Syntax, part 2
More on phrase structure: what’s inside VP?

What rearrangement and replacement still have to tell us...

You already know that we’ve only just started on this project of probing the structure of sentences to find out just how they’re constructed. It stands to reason that if the whole string of words that makes up a sentence can be broken down into smaller parts, as per the final example on the previous handout, then those parts themselves may have subparts. It’s not logically necessary, of course, that that be the case, but having broken the ice, so to speak, by using rearrangement and replacement to identify these subparts, it clearly would be worth our while to try to push them as far as possible to reveal more of the ‘fine-grained’ substructure of sentences. Given the way rearrangement and replacement have converged in identifying the same classes of word blocks, we have reason to be confident that they can give similar robust results when used as diagnostics within the VP.

Let’s return again to our familiar example in (1).

(1) a. Robin put this book on that table.
   b. [s Robin [vp put this book on that table]]

On the basis of this example, we can rearrange the order of words as follows:

(2) a. That table, Robin put this book on
   b. This book, Robin put on that table.

It’s important to bear in mind that the particular verb in these sentences, put, is especially intolerant of any shortage in the rest of the VP in which put occurs as the primary element. We can’t omit this book or that table or on that table, as we saw in the first handout. But in cases such as (2)a, while we’re not actually omitting this book, we’re definitely displacing it beyond the VP; what we have is something like

(3) [s This book [s Robin put on that table.]]

This possibility opens up the prospect of a new kind of phrase—new because the displaced element this book doesn’t contain a verb, hence won’t qualify as a VP. If we follow the model of argument for VP here, we’ll require a second test to back up the claim that this book is a phrase, and we don’t have far to go to find a linguistic expression which can replace this book in (1) above, an expression which doesn’t mean anything by itself, but which derives its meaning from a preceding phrase just as in the case of do so—name, the pronoun it:

(4) Robin put it on that table.

And of course, we can replace that book in (1) with it as well. The displacement/replacement facts noted here parallel those that we invoked in support of a VP constituent. But to complete the argument, we have to show that not just any substring within the VP can be displaced in the same way. This task is quite easy: all one has to do is look at (3) in order to be convinced that there’s something special about this book and that table:
It seems fair to say that the burden of proof falls on anyone who wants to deny phrasal status to *this book* and *that table*. But what kind of phrase do we want to describe these and similar constituents as?

We need to be careful here. *This, that, these, those, the, a, certain, my, your*, and many other words fit into the positions before nouns, and all of these combinations are displaceable (although the precise form of the displacement will very possibly differ depending on which of these words precedes the noun, as we’ll see). Our conclusions should therefore take into account all of these possibilities, not just those involving a small subset of the forms that can precede the noun. As I mentioned, just what kind of rearrangements are possible are somewhat tied up with which of these forms—called *determiners*—can precede the noun. So we have

\[
\begin{cases}
\text{That} \\
\text{?The} \\
\text{??A}
\end{cases}
\]

book, Robin will never read _.

where '?' indicates that the result of the displacement is a bit off, and ‘??’ that it’s a bit further off. But why is this? It’s only the result of the fact that this particular kind of fronting, called *topicalization*, has a particular function in discourse, which may be called contrastive emphasis. And when you use e.g. *this* or *that* to talk about something, the basis of the contrast is more or less built into the determiner—when you talk about ‘this book’, you’ve already got an implicit comparison available, i.e., a comparison with ‘that book’ (or ‘that magazine’ or whatever). But *the* isn’t a very good candidate for contrastive emphasis because, when you use *the*, the implication is that you’re talking about the only one—that’s what *the* conveys: some uniquely identified thing in the common ground of assumptions and information you share with the people you’re talking with. A change in emphasis can make such examples much better (e.g., *The BOOK, Robin will never read, but the MAGAZINE, s/he just might.* Even *a/an*, which indicates something introduced into the discourse for the first time, can receive contrastive emphasis, if you stress the noun following it heavily: *A BOOK, Robin will never read, but a MAGAZINE, s/he just might.* But there are other displacement tests which do the job more easily:

\[
\begin{cases}
a \\
\text{the}
\end{cases}
\]

book (that) Robin was reading.

This is a kind of displacement construction, but it doesn’t have any contrastive aspect to it. It has the different role of identifying something: you found something which had the properties of (i) being a book and (ii) being Robin’s reading material, and you’re in a sense using (ii) to add information to (i) to give your listener more specific information about what it was that you found. Such constructions, called *relative clauses*, don’t pose the same kind of problems for *a*, and to some extent *the*, that topicalization as in (6) does.

The point of all this is that we can use rearrangements, including different kinds of displacement, to show that strings such as *this book, the book* and *a book* are all phrasal constituents (in sentences where they in fact are, that is; they won’t always be—we have to be able to show that by using these tests).
Another such test is called the *cleft* construction. We have examples such as

    b. It was a book that Robin got for his birthday, as I recall.

(9)  a. Robin took the bus from the airport.
    b. It was the bus that Robin took from the airport, if I remember correctly.

Contrastive emphasis is still possible here, but it’s not really the point of the construction, which is rather to highlight the thing identified by the displaced material (*a book, the bus*). Having a variety of different displacement tests gives us a range of options for using in discovering the structure of sentences.

We’ve now identified *this book* and *that table* as phrases within sentence (1). What kind of phrases are these? If we look over the whole range of phrases of this kind—those that can show up in the same places as *this/that book*—we find that we have the following:

(10) Robin put \(\begin{align*}
\text{books} \\
\text{the books} \\
\text{the new books} \\
\text{the book of essays} \\
\text{the new books of essays} \end{align*}\) on that table.

In *the new books of essays*, it seems we can omit *the, new and of essays*—but one thing we cannot omit is *books*:

(11) *Robin put \(\begin{align*}
\text{the} \\
\text{the new} \\
\text{new} \\
\text{the of poetry} \\
\text{the new of poetry} \\
\text{new of poetry} \\
\text{of poetry} \end{align*}\) on that table.*

On the basis of our previous reasoning, we would want to say that the phrase *the new books of poetry* represents a *noun phrase*, labeled NP, and this is the analysis we will therefore adopt.

When we combine this information with what we’ve already learned about this sentence, we wind up with the analysis in (12):

(12) \[s \text{Robin } [\text{vp put } [\text{np this book] on [np the table]]}\]

**Further results**

But there’s more, because we can also say

(13) On that table, Robin put this book __.

This fact suggests that *on that table* is a phrase—and once again, we can support this conclusion with evidence from replacement. The word *there* works in a manner exactly parallel to *do so* and *it*:

(14) Terry cleared *that table*, and Robin put this book *there*. 
This means that we have a new level of structure, a phrase on that table that contains the NP that table. But what kind of phrase is it?

We can start by considering the actual contents of this phrase: a preposition and an NP. That fact pretty forces us to regard the phrase as built up either around the P, or around the NP, in the same way that NPs are built up around the indispensible N, and VPs around the indispensible V. So if we can eliminate NP as a possibility here, P will be all that’s left.

At this point, our reasoning has to become a bit more sophisticated. We need to consider the distributional difference in English between phrases such as the table, and phrases like on the table. If those differences were minimal, it would be easy: since in this scenario both phrases show up in the same places, treating them as instances of the same type of entity is the default. But in fact, the two kinds of phrase differ in their possible appearances pretty much across the board. We cannot say *I put the book the table, only I put the book ON the table. We cannot say *On the table would be easy to stack the books, only The table would be easy to stack the books on. There are a large number of kinds of contexts where a phrase consisting of a P + NP, such as on the table, cannot appear, only an NP. And the converse holds as well. These facts should be seen as telling us something—that on the table is a fundamentally different kind of phrase from the table.

We get more support for this point from a class of P + NP phrases that behave quite differently so far as their P and NP subparts are concerned. The following kinds of data tell us that P + NP is a phrase:

(15) a. Robin walked out the door.  
   b. It was out the door that Robin walked.

(16) a. Terry swaggered boldly through that room.  
   b. Through that room, Terry swaggered boldly.

(17) a. Dana scurried quickly past the admin building  
   b. It was past the admin building that Dana scurried quickly.

But what do the following facts tell us?

(18) a. *Robin walked the door.  
   b. Robin walked out.

(19) a. *Terry swaggered that room boldly.  
   b. Terry swaggered through boldly.

(20) a. *Dana scurried the admin building quickly.  
   b. Dana scurried past quickly.

You should be able to connect the dots yourself, at this point: we have a sequence P + NP which in each case manifests the profile of a phrasal constituent, and where, we now know, the NP is a number of cases optional, whereas the P is obligatory—so the course of least resistance is to assume that these phrases are prepositional phrases, abbreviated PP. That in turn means that we should analyze Robin put this book on that table, which is what we started with in (1)a, as

(21) [s Robin [vp put [np this book] [pp on [np the table]]]]

And now I have an exercise for you. Consider the following facts:

(22) a. Robin put this book on that table quickly, and Terry did so too.  
   b. Robin put this book on that table quickly, and Terry did {so quickly as w even more quickly}.
Answer the following questions:

- What is *do so* replacing in (22)a?
- Given that we take *do so* replaceability to indicate VP status, we therefore have evidence from (22a) that what string of words is a VP?
- What is *do so* replacing in (22)b?
- Given that we take *do so* replaceability to indicate VP status, we now have evidence from (22b) that what string of words is a VP?
- These results mean that when we assign labeled brackets to *Robin put this book on that table quickly* along the lines I’ve been showing you, what should the result look like?

Take this step-by-step and think carefully about what the evidence is showing at each step. We’ll talk about this during the current week.