Some miracles, we perform immediately, impossible tasks take longer.
 c. *Miracles immediately, we perform some, impossible tasks take longer.
 - (44) a. She will place a stamp showing today's date in your books.
 b. A stamp showing today's date, she will place in your books.
 c. In your books, she will place a stamp showing today's date.
 d. *[A stamp] [in your books] she will place.
 - If a string of words can be topicalized (or otherwise moved) it is evidence that it is a constituent.
 - Sometimes a so-called 'cleft' construction can be used in the same way:
 - (45) a. We perform miracles immediately.
 b. It is miracles that we perform immediately.
 c. *It is miracles immediately that we perform.
 - (46) a. She will place a stamp showing today's date in your books.
 b. It is a stamp showing today's date that she will place in your books.
 c. It is in your books, that she will place a stamp showing today's date.
 d. *It is [a stamp] [in your books] that she will place.
- Coordination
 - Coordination is joining phrases together with *and*, *but* or *or*:
 - If two strings can be coordinated, it is evidence that they are constituents.
 - (47) a. She will place a stamp in your books or on your card.
 b. She will place a stamp or some other mark in your books.
 - Compare, if we coordinate non-constituents, either the result is ungrammatical, or we need special intonation: as in (48b)
 - (48) a. She will place a stamp in your books.
 b. She will place a [stamp in your], and [a mark on my], books.
- Omission/Ellipsis
 - If a string of words can be omitted, it is evidence that it is a constituent.
 - We cannot use this for the examples we have used so far, because *place* requires a subject, an NP argument/complement, and a PP argument/complement, but it can be used in other cases, e.g. for adjuncts:
 - (49) a. She left quite early because she was tired.
 b. She left quite early.
 - (50) a. She left quite early because she was tired.
 b. She left because she was tired.
 c. She left [quite early] [because she was tired].
 - (51) a. She left quite early because she was tired.
 b. *She left quite she was tired.

5 The VP in English

- What are the 'immediate constituents' of the clause in English?
- Traditional grammar recognises a fundamental division between (i) grammatical subject and

- (ii) predicate. Should we accept this, or should we take the structure of (52) to be 'flat'?
- Should we assume the verb and its objects form a structural unit (constituent) separate from the subject?
 - (52) a. [Sam] [placed [the book] [on the table]].
 - b. [Sam] placed [the book] [on the table].
 - (53) a. [The fathers] [cuddled [the babies]].
 - b. [The fathers] cuddled [the babies].



- Substitution
 - (55) a. The fathers cuddled the babies.
 - b. The fathers WHAT?
- 'Unit of sense'
 - (56) a. The fathers cuddled the babies.
 - b. What did the fathers do?
 - c. Cuddled the babies.
- Movement
 - (57) a. The fathers cuddled the babies.
 - b. (The father said they would cuddle the babies and) cuddle the babies they did.
- Coordination
 - (58) a. The fathers [cuddled the babies] and [sang quietly]
- Ellipsis
 - (59) a. (The fathers were told they could cuddle the babies, and ...)
 - b. They did so. (=cuddle the babies)
 - c. They did Δ. (=cuddle the babies)

5.1 Some Caveats

- These tests do not settle all structural questions, e.g. it is not at all clear what the relationship of auxiliaries and main verbs should be. Both of the following have defenders:
 - (60) a. Sam [may have been] leaving.
 - b. Sam [may have been leaving].
- The tests have to be used with some care – there may be many reasons why applying one of them produces an ungrammatical result. For example, we have seen that there is good evidence that a verb and its non-subject arguments form a constituent, but it still cannot be the target of a cleft construction – see (61b).
 - (61) a. She will place a mark in your book.
 - b. *It is place a mark in your book that she will.
- This does not show that *place a mark in your book* is not a constituent – it just shows that in (standard) English VPs cannot be the focus of a cleft: – cf. the construction is impossible even we have a single word VP:
 - (62) a. Sam arrived.
 - b. *It is arrived that Sam did.

6 Exercises

Exercise 6.1 Consider example (63). (from Mihaliček and Wilson (2011), p232)

(63) a. A highly motivated student of mine wanted to go to Rome to study Italian.

Do the following

1. Use the cleft test to show that *a highly motivated student* is not a constituent in (63).
2. Use the fragment test to show that *to Rome to study Italian* is
3. Is *to go to Rome to study Italian* a constituent? Give evidence
4. Is *a highly motivated student* a constituent?
5. Use the coordination test to show that *to Rome* is a constituent.
6. Is *wanted to go to Rome* a constituent?
7. Is *wanted to go to Rome to study Italian* a constituent?

Exercise 6.2 Use constituency test to break the following into constituents. Don't worry about the words, or names for the constituents. (from Mihaliček and Wilson (2011), p233)

- (64) a. Sandy shot the soldier.
b. Leslie said it rained.
c. The girl persuaded her brother to come along.
d. Sally mailed a letter to Polly.
e. Polly saw Bob with Sally.
f. Sally put the book on the desk in her room.

Exercise 6.3 (from Mihaliček and Wilson (2011), p233) Consider *Polly sent Bob a book*. Construct a sentence in which *Bob a book* is a conjunct. Is there evidence from other tests that this is a constituent? What does this tell you about the coordination test?

Exercise 6.4 Apply the tests that were used above to show that the structure of (65) is as indicated (i.e. that *put the bike in the garage* is a unit).

(65) Sam [put the bike in the garage].

Exercise 6.5 Consider (66). Look at the evidence in (67) and try to work out what it suggests about the major constituents structure of (66).

- (66) a. The man with the new coat paid the driver of the cab £5.
(67) a. He paid him something.
(68) a. It was the man that paid the driver of the cab £5.
b. It was £5 that the man paid the driver of the cab.
c. It was the driver of the cab that the man paid £5.
d. *It was the cab that the man paid the driver of £5.

Try to construct data involving cleft sentences that will support the idea that *the man* and {with the new coat} form a constituent (rather than two separate constituents).

Exercise 6.6 The sentences in (69) each have only one really sensible interpretation:

- (69) a. Sam broke the window with the hammer.
b. Sam kissed the baby with the new hat.

Do they have the same structure? Give evidence.

Exercise 6.7 Do you think the following sentences have the same structure? Give reasons and evidence.

- (70) a. Sam sent a letter to her sister.

- b. Sam intercepted a letter to her sister.

Exercise 6.8 Consider sentence (71). What should the structure of the VP be? In particular, should *up the hill* be a structural unit (constituent)? Use the data below to investigate this:

- (71) Sam ran up the hill.
(72) Sam ran.
(73) a. Where did Sam run?
b. Up the hill.
(74) a. Up the hill Sam ran.
b. It was up the hill that Sam ran (not over the moor).
(75) Sam ran up the hill and over the moors.

Exercise 6.9 Consider sentence (76). What should the structure of the VP be? In particular, should *up the hospital* be a structural unit (constituent). Use the data below to investigate this:

- (76) Sam rang up the hospital.
(77) a. Sam rang up.
b. #Sam rang. (does not correspond to (75))
(78) a. ??Where did Sam ring?
b. *Up the hospital.
(79) a. *Up the hospital Sam rang.
b. *It was up the hospital that Sam rang.
(80) *Sam rang up the hospital and up the police.
(81) *Sam rang up the hospital and over the police.

Exercise 6.10 There is clearly a rather different structure involved in *run+up* vs. *ring+up*: the former involves a PP *run [up the hill]*, the latter does not.

Notice that *ring* allows a structure that *run* does not allow:

- (82) a. Sam rang the hospital up.
b. *Sam ran the hill up.

This re-enforces the idea that the examples above involve different structures. In one case (*run*) a PP, something different in the other.

Verbs like *ring (up)* are sometimes called ‘particle’ verbs (as opposed to ‘prepositional’ verbs) – that is, verbs that take a particle, rather than a PP.

The structures of sentences involving *ring (up)* would be as in (83):

- (83) a. Sam rang [_{part} up] [the hospital]
b. Sam rang [the hospital] [_{part} up]

Classify the following as ‘particle’ or ‘prepositional’ verbs:

- (84) a. sell to (e.g. *sell a book to Kim*)
b. look after (e.g. *look after your children*)
c. attend to (e.g. *attend to the matter*)
d. deal with (e.g. *deal with these problems*)
(85) a. break off *he broke off the branch*
b. burn down *burn down the house*
c. burn off *the cover*

Exercise 6.11 You may be inclined to think that the PP in *Sam ran up the hill* is an adjunct. This is arguable (it is certainly optional, so if it is an argument it is an optional argument), but it is probably wrong, since we can classify verbs according to whether they allow this kind of directional or ‘path’ argument, compare:

- (86) a. Sam ran/walked/wandered/staggered up the hill. (verbs of motion)
 b. *Sam slept/sang/argued up the hill.

In any case, there are some verbs that unquestionably take PP arguments/complements. One of them is *rely (on)*. Notice that requires a particular preposition:

- (87) a. Sam relies on Kim.
 b. *Sam relies at/in/over Kim.

This might make you think it should be treated in the same way as *ring*. That is, with a structure as in (88a). Construct arguments that this is wrong, and that the structure should be as in (88b)

- (88) a. Sam relies [_{part} on] [her friends].
 b. Sam relies [on her friends].

Exercise 6.12 Classify the following as prepositional vs particle verbs (giving arguments in support) and in each case say how ‘idiomatic’ or on the other hand ‘transparent’ the meaning seems to be.

By ‘idiomatic’ vs ‘transparent’ what I have in mind is that the meaning of (89a) seems easy to work out from the meaning of the parts (it is transparent), but that the meaning of (89b) is rather ‘opaque’ or ‘idiomatic’ (you can’t easily work it out from its parts):

- (89) a. Sam ran up the hill. (=‘ran’ along a path specified by the PP)
 b. Sam ran for president. (=‘tried to get elected as president’)

And similarly:

- (90) a. Sam sawed off the leg. (=‘sawed’ so that the leg was ‘off’)
 b. Sam wrote off her new car by crashing into a tree. (=‘damaged beyond repair’)

Exercise 6.13 The structure of examples like (91) is controversial. One analysis assumes that *him a genius* is a constituent, the other that it is not:

- (91) a. They consider [him] [a genius].
 b. They consider [him a genius].

Use some the tests above to investigate this.

Exercise 6.14 There is good evidence that the strings of words in (92) form constituents.

- (92) a. whether Kim left
 b. that Kim left

For example, we can see that they appear as subjects in (93) and as complements of verbs in (94):

- (93) a. Whether Kim left is a good question.
 b. That Kim left is a good reason for doing this.
- (94) a. They wonder whether Kim left
 b. They know that Kim left

But it is less obvious what the internal structure is. One possibility is that has *whether Kim* and *that Kim* as constituents, another is that *Kim left* is a constituent. Look at the following data, and suggest which possibility it supports:

- (95) a. They wondered whether Kim left.
 b. *They wondered WHAT left?
 c. They wondered whether WHAT?
- (96) a. They wondered whether Kim, or whether Sam, left.
 b. They wondered whether Kim left or Sam left.

Exercise 6.15 Identify some of the constituents in the following:

- (97) a. One morning, I slithered down the steep bank to the stream for a wash.

Exercise 6.16 Which of the expressions in brackets are arguments, which are adjuncts. Give reasons:

- (98) a. I saw [her] [this morning].
b. They [still] think [they were right].
c. I'm keeping [that car], [whatever she says].
d. They swam [in the lake], [even though it was cold].
e. I think you should bring [the dog] [in].
f. They ran [to the gate].
g. The box was [useless] [because it had a hole in it].

Exercise 6.17 It is important not to confuse the grammatical function of a phrase with its category (traditional grammars often make this mistake when they talk about adjuncts as 'adverbials').

Satisfy yourself that the underline expressions in the following are all adjuncts (give reasons), and try to work out what syntactic category they belong to (e.g. noun phrase, prepositional phrase, etc. – don't worry if you do not have all the terminology yet):

- (99) a. He thanked us briefly.
b. They quite often eat here.
c. I saw her yesterday.
d. I have seen her several times.
e. I'll help you in a couple of days.
f. She cut it with a sharp knife.
g. I could not do it however hard I tried.
h. I did it because I had to.

Above we discussed the question of what grammatical role/function should be associated with *Kim* in (100):

- (100) a. Sam gave [Kim] a book.

We did not consider what role should be given to *a book*. Look at the following examples, and try to produce reasons for thinking that the underlined expression is an argument rather than an adjunct:

- (101) a. Sam gave Kim a present.
b. Sam read Kim that story last night.
c. I will send him that letter tomorrow.

Exercise 6.18 Look at the following, and find arguments for (or against) the claims about the underlined constituents:

- (102) a. Sam urged Kim to study French [argument of *urged*]
b. Sam went to France to study French [adjunct]
(103) a. Sam put the book on the desk. [argument of *put*]
b. Sam went to sleep on the desk. [adjunct]
(104) a. Sam behaved badly. [argument of *behaved*]
b. Sam did her homework badly. [adjunct]

What about these?

- (105) a. Sam told everyone.
b. Sam left last week.

Exercise 6.19 Not only verbs have arguments the following show a preposition (*with*) and some adjectives:

- (106) a. *Sam came to the party with

- b. Sam came to the party with Bob
- (107) a. *Sam is fond.
b. Sam is fond of parties.
- (108) a. Sam is grateful to her parents for everything
b. *Sam is grateful at her parents by everything

What reasons can be given for thinking the underlined expressions are arguments rather than adjuncts?

Exercise 6.20 Over the next few weeks we will look at ways we can justify dividing sentences into phrases (constituents) in a relatively systematic way, but a first approximation is not difficult without this. (a) Identify some of the ‘chunks’ in the following, and (b) for each, identify some sequences of words which are not ‘chunks’:

- (109) a. The lecturers should try to write more clearly on the whiteboards.
b. Your fascination with reading books about grammar in the library amazes your friends.
c. We really hope that the heating in the library will be turned up next week.

Exercise 6.21 Subject auxiliary inversion does not only occur in interrogatives:

- (110) a. Never had he felt so alone.
b. So sad was he that he decided to leave.
c. Only later did he realise his mistake.
d. Sam is going, and so is Kim.

Make versions without inversion; what is the crucial ingredient that allows inversion in these cases, is it required, or is it optional?

Exercise 6.22 How many arguments do each of these verbs take?

- (111) a. Sam put the book on the desk.
b. Sam gave Kim a new notepad.
c. Sam persuaded Kim to go on holiday.

Exercise 6.23 *Put* requires three arguments, and so do *give* and *persuade* but they are not the same. What kind of arguments does *put* require/allow, what kind does *give* require/allow, what kind does *persuade* allow?

- (112) a. Sam gave a book to Kim.
b. Sam put a book on the table.
c. Sam persuaded Kim that she should leave.

Exercise 6.24 Earlier, I marked (113) as ungrammatical, on the basis that *put* requires three arguments.

- (113) *Sam put it the book on the table

But it is easy to think of examples that look a little like (113) which are perfectly okay. Explain why they are not counter-examples to the claim that *put* requires three arguments:

- (114) a. Sam put the book in his pocket on the table.
b. Sam put the packet of peas in the freezer on her sore knee.

7 References

Mihaliček, V. and Wilson, C. 2011. *Language Files: Materials for an Introduction to Language and Linguistics*. Columbus, Ohio: Ohio State University Press.