&L322 Syntax

Chapter 6: Extending $\overline{X}$ Theory

Linguistics 322

1. Determiner Phrase

A. C. talks about the hypothesis that all non-heads must be phrases. I agree with him here.

B. I have already introduced D (and Q as well) as heads: D^0 and Q^0.

C. C. says the D should take a complement. It can; its complement would be not NP, but QP, since we would have to treat Q the same way:

(1) $[_D{}^1\ [_D{}^0$ the $[_Q{}^1\ [_Q{}^0$ [null]] $[_{NP}$ boy]]]

D. Now the first problem arises.

i. 'D' was used as the first bit of evidence for $\overline{X}$ (X-bar) theory.

ii. So if D is a distinct head, then there should be no need for X-bar.

iii. The traditional view of X-bar doesn't make much sense on its own.

iv. It is the claim that D is an operator that leads to X-bar.

v. So what happens if D is a projection in its own right and QP is its complement, and subsequently, NP is the complement of QP?

vi. One might just as well abandon X-bar Theory, but they don't they keep it with less motivation than before.

E. C. now moves to possessive NPs

i. They use the 'of'-construction, but are different from container nouns.

(2) a. the tail of the cat

b. #a tail of the cat

c. the tail of a cat

d. # a tail of a cat

ii. (2b) and (2d) are semantically odd since cats like all other mammals have only one tail unless there is genetic mutation.

iii. In ((2a) and (2c) since the cat has only one tail, it must be definite because of the pragmatic knowledge that a cat has only one tail. 'A tail' implies that there must be more than one tail.

iv. Cats, like some other mammals, have more than one claw. Hence, it is possible to get:

(3) a. the claw of the cat

b. a claw of the cat

c. the claw of a cat

d. a claw of a cat

v. (3a) and (3c) are ambiguous in at least two ways: either a specific claw if referred to determined from the discourse, or a generic statement is being made:

(4) The claw of the cat is sharp.

vi. (3b) and (3d) are interpreted as "one of the cat's claws'.

vii. there is an alternative construction where 'the cat' occurs in a possessive construction where "'s" is adjoined to the phrase 'the cat':

(5) a. the cat's claw

b. a cat's claw

viii. Note that

(6) a. a cat's tail

b. the cat's tail

ix. corresponds to (2a) and (2c), respectively.

x. Therefore, the null determiner in (6a) is modifying *cat* but not *tail*. Otherwise we get the semantically odd reading of the 'b' and 'd' examples.

xi. Now, C. raises the interesting question, what is the position of "a cat" and "the cat's" in (6)?

xii. It has long been argued that it occurs in the D position, since English does not permit two D operators for a noun:

(7) a. *the this cat

b. *this that cat

c. *that the cat

d. *this the cat's tail

e. *that this cat's tail

f. *the cat's this tail

xiii. and so forth.

xiv. Here, the evidence is very strong. Possessive NPs occur in the D position (or slot if you are an advocate of Tagmemics).

xv. "'s" is a clitic adjoined to a noun phrase:

(8) $[[_D$ the$]$ $[_N$ cat$]]$'s

xvi. C. calls it a "small word," a term I've never heard used before. If a clitic is defined as a form that cannot take independent stress and is adjoined to fully declined or conjugated forms or to phrases, then "'s" is a clitic, a common term used in many languages. English has a fair share of them. More on this later.

xvii. the clitic must occur at the end of the phrase such as when there is modifying PP or relative clause:

(9) a. the cat on the sofas' tail

b. the cat that is sleeping's tail

xviii. note that *tail* cannot be adjoined to *sofa*, since sofas do not have tails, nor can it be adjoined to *sleeping*, since *sleeping* is a verb and verbs cannot occur as a possessive.

xix. In lexico-semantics possessive forms take two arguments:

(10) POSSESS(possessor, possessee)

(11) a. John has a book.

b. Our had a tail.

c. Mr. Gumbraati possesses several fine automobiles.

d. He's got a new shirt.

e. The computer belongs to Sally Forth.

xx. Note that the possessor occurs in the subject position in the first four examples, the possessee occurs there in the last example.

xxi. The "'s" marks possession. the first NP is the possessor. The second NP marks the possessee: the cat's tail:: cat = possessor, tail = possessee.

xxii. However, a problem arises. Consider:

(12) a. John stepped on the cat's tail.

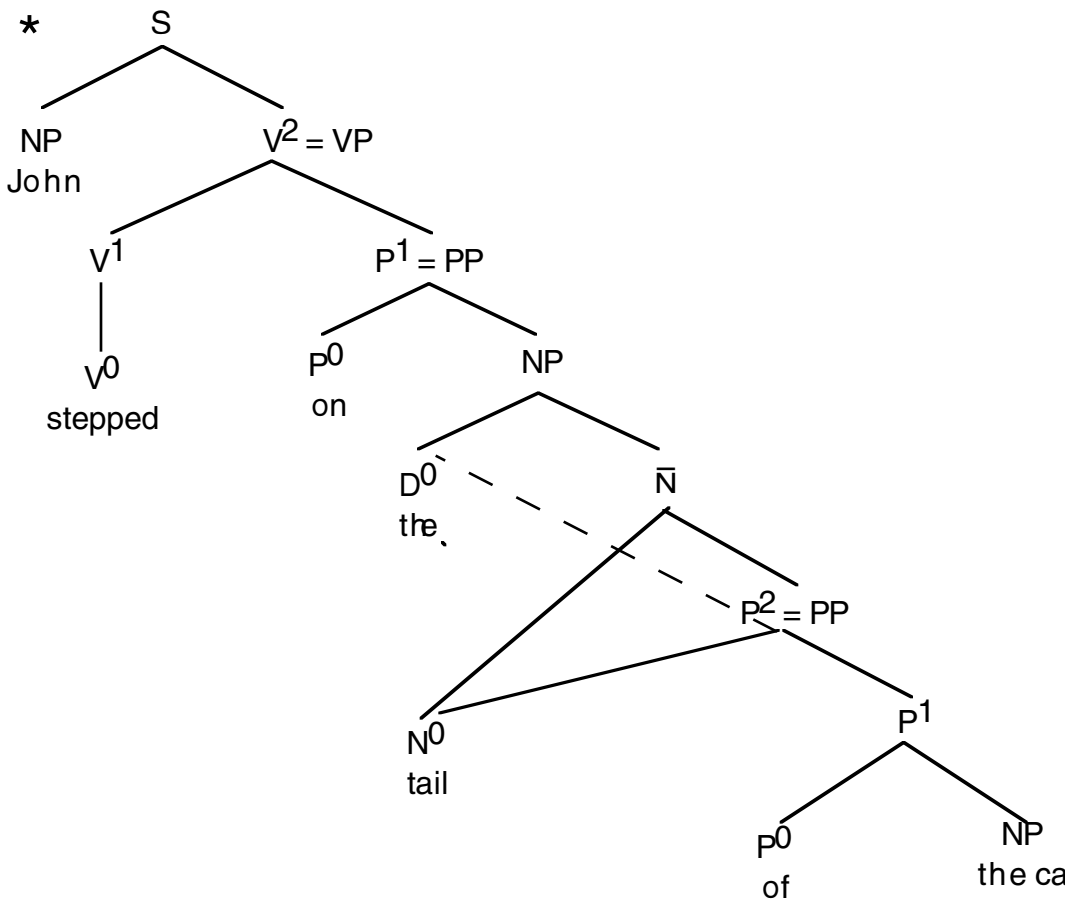
b. John stepped on the tail of the cat.

xxiii. What did John step on? The tail, obviously. Here, *tail* is the argument of *step*, the direct object.

xxiv. But isn't *the tail* the possessee of "of," which also marks possession? Yes, it is.

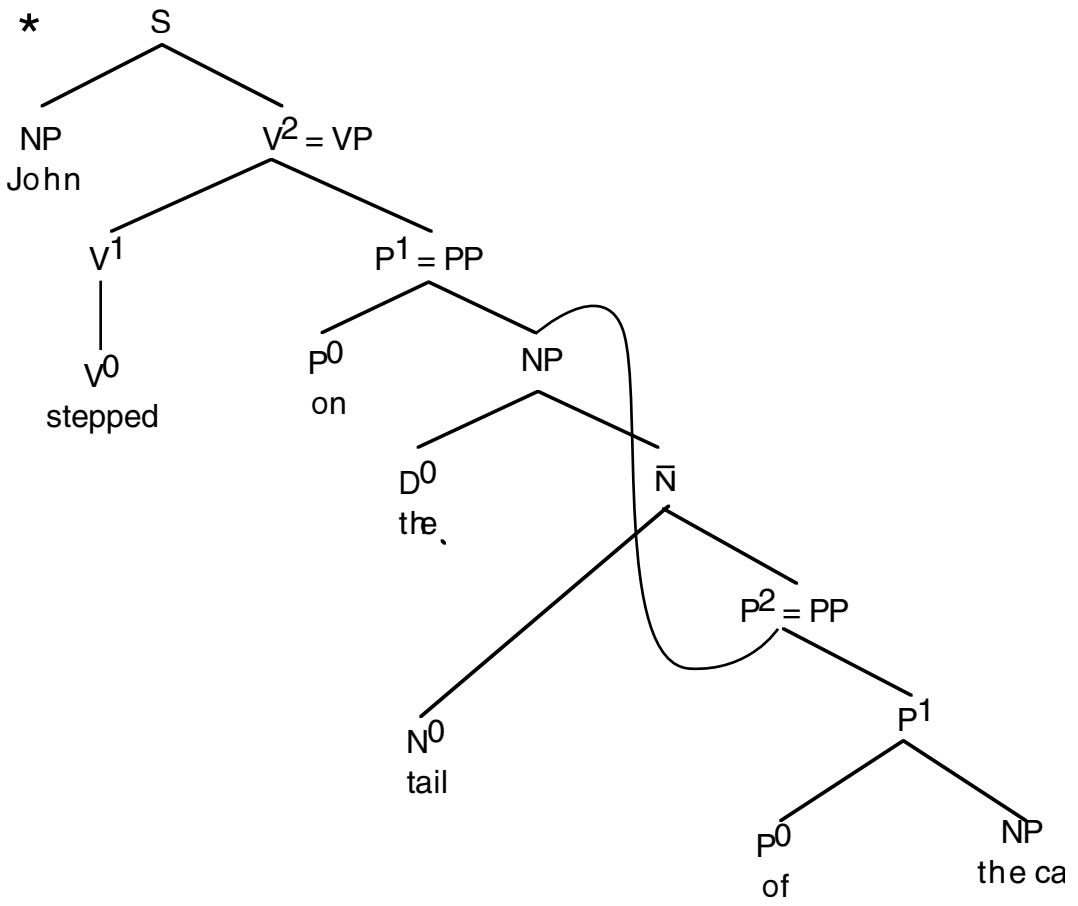
xxv. It is generally accepted that a NP cannot be dominated by two distinct nodes where neither is a projection of the other. That is, the following is considered bad:

(13)



xxvi. The above figure illustrates the problems with double domination. P^2 should dominate D^0 *the*, but we get a cross line. That is out. It should dominate NP *the tail*, but if it does, we get the NP dominating itself. That is definitely out:

(14)



xxvii. Both of these structures provide strong evidence against double domination.

xxviii. So what is the answer. Consider the following:

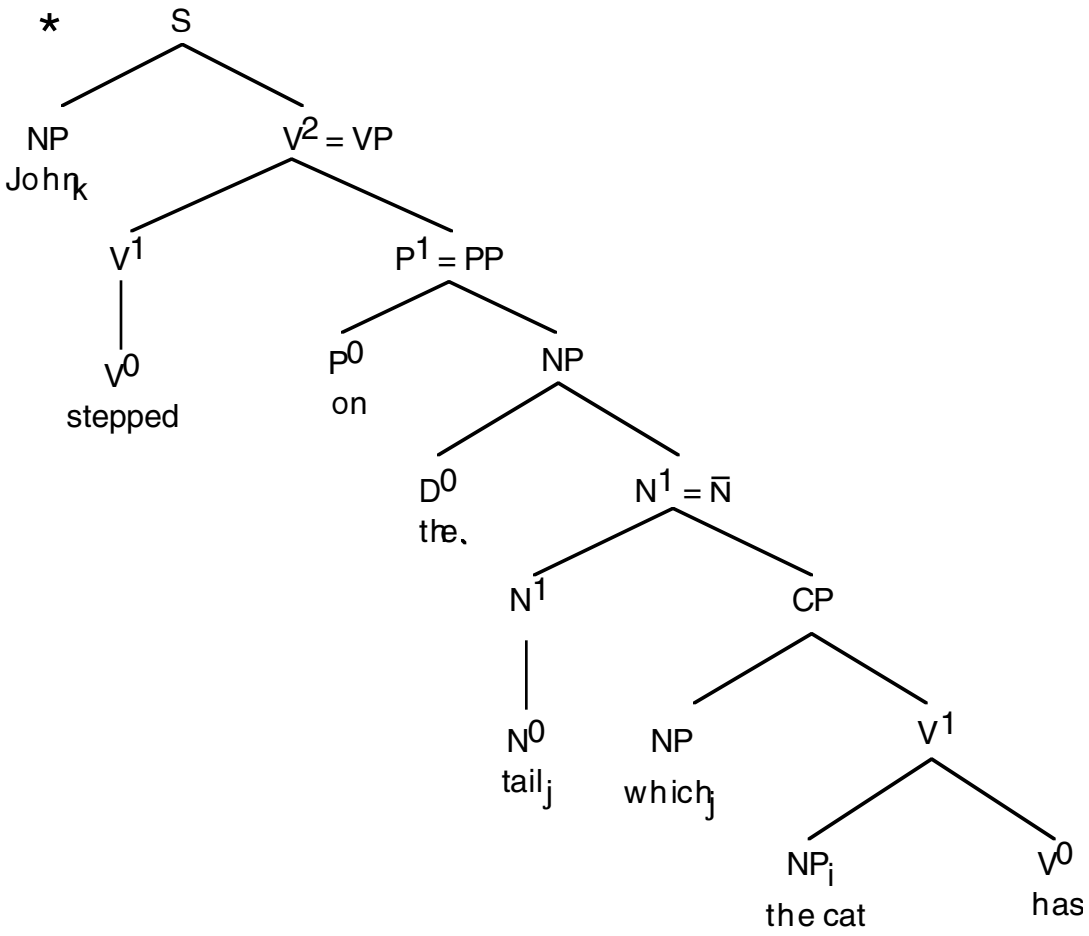
(15) John stepped on the tail which the cat has.

xxix. As mentioned above,*has* is a possessive verb. One of its arguments is the relative pronoun*which*. This pronoun must be coindexed with*the tail*. *Which* is a pronominal since its antecedent is in another clause.

xxx. Implied in (12) is a relative pronoun, which is null. There are many instances of this. They will be introduced in due time.

xxxi. The structure for (12a) includes a null relative pronoun:

(16)



xxxii. The empty relative pronoun is part of the key to the problem.

xxxiii. Now compare:

(17) a. this claw of the cat

b. the claw of the cat

c. the cat's claw

d. a cat's claw

xxxiv. In the first two examples of (17), *claw* is modified by *this* and *the*, respectively.

xxxv. The D position is filled. This blocks placing *the cat's* in D.

xxxvi. In the last two examples, the two possessive NPs may be placed in D.

xxxvii. In (17c) *claw* is definite The hearer knows from a pragmatic context which cat, which claw on that car.

xxxviii. In (17d) both *cat* and *claw* are indefinite. Note the following:

(18) Lewie was scratched by a cat's claw.

xxxix. Here we don't know which cat nor which claw.

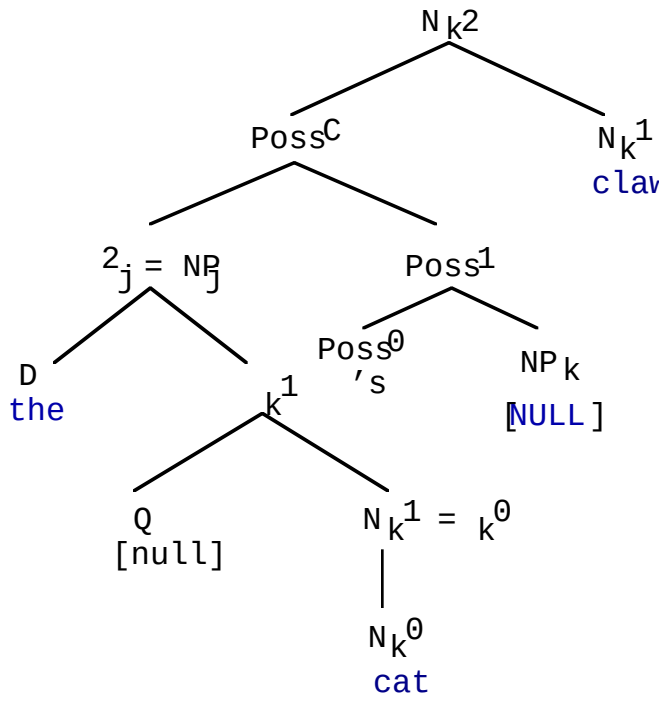
xl. The evidence from above strongly suggests that "'-s" is a marker of possion. It is a head that takes the form of a clitic. This is probably where C. got his terms*mall word* from.

xli. However, I strongly disagree that "-'s" is D. The feature of definiteness is determined by the NP to which "-;s" is adjoined.

F. Possessive as an operator

xlii. Based on the above presented evidence, the structure for 'the cat's tail' must include an empty relative pronominal:

(19)



xliii. The empty relative pronominal is required for proper interpretation.

xliv. One thing I haven't talked about is where are sentences interpreted and where are they first laid out?

(a). In logical structure or lexical structure. Chomsky calls this Logical Form, but he does not recognize that sentences are logically laid out before they enter the syntactic component.

(b). Actually, this means that we can eliminate some or most if not all empty positions in the syntax--the constraint is that the empty node must be reconstruction in lexical/logical structure.

xlv. For some reason, "-'s" evolved so that it could occupy the D position.

(a). It marks possession and definiteness: [±Def].

(b). It could be said that "-'s" is a possessive-definiteness operator.

(c). It is the definiteness feature that permits it to occupy the D position.

xlvi. Recall, "-s" can occupy the D position only when there is no phonetic determiner in the D position which is modifying the main noun ('the tail').

xlvii. This is not a common construction in languages of the world. It does not occur in French or any of the Slavic Languages. And as far as I know not in any of the Romance languages.

xlviii. It seems to have appeared in German in the last century. It was not recognized a literary German in 1950, but it seems to be acceptable now, perhaps due to the influence of English:

(20) Der Kapitans Tafel. (The captain's table).

xlix. The Germans seem to be unsure whether to write an apostrophe or not.

G. Does D take a complement?

i. There are two points of view here.

ii. In the first view, [D the, this, or that] implies a NP that D is marking as [±Def]. Therefore, the structure would be:

(21) $[_D{}^1$ = DP $[_D{}^0$ the] $[_Q{}^1$ [Q [null]] $[_{NP}$ cat]]]].

iii. The complement of D^0 is QP, and the complement of Q^0 is NP.

iv. In some sense this is convincing.

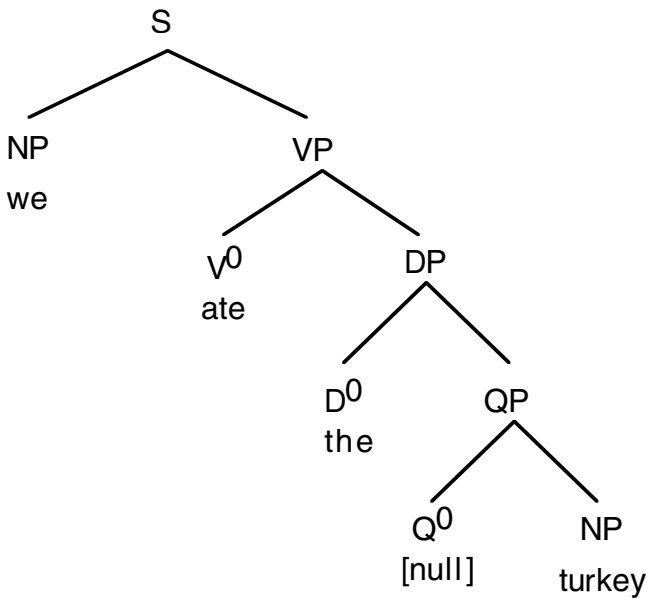
v. But in another sense it is not.

vi. When one says:

(22) We ate the turkey.

vii. it is meant that it is the turkey that is eaten, not “the”.

(23)



viii. Given this analysis a bunch of interpretive rules would be necessary to permit the semantic argument of *eat* to be [$_{NP}$ turkey].

ix. If D is analyzed as an operator taking scope over the NP it is adjoined to, the above problem does not arise.

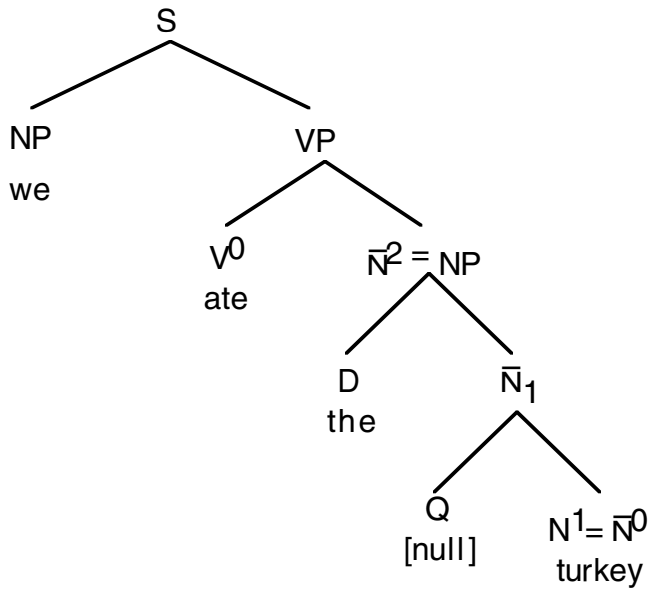
x. For this reason, I am leaning to D as an operator.

xi. What about D^1? If D is an operator, there seems to be no need for it to have a complement, at least in the surface syntax.

xii. I think that we should not treat D as a head, D^0, but simply as D, which means it does not have the ordinary properties of a head. In this case then it would not be necessary to project D up to $\acute{D}$

xiii. (23) is in this case now represented as (24); the same reasoning is applied the Q:

(24)



xiv. We have accomplished at least one thing: we have eliminated one level. This is on the road to an ideal minimalistic theory.

xv. I will therefore adopt this revision eliminate D and Q as projections.

xvi. In fair warning, a case can be made for the projection of Q when it has a group meaning as in 'two of the eggs' = of a larger set of eggs, there are two eggs that I am talking about. I will not attempt to do this here.

xvii. And, I must mention, that "-s" must be treated as a head and projected up since it is phrasal. The question remains, what label should I assign to "-s"? Poss or D or something else?

2. $\bar{V}$ (V-bar) tense phrases and complementizer phrases

1. Kinds of clauses

A. clause = subject + predication

i. predication is the term now used by most linguists

ii. predicate is now used for a head in logical semantics

iii. Hence predicate phrase is misleading. Don't use this term.

B. [matrix = root = main] clause

C. [embedded = subordinate (old fashioned)] clause

i. ≠ matrix clause

D. Two kinds of embedded clauses

i. finite or tensed [+Tense]

i. non-finite or tenseless [-Tense]

ii. infinitives, gerunds, participial clauses, and small clauses

(25) a. to go to the store = infinitive (clause)

b. going to the store = gerund (clause)

c. a broken chair = participle

d. a chair broken into pieces = participial clause

e. He saw [the chair break]. = small clause

E. functions

i. Gerunds are adverbial: they modify events

ii. Participles are adjectival: they modify nouns

iii. Infinitives are normally arguments, usually of V

iv. small clauses are arguments, usually of V

2. CP or MP or just C?

A. The term **complementizer** was introduced about 35 years ago.

i. It is a bad term.

ii. But it is thoroughly entrenched in contemporary linguistics.

iii. The function of a complementizer is to mark mood.

(a). mood deals with the reality of a clause, but not its truth value.

(b). mood includes the indicative or declarative (actually happens or happened), interrogative (questions), imperative (command), conditional, and contrafactual. There may be others.

iv. I will continue to use C here, so as not to drift too far from the norm.

v. In matrix clauses in most of not all languages of the world the indicative mood is not marked; it is [null].

vi. In embedded clauses it can be or must be marked depending on the language and the context. In English it is unmarked if a complement of the verb:

(26) a. John said [that he despises syntax].

b. John said [he despises syntax]. (C = [null].)

vii. obligatory as noun complement:

(27) a. *The fact John hates syntax amuses Mary.

b. The fact that John hates syntax amuses Mary.

viii. It is obligatory in other constructions, which I won't go into now.

ix. When questions are embedded they are marked with *if* or *whether*:

(28) a. Susan asked if Bill likes syntax.

b. Susan asked whether Bill likes syntax.

B. Is C as an operator

i. C is a mood operator.

ii. All sentences be [±Irrealis]

(a). [+Irrealis] is a marked feature indicating that the eventuality (event = clause) is not actually happening or has not happened.

(b). [-Irrealis] is the feature I use to mark the indicative mood.

(c). There are no known clauses that are not marked for this feature.

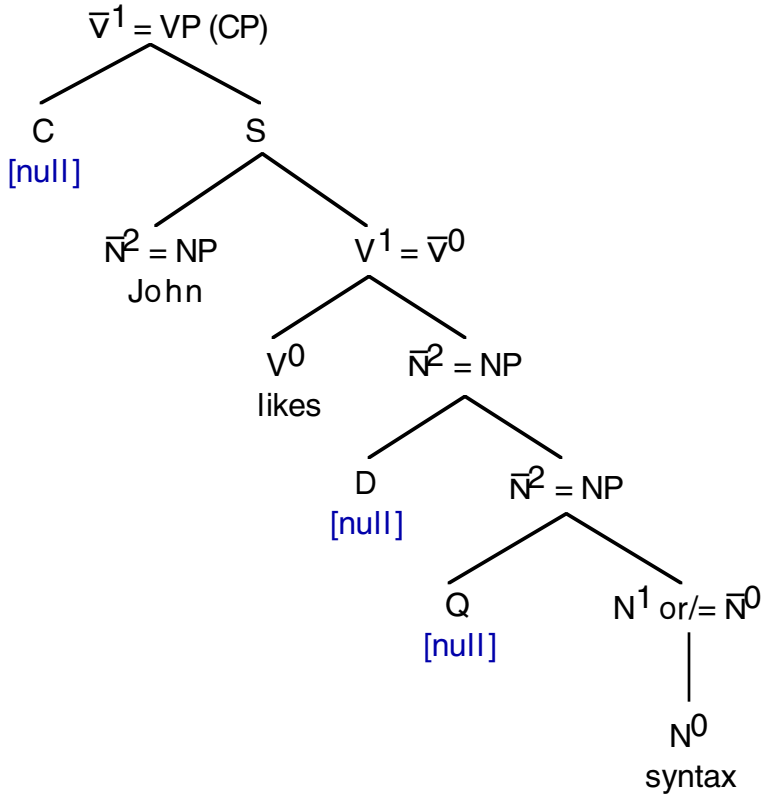
(d). This is the property of an operator; hence C is an operator.

iii. As I have argued in the first section Determiner Phrase, it seems better to consider C as an operator, not a head; hence only "C" is written, not "C^0" which marks a head.

iv. It is adjoined to $\overline{V}$, our first example of it.

(29) John likes syntax.

(30)



v. V^0 projects up to V^1, max for V^n. We haven't covered S yet, but it will be a projection of V (V). The complementizer is null as it is [-Irrealis]. Recall that in English all names are $\bar{N}$, i.e. it incorporates D, as all proper names are definite. Normally in English, the determine is incorporated into the name: *the John, but some places names permit the definite determiner:

(31) The Dalles, Oregon; The Netherlands; former: The Ukraine (now just Ukraine), The United States, The Soviet Union, The Rockies.

vi. .There are no known modifiers of complementizers (mood markers).

C. T [±Tense]

i. Although T exists, the theory of it here is flawed.

ii. Chomsky admits that it doesn't follow the pattern of everything else.

iii. His (the standard more or less theory) has the subject of the sentence in Spec-T.

iv. And, as we shall find out later, $\bar{T}$ (T-bar) governs to the left.

(a). This is the first odd thing; the subject is not a complement of T.

(b). If T has a complement, it is VP.

(c). $\overline{T}$ is not a head, the second odd thing.

(d). I am going to accept this theory, adopting one that is much more consistent.

v. First, T is an operator taking scope over V.

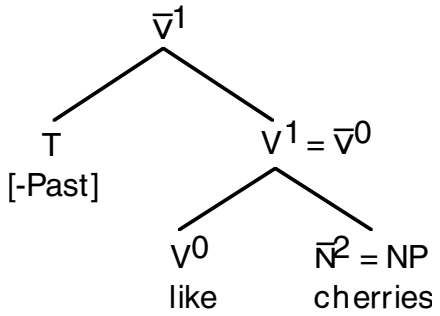
(a). All main verbs must be marked for tense; that is they must occur under the scope of T. 'Under the scope of' means be c-commanded by.

vi. Since T is an operator and not a lexical head, it does not project up to T^1. It remains T adjoined to VP

vii. The initial structure for the VP in is shown in (33):

(32) eats cherries

(33)



viii. The feature [+Tense], represented here as 'T', is required for all matrix verbs, and for some embedded verbs. Embedded verbs will be covered later.

ix. In (33) [-Past] is the unmarked feature of Tense. [+Past] refers to eventualities that have taken part before the speech event. [-Past] refers to eventualities occurring at the moment of the speech event (the present) and to future events"

(34) The ship sails tomorrow.

x. Neither occur before the speech event (the past).

xi. There is a construction in English where the present tense form is used in a narrative style referring to eventualities occurring in the past tense, but seen as cotemporous with the narrative event:

(35) The year is 1939. The Prime Minister is meeting with the King to see if it will be necessary to declare. Last week he didn't think he would be necessary.

(a). This construction is called the historical present.

xii. [-Past] contains a feature that indicates that T needs a host; it will take the form of an affix.

xiii. As is the case for all inflectional endings, they are adjoined to the right of their host, the form to which they are adjoined. They must include a feature in the grammaticon, the component that houses all the grammatical rules and forms.

xiv. T, [-Past] must move down to the verb and be adjoined to it on the right. Another feature of T is that it must be adjoined to the verb:

(36) [+Tense] = T

[-Past]

[+Bound]

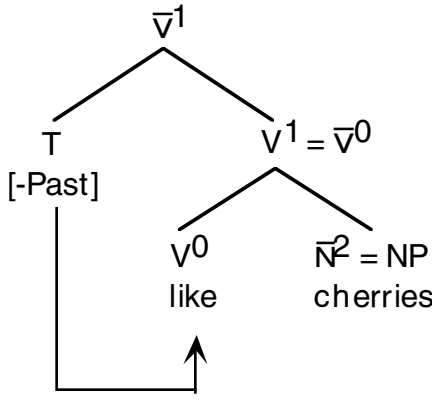
[+V]

[+right adjoined]

xv.

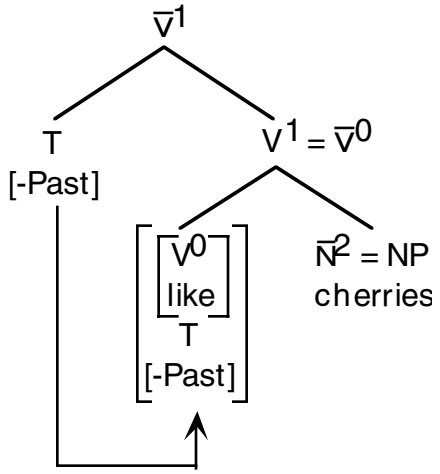
xvi.

(37)



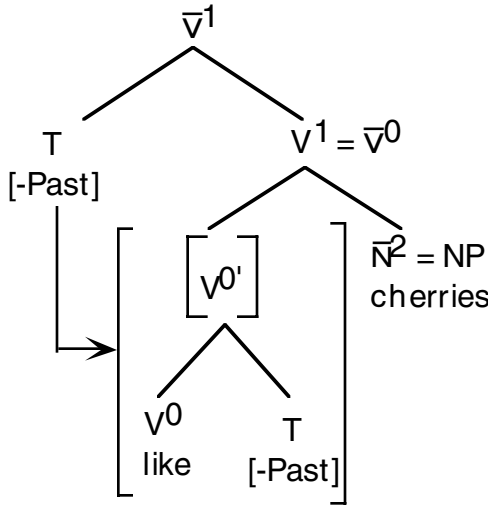
xvii. This operation is called a **transformation**, and is often referred to as movement and similar terms: T is lowered (movement)

(38)



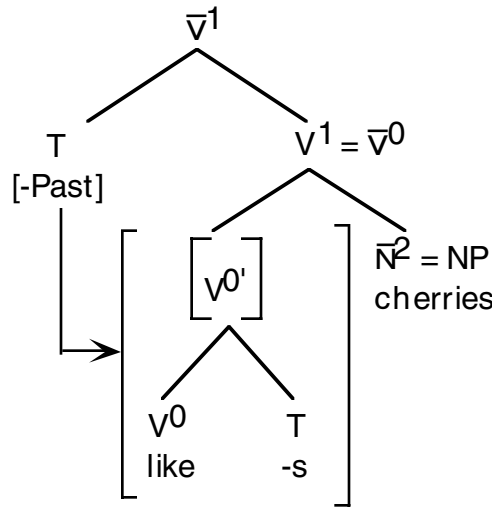
xviii. Technically, T is adjoined to V with no direction of adjunction. The form has to split into [V V T].so that T is adjoined to V^0 on the right.

(39)



xix. [-Past] is spelled out as the regular ending "-'s" if the subject is 3rd person singular:

(40)



xx. I won't expect to interim steps to be learned at this time. But I want the reader to be aware of these steps.

D. T is not the only verbal operator. I will wait until Carnie gets to them.