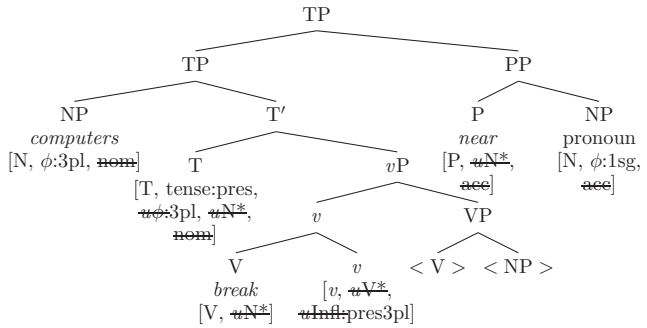
Previously...

Near me computers break

- The last step: Adjoin the PP to the TP.
  - To the TP? *Near me* can appear on either side of TP, not *v*P.
  - Computers near me break



P checks accusative

- So, *in general*: A preposition P...
  - Has a [P] category feature
  - Has a [*u*N*] feature, motivating a Merge with its object.
  - Has an [acc] feature, valuing and checking the [case] feature of its object.
  - T has [T], [uN*] (EPP), [*u*ϕ:], [nom]
  - *v* has [*v*], [*u*Infl:], [*u*V*], and, if *v* assigns a θ-role, it has [*u*N*] and [acc].

Double-object constructions

- We've by now covered the sentence

  1) Pat gave books to Chris.

- Pat, books, and *Chris* are all noun phrases, they all need case.
  - *Pat* gets (nom) case from T.
  - *books* gets (acc) case from *v*.
  - *Chris* gets (acc) case from P (*to*).
- What about *Pat gave Chris books*?
  - The "have" kind of "give" must have an [acc] feature.

Adverbs

- Before today, we'd always drawn adjuncts as adjoined to *v*P. This explains why *sloppily* can be either to the left or to the right of *v*P:

  1) Pat sloppily ate lunch.
  2) Pat ate lunch sloppily.
  3) Pat has sloppily eaten lunch.
  4) Pat has eaten lunch sloppily.

- *Sloppily* also seems to be able to adjoin to PerfP or ProgP, at least marginally.

  1) ?Pat might sloppily have eaten lunch.
  2) ?Pat should sloppily be eating lunch.

- But it can't be between a subject and T:

  1) *Pat sloppily might eat lunch.

Manner vs. propositional adverbs

- *sloppily*, *slowly*, *quickly*—all describe the *manner* in which an action takes place. These are **manner adverbs**. They adjoin to *v*P.

- There are other kinds of adverbs as well, however. One such kind are propositional adverbs: *perhaps*, *fortunately*, *interestingly*. These express a kind of attitude on the part of the speaker toward the content of the sentence.

Propositional & temporal adverbs

- **Propositional adverbs** seem to adjoin to TP.

1) Fortunately, Pat ate lunch.
2) Pat ate lunch, fortunately.
3) ?Pat fortunately ate lunch.
4) ?Pat might have fortunately eaten lunch.

- **Temporal adverbs** also seem to adjoin high.

1) Today Pat ate lunch.
2) Pat ate lunch today.
3) *Pat today ate lunch.

Adverb positions

- Generally speaking, where an adverb attaches depends on its meaning.
  - *v*P for manner adverbs, TP for temporal adverbs, …
- Notice that we predict this now:
  1) Yesterday [Pat completely [finished lunch]].
  2) Yesterday [Pat [finished lunch] completely].
  3) Pat [[finished lunch] completely] yesterday.
  4) Pat [completely [finished lunch]] yesterday.
  5) *Pat [[finished lunch] yesterday completely.
- Later, perhaps, we'll consider additional complexity in adverb placement.

Passives

- The **passive construction** is one where:
  - The original subject disappears (or becomes a *by*-phrase)
  - The original object becomes the subject.
  - The verb appears as *be*+passive participle.
    - The passive participle in English sounds just like the perfective participle.
- Pat took pretzels. **active**
- Pretzels were taken (by Pat). **passive**

Passives

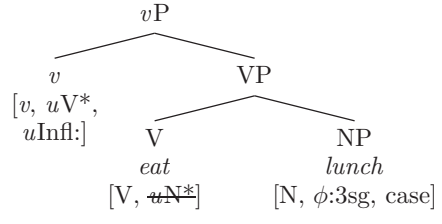
- Pat stole books.
- Books were stolen (by Pat).
- In both cases, *books* is getting the Theme/Patient θ-role. By UTAH, it must be originally Merged as NP daughter of VP, in both the active and the passive.
- In fact, the passive is a lot like the unaccusative. An "underlying object" becomes the subject.

Passives

- All we need is the passive auxiliary Pass.
  - *be* [Pass, *u*Infl:] selects a $v_{\text{unaccusative}}$.
- By selecting for $v_{\text{unaccusative}}$, the passive auxiliary "removes" an Agent.
  - Not allowed for intransitives, an open mystery.
  - *It was danced (by Pat)
- The passive auxiliary works like other auxiliaries: Pass can value a lower [*u*Infl:] feature, if Pass' own [*u*Infl:] feature is valued by a [tense] feature, it is strong.
  - Lunch was not eaten.
- **Pass is the last auxiliary in the HoP:**
  - Lunch may not have been being eaten.
  - T > (Neg) > (M) > (Perf) > (Prog) > (Pass) > *v* > V

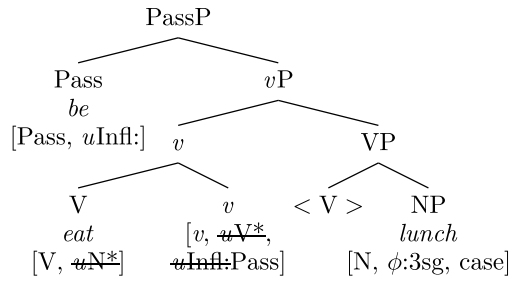
Lunch was eaten

- For *Lunch was eaten*, we Merge *eat* and *lunch* to build the VP, then Merge an unaccusative *v*…



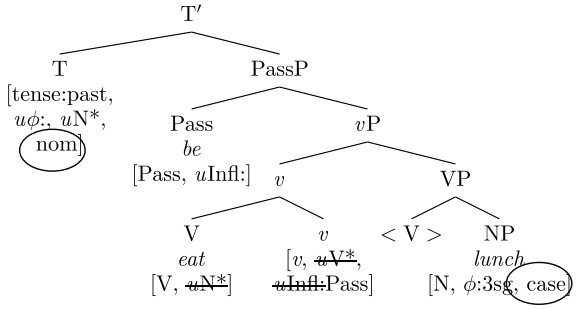
Lunch was eaten

- The V moves up to adjoin to *v* to check the [*u*V*] feature of *v*.
- The Pass auxiliary is Merged (HoP).
  - [Pass] matches, values, checks [*u*Infl:] on *v*.



Lunch was eaten

- T is Merged (HoP).
  - [nom] on T matches, values, checks [case] on *lunch*.
  - [ϕ:3sg] on *lunch* matches, values, checks [*u*ϕ:] on T.
  - [past] on T matches, values [*u*Infl:] on Pass.



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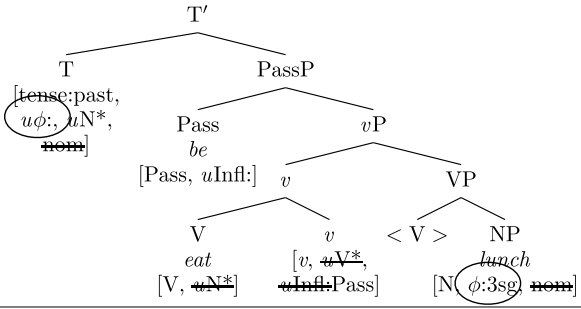

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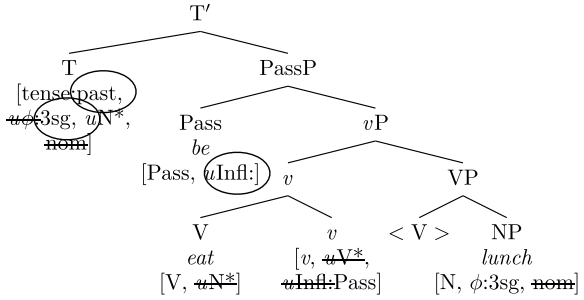
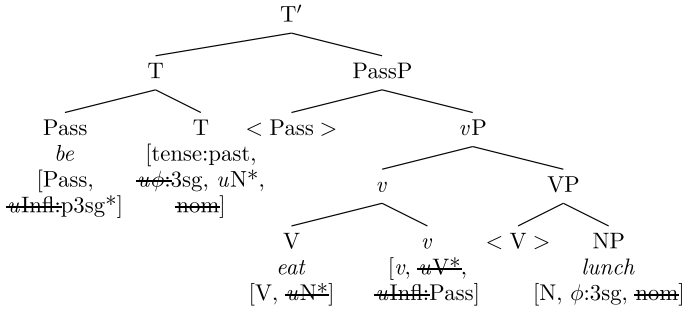


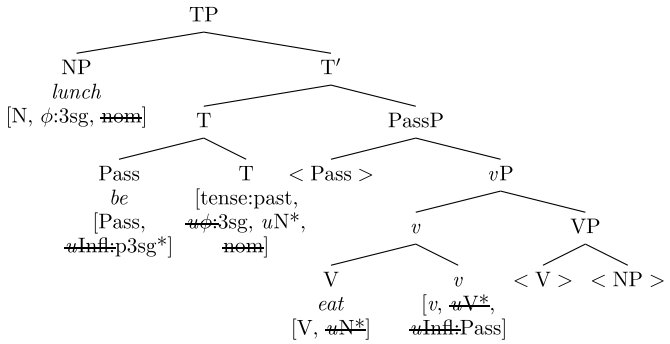
Lunch was eaten

- Pass moves to T (checks [*u*Infl:past*] on Pass).



Lunch was eaten

- *Lunch* moves to SpecTP (checks [*u*N*] on T).



Ditransitive passives

- Consider again *Pat gave Chris books.*
  - Chris was given books.
  - *Books were given Chris.
- *Pat gave books to Chris.*
  - Books were given to Chris.
  - *Chris was given books to.

Where does the by-phrase attach?

- Adverb tests can give us a hint…
  - The sandwich was eaten by Pat today at noon
  - The sandwich was eaten by Pat at noon today
  - The sandwich was eaten today _ by Pat _ at noon
  - The sandwich was eaten at noon _ by Pat _ today
  - The dishes were washed by Pat _ poorly _ yesterday
  - The dishes were washed poorly by Pat yesterday
  - The sandwich was eaten by Pat _ sloppily _ at noon
  - The sandwich was eaten sloppily by Pat at noon
- Conclusion?

Japanese Numeral Quantifiers

- Gakusei ga hon o 4-satu katta
  students nom book acc 4-cl bought
  'The students bought four books.'
- ?*Gakusei ga hon o 4-nin katta
  students nom book acc 4-cl bought
- Gakusei ga 4-nin hon o katta
  students nom 4-cl book acc bought
  'Four students bought books.'
- Gakusei ga kyoo 3-nin kita
  students nom today 3-cl came
  'Three students came today.'
- Hon o Taroo ga 2-satu katta
  books acc T nom 2-cl bought
  'Books, Taroo bought two.'
- Yuube, kuruma ga doroboo ni 2-dai nusum-are-ta
  last night cars nom thief by 2-cl steal-pass-past
  'Last night, two cars were stolen by a thief.' (Miyagawa 1989)

Italian ne-cliticization

- Maria ha visto Gianni. Maria lo ha visto.
  M has seen G. M him has seen.
- Gianni trascorrerà tre settimane a Milano.
  G spend.fut3sg 3 weeks in M
- Gianni ne trascorrerà tre (*ne) a Milano.
  G of-them spend.fut3sg 3 in M.
- Alcuni {persone/*ne} trascorreranno tre settimane a Milano
  some people/of-them spend.fut3pl 3 weeks in M.
- Telefoneranno tre persone domani
- *Ne telefoneranno tre domani
- Ne arriveranno tre domani
- Ne furono arrestati molti.

CAS LX 522
Syntax I

13

The DP
(6.5-6.8, 7.1-7.2)

Determiners vs. adjectives

- There are a number of things that can come before nouns in a noun phrase:

1) fluffy bunny
2) that bunny
3) the bunny
4) a bunny
5) every bunny
6) big fluffy bunny
7) that fluffy bunny
8) the fluffy bunny
9) a fluffy bunny
10) every fluffy bunny.
11) *fluffy the bunny
12) *that the bunny
13) *a the bunny
14) *every the bunny
15) *fluffy every bunny
16) *a every bunny
17) *the every bunny
18) *that every bunny

There seem to be two classes, things like *fluffy* that can iterate, and things like *the* that must be first and must be unique.

Determiners

- The class that includes *the*, *every*, *that*, and so forth are called the **determiners**. They come in several subtypes, but they form a category, which we designate with the **category feature [D]**.
  - Cf. the [V] feature of verbs, the [T] feature of T.
- There can be only one D in a noun phrase, and it must come first.
- Adjectives come after D and before N, and can iterate.

Adjective iteration

- We've seen the iteration property elsewhere (PP adjuncts, for example):

  1) Pat ate lunch on the hill by the tree in the rain.

- Or adverbs (*v*P adjuncts):

  2) Pat deliberately completely ate the sandwich.

- So, it makes sense to suppose that adjectives are also adjuncts. But to what?

  3) The big fluffy bunny.

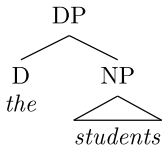
- Notice that if *big* and *fluffy* are adjoined to NP, it suggests that *the* must also be, if the whole thing is an NP. But then **why can there be only one, and why must it be first?**

D vs. N

- Also, notice that D doesn't stand alone.
  - *The* feels incomplete. It needs a noun.
  - *Student* does not feel similarly incomplete.
- Like (the prepositions) *to*, *beside*, or *with* feel incomplete, they also need something.
- Or (the verbs) *sink*, *kick*, *dance*.
- All of these are sort of "completed" by nouns. For P and V, we understand how: They select for a noun as their complement. (They have a [*u*N*] feature.)
- So, maybe D is something like a P, selecting for a noun phrase complement…

The students is a DP

- Perhaps *the students* is not an NP, but rather a **DP**.
- It's head-initial, like English is everywhere else.
- D selects for N ([*u*N*]), accounting for
- the inability to "stand alone"
- the inability to have more than one (it selects for N, not D)
- the fact that it must come before adjectives (adjoined to NP)
- Since D forces the Merge, it is D that projects.
- The NP can be modified by (iterating) adjectives: *big fluffy pink bunny*.



The students arrived

- Ah, but there's a problem.
- Why is *The students arrived* grammatical?
  - *Arrive* is unaccusative, which we've formalized as a V with a single [*u*N*] feature and associated with a special "inert" *v*.
  - T also has a strong [*u*N*] feature (the EPP feature), bringing the subject to SpecTP.
- How can either of those be satisfied?
  - If we suppose *arrive* has a [*u*D*] feature instead, why isn't it **Students arrived the*?
  - Are there two different versions of *arrive*, one for *the students arrived*, and one for *students arrived*?

They were always DPs

- We can bring a degree of order to this chaos if we shift our thinking about "noun phrases":
  Those things we called "noun phrases" before were always actually DPs.
  - So, T *doesn't* have a [*u*N*] feature—rather, it has a [*u*D*] feature.
  - Prepositions *don't* have a [*u*N*] feature, they have a [*u*D*] feature.
  - No "version" of *arrive* has a [*u*N*] feature, it's just the one *arrive*, but it has a [*u*D*] feature.
- The basic form of a "noun phrase" is not *students*, but rather *a student*, *the students*. A determiner phrase.

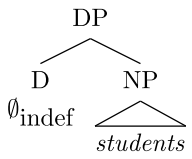
Students arrived

- Having taken that step, we have (the specter at least) of the opposite problem:
  If *arrive* has a [*u*D*] feature and T has a [*u*D*] feature, how come *Students arrived* is grammatical? How are those features checked?

- **Stand firm, brave syntacticians.**
- We grit our teeth, and conclude what we must:
  ***Students* in *Students arrived* is in fact a DP.**
  It has a determiner, which heads the DP.
  That determiner just happens to be *silent*.

[$_{DP}$ Ø students] arrived

- The silent D (**null determiner**) "shows up" with certain kinds of nouns, most notably the **bare plurals** (*Ø books*, *Ø students*) or **mass nouns** (*Ø lunch*) that we've mostly been using up until now.
- There are no "bare singulars" in English: you can't use *Ø book* or *Ø student* (as in **Ø student arrived*). The null determiner seems to be incompatible with singular nouns— it shows a kind of *number agreement*. The related singular form would use the **indefinite article** *a*: *A student arrived*.

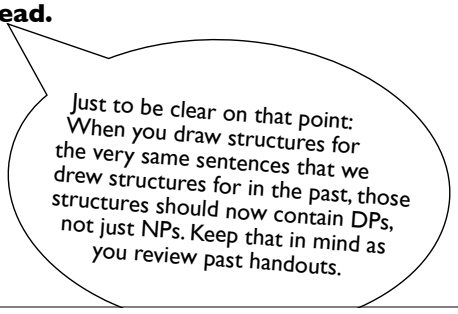


There is still an NP

- **What we're doing now suggests that all of those places in previous trees where we wrote "NP", we should have written "DP" instead.**
- But there still is a category N, and there still are phrasal NPs, of course. We just find them in the complement of D, rather than on their own.
- That is, "N comes with D."
- **Hierarchy of Projections** (relevant to nouns): D > N

But those were DPs

- **What we're doing now suggests that all of those places in previous trees where we wrote "NP", we should have written "DP" instead.**



one-replacement

1) This book or that one
2) This book or the one about cats

- It appears that in English, the word *one* can replace something smaller than the DP (hence evidence for the DP having an NP inside it.)

3) The big green book of poetry on the shelf
4) This one on my desk
5) This small one on my desk
6) This small red one on my desk
7) *This small red one of riddles on my desk

Proliferating PPs

1) The book of poetry on my desk in the corner under the coffee
2) The book of poetry in the corner on my desk under the coffee
3) The book of poetry under the coffee in the corner on my desk
4) *The book under the coffee of poetry in the corner on my desk

- Any number of PPs can appear here, in any order, except *of poetry* seems to need to be first.

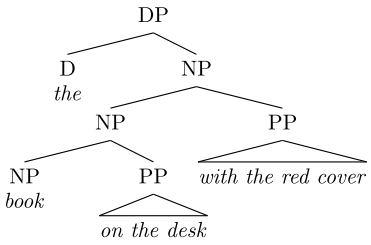
one-replacement again

1) This book of poetry on my desk
2) *This book on my desk of poetry.
3) *This book of poetry of riddles.
4) That one on the floor.
5) *That one of riddles on the floor.
6) This book on my desk by the coffee.
7) This book by the coffee on my desk.
8) That one by the pencils.

- What's the pattern? Whence the pattern?
  - Of the PP's, one kind (*of poetry*) seems to have to come first.
  - There cannot be more than one of the *of poetry* type PPs.
  - *One* seems to replace N and any number of PPs— but *must* replace the *of poetry* type PP if it is there.

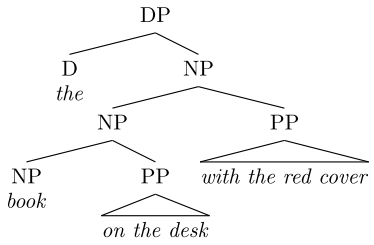
PP adjuncts

- The fact that we can have any number of PPs and they can come in any order (momentarily ignoring *of poetry* type PPs), suggest that they are adjuncts. Just like with *v*P. So what does *one* stand in for?



PP adjuncts

- What kind of explanation can we offer for the facts about *of poetry* type PPs that…
  - Must be closer to the noun than the other PPs, and
  - Of which there can be only one, and
  - Get replaced by *one*?



Differentiating poetry from pencils

- It's somewhat tricky to pin down a good diagnostic for which kinds of PP count as *of poetry* type PPs and which count as *by the pencils* type PPs.
- *Of poetry* PPs generally start with *of*.
  1) The book of great importance by the pencils.
  2) The book by the pencils of great importance.
- *Of poetry* PPs generally describe a fairly intrinsic property of the N.
  3) The student of physics in the hall.
  4) The student in the hall of physics.

Of poetry PPs aren't obligatory

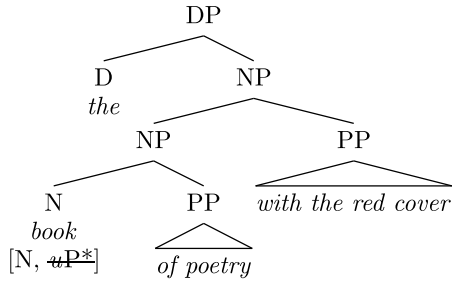
- NPs don't necessarily have an *of poetry* type PP, but they can.
  1) The book of poetry on the table.
  2) The book on the table.
- We'll analyze this essentially like Adger analyzed *letters to Peter* on p. 109 (though we may revise this slightly next week). An N has the option of having a [*u*P*] feature, and if it does, the PP that satisfies it must have this "intrinsic property" characteristic (and will generally be an *of*-PP).

UTAH

- Adger doesn't treat this as such (actually, he doesn't treat this at all), but we can understand the restriction to "intrinsic properties" in somewhat the same way we treat the oddity of these:
  1) #The room learned Chinese.
  2) #I sent Chicago letters.
- Here, there's something about being an Agent or a possessor that requires cognitive capacity. There's an intrinsic property of the role assigned.
- If *intrinsic property* can be thought of as a θ-role, N can optionally assign this role.
  - PP sister of N: Property

one

- So *book of poetry with the red cover* would look something like this. *One* can replace any NP.



The category of pronouns

- We said that bare plurals like *students* in *Students arrived* are really DPs, and have a null determiner.

  [$_{DP}$ Ø students] arrived.

- How about pronouns, like *we* in *We arrived*?
- Although you can say *The students arrived*, you can't say **The we arrived*.
- You can say things like *We linguists should stick together*. Or *You syntacticians are a crazy lot*. That is, a pronoun followed by a noun.

This only seems to work with *we* and *you*, though.

The category of pronouns

- *We linguists* looks rather like *The linguists*.
- *We* looks rather like a D.
- Also noteworthy:

  1) The media always disparages us linguists.

- Pronouns reflect case distinctions.
- If pronouns are just Ds, then case must be a property of D.
- **Case is actually a property of D (not of N).**

Possessors

- Consider the genitive (possessive) *'s* in English:

  1) John's hat
  2) The student's sandwich
  3) The man from Australia's book
  4) The man on the hill by the tree's binoculars

- The possessor can be a full DP (inside another DP).
- The *'s* attaches to the whole possessor *phrase*—it's the man's book and binoculars, not Australia's or the tree's, after all.
- This is not a noun suffix. It seems more like a *little word* that signals possession, standing between the possessor and the possessee. (it's a *clitic*).

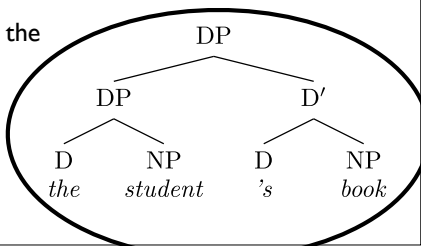
Possessors

- It seems to be impossible to have both a *'s* and a determiner.
  - *The building's the roof
  - The roof of the building
  - *The hurricane's the eye
- Determiners like *the* and the possession marker *'s* seem to be in complementary distribution—if one appears, the other cannot.
- Compare:

  1) The big fluffy pink rabbit
  2) *The that rabbit
  3) *The my rabbit
  4) *Every my rabbit

Possessors?

- This suggests a structure like this for possession phrases:
- The possessor DP is in the specifier of DP. And of course, this can be as complex a DP as we like, e.g., *the very hungry student of linguistics by the tree with the purple flowers over there... ...'s book*
- The possessed NP is the complement of D.

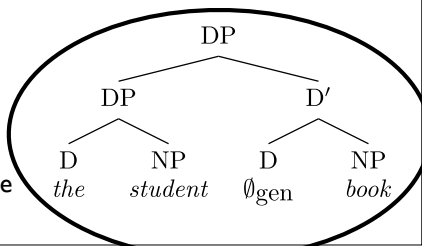


Possessors and the null D

- But what then to do about DPs like *his book*? Or *their book*?
- Here the possessor DP is the genitive case pronoun, and there's no *'s*.

  1) *Their's book
  2) *Them's book
  3) *They's book

- Accordingly, we will instead suppose that there is a **null D**, **Ø$_{gen}$**, that checks genitive case. The genitive case form of a non-pronominal DP *is* audible in English, as *DP*'s.



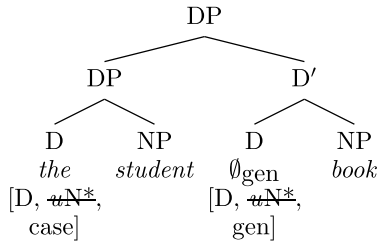
The king's every whim

1) A whim
2) The king's whim
3) The king's every whim

- To the extent that *every* is a D, this indicates two things:
  - The king is to the left of the D; really, the specifier of DP is the only place it could be.
  - The genitive case *'s* isn't *always* incompatible with an overt D (hence, better to think of *'s* not as a D but rather as a case marker on the possessor DP). We take this (marked) use of *every* to be an exceptional overt determiner that can still check [gen].

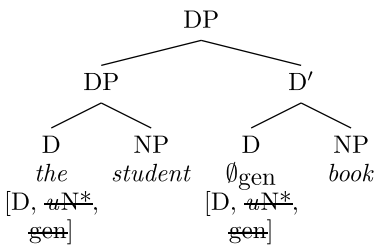
Checking genitive case

- The checking of genitive case in the DP works exactly like the checking on nominative case in the TP does.



Checking genitive case

- The checking of genitive case in the DP works exactly like the checking on nominative case in the TP does.



I don't mean to preclude the possibility that the possessor actually moves from somewhere into SpecDP—we'll explore that next week, but that need not happen for this to work.

A couple of null Ds

- So we have at this point a couple of different null determiners. They are as different as *the* is from *a* or from *that*, they just happen to be pronounced the same way (like this: " ").
- One is **Ø$_{gen}$**, which has a [gen] feature and in whose specifier we find possessors.
- Another is **Ø$_{indef}$**, which is a nonsingular indefinite article, in whose complement we find plurals and mass nouns.

  [**Ø$_{indef}$** Milk] spilled. [**Ø$_{indef}$** People] cried.

- Mass vs. count: Some nouns indicate countable things (*chairs*) others indicate stuff (*milk*). Singular/plural distinctions don't apply with mass nouns.

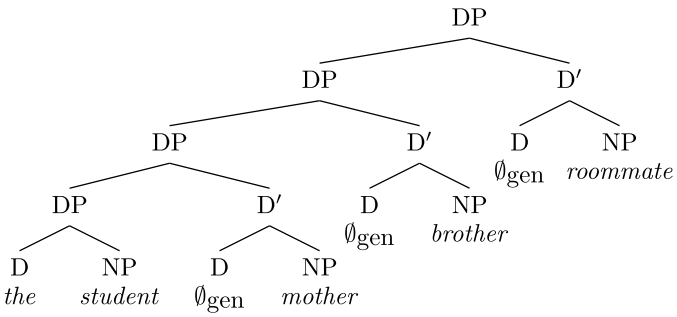
Recursion

- Another noteworthy aspect of the possessor phrase is its *recursive* property.
- The possessor is a DP in the specifier of DP. That means that the DP possessor could have a possessor too…

  1) The student's father's book

  2) The student's mother's brother's roommate

Recursion



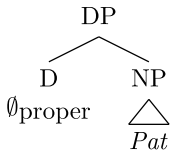
Proper names

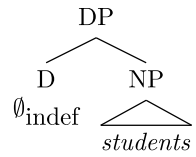
- As for proper names like *Pat*, we will assume that they have a structure something like *students*.

  1) The Pat we respect came to the party.

  2) O Giorgos ephuge
     the George left
     'George left.'

- **Ø$_{proper}$** (names are not indefinite; this is probably mostly the same as *the*, but silent).
- *Implementation:*
  Ø$_{proper}$ has a [*u*proper] feature, *Pat* has a [proper] feature.





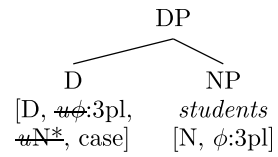
Number agreement on D

- What is wrong with *[**DP** *A students*] and *[**DP** *student*]? It's a lack of agreement in number. It's like **Students eats lunch*.
- We can encode this in the same way: The indefinite determiner has a [*u*ϕ:] feature, and the N has ϕ-features as always (including a num feature).
- The [*u*ϕ:] feature is valued and checked by the ϕ-features of the N.

Number agreement

- This means *a* and **Ø$_{indef}$** are in fact pronunciations of the same D (Like *me* and *I* are).
  - *A(n)* is the pronunciation when it has a [~~*u*~~ϕ:sg] feature
  - Ø is the pronunciation otherwise

[**DP** **Ø$_{indef}$** students]



[**DP** a student]