Functional Categories (Handout 2; Seminar *English Syntax*)

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Functional categories: Elements which have purely grammatical meanings (or sometimes no meaning), as opposed to **lexical categories**, which have more obvious descriptive content.
(1) Lexical: V, N, A, Adv and (most instances of) P.
(2) Functional: determiner (*the*), conjunction (*and*), complementiser (*if*), auxiliary (*be, can*).

1. Auxiliaries, I and IP

1.1. Auxiliaries vs. lexical verbs

- **Auxiliaries** (hard-to-define verb-like words with grammatical functions):
  - **Modal auxiliaries**: *can, may, must, shall, will,* as well as *need* in some uses. (Express deontic or epistemic modality.)
  - **Other auxiliaries**: *be,* as well as *have* and *do* in some uses.

- Ways in which auxiliaries differ from normal verbs (**lexical verbs**) syntactically:

A) Negative particles (*not, n't*) cannot be used if there is no auxiliary in the sentence:
(3) *she mustn't/must not smoke* vs. **she smokes not*

B) In **question inversion**, auxiliaries go before the subject NP, lexical verbs do not:
(4) *Does she work?* / *Has she worked* / **Worked she?*

C) Extension of point A: in **tag questions** an auxiliary can appear but not a lexical verb:
(5) *She has worked, hasn't she?* vs. **She worked, worked she?*

D) Lexical verbs can be transitive (i.e. take an object), auxiliaries cannot:
(6) *He wants/needs a drink* vs. **He must a drink*

E) Lexical verbs can take a complement VP introduced by *to*. Auxiliaries cannot.
(7) *He wants to VP, she tried to VP; he must VP, she did VP*

- With inversion, tag questions, negation, if there is no auxiliary, a **dummy** auxiliary *do* must be inserted. This phenomenon is called ***do*-support**:

(8) a.	*Smokes she?	/	Does she smoke?
b.	*She smokes not	/	She does not smoke
c.	*She smokes, smokes she?	/	She smokes, doesn't she

- Some verbs can be used either as lexical verbs or as auxiliaries.
  - **HAVE** is an auxiliary if used in forming the perfect tense. Otherwise it is lexical:

(9) a. Have^{aux} you eaten? b. Don't you have^{lex} a pencil?

  - **DO** as a transitive verb is a lexical verb. Otherwise it is an auxiliary (e.g. in *do*-support and its emphatic use)

(10) a. Did^{aux} you do^{lex} work/a dance? b. Martians DO^{aux} exist, I DID^{aux} see one!

  - **NEED** always behaves like a lexical verb when transitive, and means 'have to have'. When it means just 'have to' it can be either a lexical verb or an auxiliary. If used as an auxiliary, it is uninflected and is mainly confined to negative contexts and questions (*Need he go? He needn't go. *He need go.*).

(11) He doesn't need^{lex} a pencil.
(12) a. He {need/*needs/*needed} not do that. b. He needs <u>to</u> do that.

A. Decide whether *need* is an auxiliary or lexical verb in the following sentences. Reformulate the sentences, changing *need* to a lexical verb if it is an auxiliary, or to an auxiliary if it is lexical. (The reformulation may not be possible in all cases.**)**
a. You don't need to go to the bank. b. I don't need any help.
c. Nobody need do that. d. You need to go to the bank.

1.2. Auxiliaries as head of the sentence

Simplest analysis for the structure of an English sentence with an auxiliary:
(13) [$_S$ NP Aux VP]
There are reasons to think that (13) should be replaced with a structure with the auxiliary is head of the whole sentence and the VP is its complement:

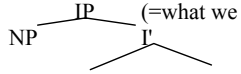
A. What we know about phrase structure tells us that phrases have heads. A sentence is also a type of phrase, so we expect it to have a head, unlike what (13) suggests. Since the head of a phrase is a single word, Aux is the best candidate for head of the sentence.

B. The next argument begins with the observation that auxiliaries determine the form that the verb in the VP takes:
(14) a. Modals go with verbs in the infinitive form (*she must/might sing a song*)
b. *have* goes with verbs in the perfect participle form (*she has sung a song*)
c. Progressive *be* goes with verbs in the *–ing* form (*she is singing a song*)
d. Passive *be* goes with verbs in the perfect participle form (*the song was sung*).
Normally, it is the head of a phrase which imposes restrictions on the type of complement it may take. We see this in the fact that verbs and prepositions require their NP complements to have accusative case (*I saw her/*she; with her/*she*) and the fact that verbs can demand complements headed by certain prepositions (*rely on/*in them; trust in*on them*). Moreover, VP is after the auxiliary, reflecting the typical head-complement order of English.

C. Contrary to what (13) suggests, the application of the coordination test in (15) suggests that the auxiliary and the VP form a constituent which does not include the subject. It is typical of English that complements appear after heads, and this is what we find with the sequence Aux-VP. The fact that Aux and VP form a constituent (cf. (15)) and the assumption that VP is a complement of the auxiliary are in conformity with the generalisation in X-bar theory that a head and its complement form a constituent.
(15) a. She [has already gone to France] and [may go there again]
b. She [should go to the doctor soon] and [will probably do so tomorrow]

1.3. Auxilaries and the I position

Many linguists thus assume that sentences have the structure in (16). (See e.g. any of the textbooks by Adger, Carnie, Cullicover, Haegeman, Ouhalla, Radford.)
(16)



(=what we formerly labelled 'S', i.e. a sentence)

a.	they	should	go home
b.	they	have	gone home
c.	they	are	going home
d.	they	*e*	went home

In (16)d) Here *e* stands for 'empty'. (You could alternatively write Ø under I or not put anything there.) We discuss the evidence for an empty I position in sentences without auxiliaries later.

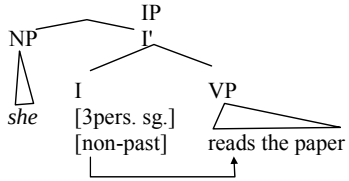
What is I? The element **I** stands for **Inflection**. (Another abbreviation for 'inflection' is **Infl**.) The sentence is thus considered to be an **Inflection Phrase** or **IP**. The 'inflection' referred to in the term 'Inflection Phrase' is the type of inflection found on verbs, which expresses the following two pieces of information:

(17) **Tense**: the distinction between past (*I talked*) and non-past (*I talk*) [1]

(18) **Agreement**: the relation between the subject and the verb (*I talk* vs. *she talks*).

If there is an auxiliary, it expresses the tense and agreement features. If there is no auxiliary, tense and agreement features of Infl are expressed on the verb in the VP. Simplifying an issue we discuss later, it is assumed that the features in Infl influence the choice of the morphological form of the verb, as the following diagramme is meant to express.

(19)



Note that on this analysis, the I position contains information about inflectional **features**, not morphemes. Some textbooks simplify the subject by putting inflectional morphemes like *–s* or *–ed* in the I position. This causes confusion, particularly when dealing with irregular verbs.

Why treat I as the head of the sentence? The idea that I is head of the sentence is supported by the fact that the tense and agreement features it contains are fundamental to the nature of the sentence. If there is no tense and agreement, there is no freestanding sentence: *reading the book, to go home, known the answer* are not full sentences. In these cases, there is also no *assertion* or *proposition*. A complete sentence is characterised by a specification of tense and linking a subject to a VP (Haegeman 2004:161-180), and these (tense and agreement) features are thus essential to the construction of a sentence, are thus legitimate candidates for being the head of the sentence.

The assumption that the auxiliary position is associated with the information expressed by verbal inflection may still seem surprising, since, when there is no auxiliary, the inflection appears on the verb inside the VP, not in the I position. We now look at more evidence in support of this position.

1.4. Evidence for the IP analysis: VP ellipsis

Some evidence for treating the sentence as an IP comes from the phenomenon in (20). The crossing out of the VPs indicates that they undergo **ellipsis**, i.e. are not pronounced. This (like the *do so* proform) is a way of avoiding the repetition of VPs.

(20) a. John will go to France and Mary **may** ~~go to France~~
b. He said he would help me but I don't know if he **will** ~~help me~~.
c. Grandma likes Gothic music but I don't know if the neighbours **do**~~like Gothic music~~
d. Juan is seeing the film and Ann **has** ~~seen the film~~ already.
e. They said they would get there before I **do** ~~get there~~, but they never **did** ~~get there~~.
f. John reads novels and Mary said she **does** ~~read novels~~. **Do** you ~~read novels~~?

[1] In many recent writings on syntax, the term I((nfl)ection) is replaced by **T(ense)**, though the basic idea of the analysis is the same.

g. Simon played the Toccata faster than anybody else **does** ~~play the toccata~~.

In (20), elements in I are in bold type. VP ellipsis is impossible without a *pronounced* element in I. If there is none, we need *do* support, cf. (20)e-g). The explanation for this:

A. Infl is associated with tense and agreement, as seen in the last section.
B. The tense and agreement features that Infl contains *must* be pronounced.
C. If the VP undergoes ellipsis, this information cannot be expressed by inflection on the lexical verb, since the verb is not pronounced.
D. Since inflectional affixes are bound morphemes, they cannot be pronounced alone in the Infl position. Hence: **Mary loaded the car faster than John* [$_{I'}$ [$_{I}$ *–ed*] [$_{VP}$ ~~*load(ed) the car*~~]].
E. To reconcile B, C and D, English inserts the dummy auxiliary *do* in order to provide a stem capable of supporting the inflectional morphemes.

This explanation for *do*-support relies on assumption A. To the extent that the explanation is satisfying, it supports assumption A, which is one of the claims to be proved in this section.

In (20) we see that the elliptical VPs are identical to the pronounced ones, except that in (20)c,d,f,g) the pronounced and unpronounced verbs differ in inflection. If we assume that the inflectional information comes from the Infl position and not from the lexical verb itself, this is not a problem. The elliptical and underlined VPs are identical in all respects. It is only the features of Infl that differ between the two clauses.

1.5. Evidence for an empty I in sentences without auxiliaries

It was suggested above that I is present even in cases where there is no auxiliary (cf. the *e* (='empty') symbol in (16)e)). We now discuss some empirical evidence for this:

A. Evidence from cliticisation (Radford 1997a:137ff): Two uses of *have*:

(21) Perfect *have*: *I had repaired the car; I have read the book*

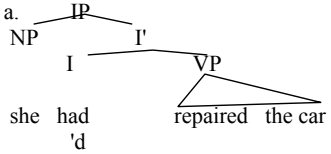
(22) Causative *have*: *I had the car repaired; I have my hair cut every month.*

Perfect *have* is an auxiliary, and causative *have* is lexical, as you can confirm using the tests for auxiliaries given earlier. (23) shows that perfect *have*, unlike causative *have*, can **cliticise** onto the subject (**clitics** are words that can't be pronounced without attaching to other words).

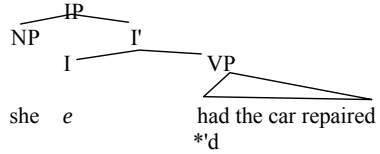
(23) a. She'd repaired the car; I'd cut my hair
b. *She'd the car repaired; *I'd my hair cut

There is a syntactic explanation for this. Consider the following structures:

(24) a.



b.



If we assume that the sentences contain an empty INFL constituent, we can explain the impossibility of cliticising *have* onto the subject. Cliticisation is impossible because there is something, namely INFL, between the subject and verb.

B. Evidence from coordination: Assuming an empty Infl when there is no auxiliary makes sense of the fact that coordinated structures of the type in (25) are possible. If the lefthand conjunct were just a VP, we would not be able to conjoin it with the I' which is the righthand conjunct.

(25) She [$_{I'}$ [$_{I}$ *e*] [$_{VP}$ read the book]] and [$_{I'}$ [$_{I}$ will] [$_{VP}$ see the film]].

C. Other evidence. We later see that inflected lexical verbs move to Infl position in many languages (e.g. French and older forms of English). Adger (2003:165f) notes that in some Creole languages tense inflection is expressed only by auxiliaries in the Infl position.

1.6. The infinitive particle *to* is in the I position

The **infinitive particle *to*** in (26)/(27) is also an instance of I. It indicates the *absence* of tense and agreement features in the clause, and thus that the IP is not a freestanding sentence. (*To read books like that is fun* indicates neither the time of the reading, nor who reads.)

(26) *I want* [$_{IP}$ [$_{NP}$ *them*] [$_{I'}$ [$_{I}$ *to*] [$_{VP}$ *go home*]]]

(27) *I want* [$_{IP}$ [$_{NP}$ *e*] [$_{I'}$ [$_{I}$ *to*] [$_{VP}$ *go home*]]]

Given what we saw about VP ellipsis, we would not expect infinitival *to* to disappear when VP ellipsis occurs. This is precisely what we find:

(28) a. He said he would help me but he may not be able **to** ~~help me~~.
b. Juan is seeing the film, Ann **has** ~~seen the film~~ and Stan is going **to** ~~see the film~~.

The infinitive particle is historically related to the preposition *to*, but synchronically is distinct from it. Proofs (see also Radford 2004:49ff): the preposition doesn't allow ellipsis of its complement and allows only NP complements, in contrast to infinitival *to*:

(29) a. I need to go to the bank. b. *I need to go to.

(30) a. I want to cancel my subscription.
b. *I want to the cancellation.

We return to the precise analysis of infinitives (e.g. the problem of the proposed empty subject in (27)) later in the course.

B. Draw the trees for the sentences below, using the new IP notation. Use triangle notation for NPs and VPs. Some of the sentences involve VP ellipsis. In these cases draw the VP as if it were pronounced, crossing out the elliptical (=unpronounced) material.

1. Fred has forgotten his book. 2. Jane has a dislike of spiders.
3. She helped me and I must thank her. 4. She will sing and dance.
5. I should go and will go. 6. You could get a job and earn some money.
7. I can go to the party and will. 8. She will go there but I don't want to.
9. Quentin has gone to a counsellor, Gertrude will and Egbert should.

C. The use of *do* in (20)(e,f) is sometimes described as a proform for a VP. This implies that *do* in a sentence like (a) below (like *do so* in (b)) replaces the underlined VP rather than being an instance of *do* support involving an unpronounced VP. Now consider (c) and (d) below. Many British speakers accept the sentences in (c), while most other speakers reject them (hence the sign %). In the light of these facts, assess, with regard to the two different types of speaker, the claim that *do* in (a) is a proform for VP.

a. He said he'd win the race and he **did**
b. He said he'd win the race and he **did so**
c. %He said he'd win the race and he has **done**; *He said he'd win the race and he could **do**
d. He said he'd win the race and he has **done so**; He said he'd win the race and he could **do so**

2. Complementisers and CP

2.1. The basics on complementisers

- Complex sentences: the underlined **subordinate clauses** (=**embedded clauses**) are part of **main clause** (also called *matrix clause, root clause*).

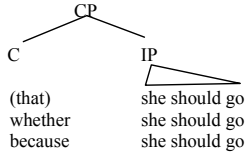
(31) a. Wayne inquired of Sybil **if** she liked car racing.
b. Someone mentioned to me **that** Quentin has a social problem.
c. She couldn't sleep **because** the problem was troubling her.

- In (31)a,b): subordinate clauses are complements of *inquire* and *mention*. (Proofs for complementhood: obligatoriness; parallels to NP complements: *mentioned the truth to me*)
- In (31)c): subordinate clause is a VP modifier, parallel to PP in: *She couldn't sleep [$_{PP}$ because of the problem]*.
- Subordinate clauses consist of **complementisers (**abbreviation: **C, Comp)** plus IPs.
- The complementiser *that* can be left unpronounced with certain verbs:

(32) a. Mervyn thought (**that**) Georgiette was a good drummer.
b. Agatha said (**that**) Egbert should go home.

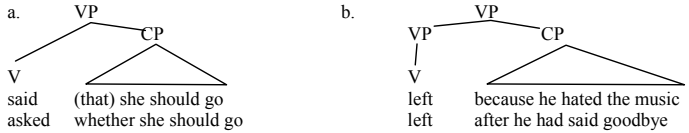
- Structure of subordinate clauses is as in (33).

(33)

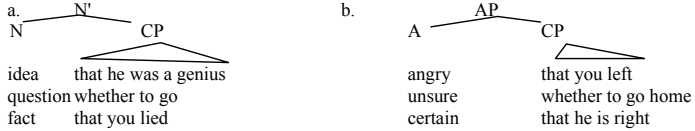


- Some uses of CPs: (a) as a complement of a verb, (b) as a modifier of a VP, (c/d) as a complement to a noun or adjective.

(34)



(35)



- For more details on this material, see *Fundamentals*, section 3.3.1.

2.2. The use of *for* as a complementiser

- While *for* is usually a preposition, in the (a)-examples in (36)-(39), it is a complementiser. It appears in the same position as the complementisers in the respective (b) examples and because of the semantic parallels between the (a) and (b) examples.

(36) a. It is important [$_{CP}$ FOR [$_{IP}$ the branch to be cut off before it falls on the car]]
b. It is important [$_{CP}$ THAT [$_{IP}$ the branch should be cut off before it falls on the car]]

(37) a. Is it necessary [$_{CP}$ FOR [$_{IP}$ it to start raining when we film that scene]]?
b. Is it necessary [$_{CP}$ THAT [$_{IP}$ it should start raining when we film that scene]]?

(38) a. [$_{CP}$ FOR [$_{IP}$ Cuthbert to win her heart]], he would have to stop dribbling.
b. [$_{CP}$ IF [$_{IP}$ Cuthbert is to win her heart]], he would have to stop dribbling.

(39) a. I'm going to Louisiana [$_{CP}$ FOR [$_{IP}$ to see my Susyanna]] [archaic/dialectal]
b. I'm going to Louisiana [$_{CP}$ IN ORDER [$_{IP}$ to see my Susyanna]]

- Don't confuse *for*[complementiser] with the *beneficiary* interpretation of *for*[preposition] (e.g. in *she did that for me* or *a present for me*). In (36)-(39), it seems clear that *for* does not form a PP with a following NP. *For* in (38)a) might appear to have a beneficiary interpretation, but constituency tests show that *for Cuthbert* is no constituent:

(40) a. *It is *for Cuthbert* that, to win her heart, he would have to stop dribbling.
b. *For whom would he have to stop dribbling to win her heart.

- *For*[preposition] with a beneficiary interpretation can be modified by *just* (to indicate that the complement of *for* is the sole beneficiary of the action), unlike *for*[complementiser]:

(41) a. She did all that *just for you*.
b. *Just for Cuthbert to win her heart, he would have to stop dribbling. (cf. (38)a))

- Two unusual properties of *for*[complementiser]: its complement IP must have *to* as its head and there must be an NP in the subject position (at least in standard English, cf. (39)a)). The complementiser *for* also assigns case to the subject of its complement:

(42) For {him/*he} to wear a torn t-shirt to the job interview was, um, unconventional.

2.3. Other uses of the C position and the overall function of C

Other uses of the position (some discussed later):

- Movement of auxiliaries into C position in questions: *Should I go?*
- Verb-second in languages like German and verb-first in Celtic languages involves movement of a verb to C.
- It is possible that even IPs in simple statements are part of CPs with an unpronounced complementiser (e.g. Carnie 2002:54f). We will ignore this point, however.
- Function of C: *to show how the IP in the complement of C fits into a larger context (either a larger sentence or a larger discourse).*

D. Draw trees for the following sentences (some of which don't involve complementisers). Use triangle notation for embedded IPs and for NPs in the main clause.

1. She said that cows can sing.
2. She said that cow can sing.
3. I asked a question.
4. I asked whether Egbert had arrived.
5. She ate dinner after work.
6. She ate dinner after she had finished her work.
7. They denied the allegation.
8. They denied that they had funded the terrorists.

E. Decide whether the following sentences involve the complementiser *for* or the preposition *for*. Evidence could include constituency tests or the possibility of replacing the string starting with *for* with another CP without changing the meaning, cf. the pairs in (36). Do not draw the trees, as some of the sentences involve constructions we not yet discussed.

1. Dwayne bought flowers for Cynthia to annoy Gertrude.
2. The general gave the order for the prisoners to be released.
3. For us to win, our opponents would have to play below their ability.
4. The detective asked for the suspects to be brought into his office.
5. He did all those things for us to try to win our support.

3. D and the DP hypothesis

(43) Examples of determiners (abbreviation: **D, Det**)
a. Articles: *the* (definite) *a, an* (indefinite)
b. Demonstrative (deictic) determiners: *this, that, these, those*
c. Quantifiers: *some, all, both, any, no, each, every, either, neither, a few, a little*
d. Possessive determiners: *my, your, its, her, his, our, their*

These are grammatical items, not vocabulary items expressing entities, properties or situations in the real world, so D is another a functional category. We now say more about D and offer a different, and better, conception of the nature of the NP.

3.1. Pronouns as determiners

There is clear evidence that pronouns are a type of determiner, i.e. have the category D:

♦ Pronouns are often closely semantically related to particular determiners. Sometimes they are morphologically related or even formally identical.

(44) a. I have NO water *vs* I have NONE
b. Do you have ANY beer? *vs.* Do you have ANY?
c. That is MY pen *vs.* That is MINE
d. I want THAT BOOK *vs.* I want THAT

♦ Some pronouns can be followed by nouns in the same way as other determiners can:

(45) a. You stupid idiots!
b. We earthlings and you Martians can learn a lot from each other.
c. them books[non-standard variant of *those books*]
d. Du bescheuerter, abartiger, hirnamputierter Loser!

♦ Children sometimes use pronouns where adults would use determiners, producing things like (46). Seeing children don't hear *it* used as a determiner, these mistakes might reflect an innate assumption that pronouns and determiners are really the same animal.

(46) Get it ladder! (Radford 1997a:155)

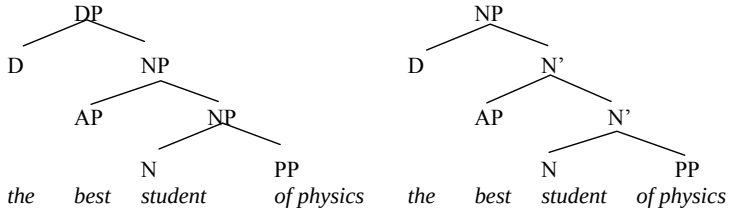
Conclusion: determiners and pronouns belong to the same category, D.

F. Can you find examples from other languages making the same point as (44) and (45)?

3.2. The DP Hypothesis

We now discuss the **DP hypothesis**, the assumption found in many recent studies in syntax that what we have called NPs are really **Determiner Phrases** (**DP**s). (See *Fundamentals* sect. 6 for more details.) An example:

(47) a. DP Hypothesis: b. The old NP Hypothesis:



The analysis in (47)a) entails that the head of (47) is *the*, not *student*. This may seem surprising. Given standard ideas about headship, one would normally treat *student* as the head of the phrase, as intuition tells us that all the other elements in the phrase, including the determiner, are giving us information about *student*. However, a different semantic analysis is possible. The determiner points to some specific individual (like pronouns like *she* or *they*

do). The phrase *clever student of physics* describes a *type* of individual, therefore restricting the set of individuals to which the determiner could refer. This phrase is thus providing information helping us to interpret the determiner and providing information about it. This means that it is legitimate to see the determiner as head of the whole construction.

It is quite easy to make the transition between the NP and the DP analyses. Many of the differences between the two analyses concern the fact that what was called N' in traditional analyses (e.g. *Fundamentals* section 4.1) is now called NP. From this certain consequences follow immediately:

- N plus its complement forms what is called NP, not N'.
- The constituent to which modifiers adjoin is called NP, not N'.
- We can now say that *one* is a proform for NP instead of N'.

3.3. Arguments for the DP hypothesis

♦ The old assumption that determiners occupy the specifier position of NP prevented linguists from assimilating determiners to normal behavioural patterns observable with other categories. For instance, under the old NP analysis, putting the determiner in the specifier position implied that determiners should be able to project phrases (since every other element in a specifier position is known to be able to project a phrase). If determiners project phrases, then they should be able to take complements, just like all other categories can. Under the old NP analysis, no candidate was found for a complement of D. Under the DP hypothesis, these problems disappear: the complement of D is the projection of N.

♦ Consider the following two observations:

(a) Pronouns are a type of determiner, as shown above.
(b) Pronouns can appear in exactly the same positions the constituents which we used to call NPs.

If we combine these two observations with the old NP analysis, we end up having to adopt either of the following unsatisfactory conclusions:

1. Under the old NP analysis, determiners are specifiers of NP. It follows from this and (a) that pronouns are specifiers of an NP. This would have to be a strange type of NP which has no noun in it. This conflicts with one of the most basic observations of syntax, namely that all phrases have heads.

2. We could solve this problem by ditching the assumption that pronouns are specifiers of NPs and by assuming that pronouns are the heads of the phrases they appear in. Given observation (a) above, these phrases would have to be considered to be determiner phrases. Given this, observation (b) and the old idea that a phrase like *the book* is an NP rather than a DP, we would then be forced to make generalisations like 'The subject of a sentence can be either an NP or a DP' or 'All verbs that can take an NP complement can take a DP complement', which creates massive redundancy in the grammar and the lexicon.

If we treat all NPs as DPs, we are not forced to adopt either of these bizarre positions.

♦ The DP hypothesis maximises parallels between nominalisations and sentences:

(48) a. [$_{DP}$ The artist's [$_{NP}$ painting of the model]]
b. [$_{IP}$ The artist [$_{VP}$ painted the model]]

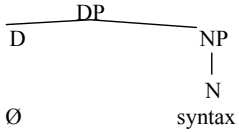
(49) a. [$_{DP}$ The enemy's [$_{NP}$ complete destruction of the building]]
b. [$_{IP}$ The enemy [$_{VP}$ completely destroyed the building]]

(50) a. * [$_{IP}$ The building [$_{VP}$ completely destroyed the enemy]]
b. * [$_{DP}$ The building's [$_{NP}$ complete destruction of the enemy]]

(51) a. [$_{DP}$ The building's [$_{NP}$ complete destruction by the enemy]] ('nominal passive')
b. [$_{IP}$ The building was [$_{VP}$ completely destroyed by the enemy]]

3.4. Empty determiners:

(52) a. [Syntax] is best explained with [example sentences].
b.



Arguments from Radford (1997:95ff) and others that apparently determinerless NPs contain a silent determiner and are thus DPs:

- The pronouns in (53) (subject pronouns in (a), reflexives in (b)) refer to an apparently determinerless noun. However, the pronominal elements *must* be third person. This does not have a *semantic* explanation. If (a) is utterred by someone talking to students, it should be possible to refer to *students* using the second person (*you*). If we assume that these nouns have an empty determiner which is specified for third person, we can explain these data. Remember, it is usually determiners, not nouns, which specify features such as person. (Compare: *we students, these students*).

(53) a. Students like reading, don't they (*don't you/*don't we)
b. Syntacticians want to make themselves (*ourselves/*yourselves) clearly understood.

- Determinerless structures in English correspond to structures with determiners in other languages. The nouns in (52) and (53) need determiners in French.

Similarly, **proper names** (which are inherently definite) have silent determiners, on analogy with languages pronouncing determiners overtly (also modern Greek, Italian).

(54) a. *Susan, Mozart, Italy, Paris*
b. Colloquial German: *der Peter*
c. French: *la France*

G. Indicate the structures of the following phrases (assuming the DP hypothesis).	
a. that demented cow	b. a student of history
c. the student in the car	d. Sweden and the other Scandinavian countries
e. Ann and her secretary	f. religious people and their beliefs

3.5. Possessive 's

- **Possessive 's** expresses a relation between the DP in front of it and the NP after it. This relation is often a possessive relation, or some other relation that can be expressed by the verb *have*, but this doesn't hold in all cases, cf. (d) below:

(55) a. *the man's hat* cf. *the man has a hat*
b. *Mary's partner* cf. *Mary has a partner*
c. *the book's catalogue number* cf. *the book has a catalogue number*
d. *the city's destruction*

- Often the possessor (or other phrase in front of '*s*) can alternatively appear in an *of*-PP:

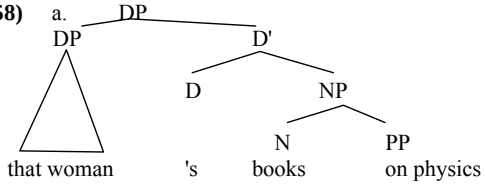
(56) a. *the children's toys* - *the toys of the children*
b. *the people's neglect* - *the neglect of the people*

- Unlike German genitive –*s*, English possessive '*s* is not an affix that attaches to nouns. It attaches to full DPs (i.e. to the things previously called NPs). Evidence in (57).

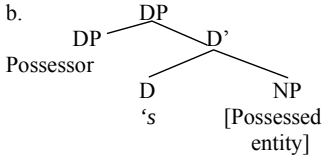
(57) a. [$_{DP}$ the woman over there]'s car ['s clearly doesn't attach to a noun here]
b. [$_{DP}$ the woman I spoke to]'s car
c. [$_{DP}$ That lady at the door]'s husband [the husband of that lady near the door]
d. [$_{DP}$ the owner of the car]'s mother

- (58) illustrates the treatment of possessive *'s* if we assume the DP hypothesis. In all cases, DPs involving possessive *'s* will have a structure like that seen in (58)b).

(58) a.



b.



- Possessive *'s* is a type of determiner. Its presence excludes other determiners (**a the lady's book, *the lady's a book*).
- A German colloquial/dialectal parallel to the structure in (58):

(59) dem Mann sein Auto
the man his car "the man's car"

- Possessor DPs are one of the few kinds of DPs that can't be replaced by a normal pronoun: *Ann's car ≠ *she's car*. This is because there are special possessive determiners which act as proforms for the D constituent in the tree (*her car*).
- Some English varieties allow movement to separate possessor and possessive *'s*, cf. (52).

(60) a. %Which student do you think __'s idea was best?
b. %Who do you think __'s idea was best?

- The specifier position of DP can also be occupied by certain adjective phrases:

(61) so big a house; this long a road; too large an amount of coffee

H. Indicate the structures of the following phrases (assuming the DP hypothesis).
a. *the workers' wages* b. *Grandma's list of underrated guitar players*
c. *my friend's wife's car* d. *a friend of my wife's car*
e. *my brother and Mary's friend* (give different trees for the different interpretations)
f. *I liked Mary's performance, but Jane liked Fred's.* [Hint: compare this with VP ellipsis]
g. *Liszt's piano transcription of Beethoven's seventh symphony*

4. General observations about functional categories

A category is 'lexical' if it has obvious descriptive content, and 'functional' if it has primarily grammatically relevant features. Lexical categories include N, V, P, A, Adv, and their respective projections (VP, NP etc.).

Examples of functional categories are I(P), C(P) and D(P). IP and CP are 'extended projections' of the verb, while DP is an extended projection of a noun. Syntacticians have also proposed other functional phases which are extended projections of adjectives and prepositions (not discussed here).

Other typical characteristics of functional elements:

- Functional elements are often absent in the earlier stages of child language acquisition. This is clear in two-word sentences like *kick ball, go mummy* (child aged 18 mths.)
- Functional elements are 'closed class elements': it is possible to have a complete list of them. One can list all determiners and auxilliaries in a language, but not all nouns and verbs. (By this criterion, prepositions are midway between lexical and functional.)
- Functional elements are often phonologically 'light':
  - They may be unpronounced, e.g.
    - Infl in an English clause without an auxilliary: *she* Infl *went home*
    - Empty complementisers: *he said* Comp *you are intelligent*
    - Empty determiners: D *cows eat* D *grass*.
  - Functional elements may often be clitics or affixes, i.e. they must attach to some other word/phrase:
    - The possessive determiner attaches to a DP: [DP the man over there]'s book
    - Pronouns can cliticise to verbs: *he loves 'er/'em, 'tisn't very good, das gibt's nicht*
    - Auxilliaries often cliticise to the subject: *he's gone, they've gone*

Syntacticians sometimes assume that there are more functional categories than have been introduced here. For instance, what we call Infl is sometimes split into a number of different categories (e.g. Agreement, Tense, Mood, Perfect, Progressive), to cover cases like *the patient will have been being treated*). Research on AP suggests that adjectives are dominated by a functional head expressing degree, expressed e.g. by the comparative morphemes *more*. (The distinction between *more intelligent* and *older* is somewhat like the difference between *do*-support and the lowering of inflection onto the verb: if the adjective doesn't have the right phonological properties to be inflection with *–er*, we need to insert *more* in the relevant functional position, just like we need to insert *do* when there is no verb capable of bearing inflection.) Adger (2003) is one textbook that introduces quite a lot of functional categories.