Case
- Recall that pronouns in English show distinctions in case:
- Subject pronouns are in nominative case
- Object pronouns are in accusative case
- How can we ensure the correlation?
  1) I saw her.
  2) She saw me.
  3) They saw him.

[ucase:nom]
- Nominative subjects generally appear in the specifier of a finite T.
- Finite T is pretty much any kind of T except the infinitive.
- We can treat case like we treated tense inflection:
  - Suppose T also has a \[u \text{case:nom}\] feature.
  - Suppose nominative NPs have a \[u \text{case:}\] feature.
  - Suppose the \[u \text{case:nom}\] on T can value \[u \text{case:}\] on the NP, checking both.
  - So T needs a nom NP, and a nom NP needs T.

[ucase:acc]
- Subjects check nominative case with T. Objects have accusative case, which we can treat in the same kind of way.
  - Suppose v has \[u \text{case:acc}\].
  - Suppose accusative NPs have \[u \text{case}\].
  - Suppose the \[u \text{case:acc}\] on v can value the \[u \text{case:}\] feature on the NP, checking both.
  - Nominative case is a relation between (finite) T and an NP, accusative case is a relation between v and an NP.

Pronouns
- Nominative case is associated with finite T.
  - She will charm snakes.
  - I want her to charm snakes.
  - I expect her to charm snakes
  - Non-finite T is not associated with nominative case. It’s not actually associated with accusative case either, but we’ll come back to that later.
  - Because NPs have an unvalued \[u \text{case:}\] feature, we can suppose that pronouns always enter the numeration the same way, and are valued based on where they are Merged.
  - pronoun \[N, u \text{case:}, \ldots\]

NPs need case
- Although in English we only see the morphological effect of case on pronouns, we assume that all NPs have an unvalued \[u \text{case:}\] feature.
  - Plenty of languages other than English show case on all NPs, not just on pronouns. Case is something that goes with being an NP. It’s just something you often don’t hear in English.
  - Notational shortcuts:
    - \[\text{nom}\] is used for \[u \text{case:nom}\] (on T, or NP when checked)
    - \[\text{acc}\] is used for \[u \text{case:acc}\] (on v, or NP when checked)
    - \[\text{case}\] is used for \[u \text{case:}\] (on an NP)
Subject-verb agreement

Recall that in English, the \( \phi \)-features of the subject have an effect on the morphology of the verb:

1) Fans were rioting on Comm Ave.
2) A fan was rioting on Comm Ave.

While we're here, we might as well account for this too. It is also an agreement relation, between the subject and, eventually, the verb (or auxiliary, if there is one).

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Subject-verb agreement

So. The verb gets its tense inflection specified by \( T \) when, e.g., the \([\text{tense:pres}]\) feature of \( T \) values the \([\text{ulnfl:}]\) feature of \( v \).

Since the subject already agrees with \( T \) (the \([\text{nom}]\) feature of \( T \) checks the \([\text{case}]\) feature of the subject), we'll incorporate subject agreement into this process.

Notice that we still want this agreement to be mediated by \( T \) (sometimes it values, e.g., Perf):

1) They have been reading novels.
2) She has been reading novels.

Subject-verb agreement

Finally, we suppose that the (checked) \([\phi:pl]\) feature of \( T \), also values a \([\text{ulnfl:}]\) feature on a lower \( v \) (or Perf, or Prog).

The rules of pronunciation will tell us that a \( v \) with the verb \textit{riot} adjoined to it sounds like:

- “riots” if \( v \) has the feature \([\text{ulnfl:pres,sg}]\)
- “riot” if \( v \) has the feature \([\text{ulnfl:pres,pl}]\)

Notice that \( T \) values a \([\text{ulnfl:}]\) feature all at once, with any relevant feature(s) it has (so, tense and \( \phi \)-features both).

Subject-verb agreement

Suppose then that \( T \) has a \([\text{u} \phi:]\) feature as well.

The subject has (interpretable) \( \phi \)-features that value the \([\text{u} \phi:]\) feature of \( T \).

- Fans were rioting on Comm Ave.
- \( T \) [\( T, uN^*, u\phi; \), nom] [\( u\text{case:nom} \) ]
- fans [\( N, \phi:pl, case \) ] [\( u\text{case:nom} \) ]

So, once \( T \) is in the structure, \( \psi \)-commanding \textit{fans} in SpecvP, we get:

- \( T \) [\( T, uN^*, u\phi:pl, nom \) ] [\( u\text{case:nom} \) ]
- fans [\( N, \phi:pl, nom \) ] [\( u\text{case:nom} \) ]

Subject-verb agreement

Finally, we suppose that the (checked) \([\phi:pl]\) feature of \( T \), also values a \([\text{ulnfl:}]\) feature on a lower \( v \) (or Perf, or Prog).

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Notice that \( T \) values a \([\text{ulnfl:}]\) feature all at once, with any relevant feature(s) it has (so, tense and \( \phi \)-features both).

She likes them

So, let’s walk through it.

We start by merging \textit{like} and the 3pl pronoun.
She likes them

- \(v \ [v, uN^*, u\text{Infl};, uV^*, \text{acc}]
- We Merge \(v\) with VP (HoP).
- The \([\text{acc}]\) on \(v\) matches, values, and checks the \([\text{case}]\) on the pronoun, checking itself as well.
  - Agree is lazy, we can do this without any further Merging or Moving.

\[
\begin{align*}
  v' & \text{ VP} \\
  v & \text{ NP}
\end{align*}
\]

- We Merge \(v\) with VP (HoP).

\[
\begin{align*}
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\[
\begin{align*}
  v & \text{ VP} \\
  v' & \text{ NP}
\end{align*}
\]

- The V moves up to adjoin to \(v\) to check the \([uV^*]\) feature of \(v\).

\[
\begin{align*}
  V & \text{ VP} \\
  v & < V > \text{ NP}
\end{align*}
\]

- The V moves up to adjoin to \(v\) to check the \([uV^*]\) feature of \(v\).

\[
\begin{align*}
  V & \text{ VP} \\
  v & < V > \text{ NP}
\end{align*}
\]

- The T is Merged with vP (HoP).
- The \([\text{nom}]\) feature of T matches, values, and checks the \([\text{case}]\) feature of the pronoun, checking itself in the process.

\[
\begin{align*}
  T' & \text{ vP} \\
  T & \text{ NP} \\
  v & < V > \text{ NP}
\end{align*}
\]

- The T is Merged with vP (HoP).
- The \([\text{nom}]\) feature of T matches, values, and checks the \([\text{case}]\) feature of the pronoun, checking itself in the process.

\[
\begin{align*}
  T' & \text{ vP} \\
  T & \text{ NP} \\
  v & < V > \text{ NP}
\end{align*}
\]

- From now on: (Finite) T can only value a lower \([u\text{Infl}]\) feature once T itself has a value for \([\phi]\). Both \([\text{tense}]\) and \([\phi]\) value the lower \([u\text{Infl}]\) feature. First step is always to check the \([u\phi]\) feature on T, after which T will check the lower \([u\text{Infl}]\) feature.

\[
\begin{align*}
  T' & \text{ vP} \\
  T & \text{ NP} \\
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She likes them

• Finally, the NP is moved up and Merged with T' in order to check the EPP feature (the \([uN^*]\) feature) of T.

The case of prepositional objects

• Consider the case of the object of a preposition:
  • Computers break near me.

  Now that we've incorporated case into our system, we're stuck with it. Noun phrases come with case. Computers has case (nominative) and me has case (accusative).

  The question is: How is the case of me checked?

Computers break near me

• Computers break is unaccusative; there's no agent, and computers is the Theme/Patient, it is the affected object.

• Thus, we have in our numeration:
  • break \([V, uN^*]\)
  • \(v_{\text{uacc}}[V, \text{uInfl}; uV^*]\)
  • computers \([N, \phi:3pl, \text{case}]\)
  • T \([T, \psi:, \text{pres}, \text{nom}, uN^*]\)

  As well as near and me, which we'll get to in a moment.

Computers break

• First, let's just do computers break.

• We start by merging break and computers.

  We Merge v with VP (HoP).

• \(v[v, \text{uInfl}; uV^*]\)

• \(v_{\text{uInfl}}[V, \phi:3pl, \text{case}]\)
Computers break

- The V moves up to adjoin to v to check the [uV*] feature of v.

\[ \text{vP} \]
\[ \text{v} \]
\[ \text{vP} \]
\[ \text{V} \]
\[ \text{break} \]
\[ [v, uV^*] \]
\[ [V, uN^*_3] \]
\[ \text{uInfl} : \]
\[ \text{v} \]
\[ \text{VP} \]
\[ < \text{V} > \]
\[ \text{NP} \]
\[ \text{computers} \]
\[ [N, \phi:3\text{pl}, \text{case}] \]

Computers break

- The T is Merged with vP (HoP).
- T has the features: [T, pres, \( \psi \), uN*, nom].
- The [nom] feature of T can now match the [case] feature of computers.

\[ \text{T'} \]
\[ \text{T} \]
\[ \text{vP} \]
\[ \text{v} \]
\[ \text{VP} \]
\[ < \text{V} > \]
\[ \text{NP} \]
\[ \text{computers} \]
\[ [N, \phi:3\text{pl, case}] \]

Computers break

- The [nom] feature of T matches, values, and checks the [case] feature of computers, checking itself in the process.
- The [u\( \phi \)] feature of T can also match the [\( \psi \):3pl] feature of computers.

\[ \text{T'} \]
\[ \text{T} \]
\[ \text{vP} \]
\[ \text{v} \]
\[ \text{VP} \]
\[ < \text{V} > \]
\[ \text{NP} \]
\[ \text{computers} \]
\[ [N, \phi:3\text{pl, case}] \]

Computers break

- The [\( \psi \):3pl] feature of computers matches, values, and checks the [\( \psi \):3pl] feature of T.
- The [tense:pres] feature of T matches the [uInfl:] feature of v, which will be valued by both the tense and \( \phi \)-features of T.
- It’s [tense:pres] that matches the [uInfl:] feature, but the \( \phi \)-features “come along” when the [uInfl:] feature is valued.

\[ \text{T'} \]
\[ \text{T} \]
\[ \text{vP} \]
\[ \text{v} \]
\[ \text{VP} \]
\[ < \text{V} > \]
\[ \text{NP} \]
\[ \text{computers} \]
\[ [N, \phi:3\text{pl, case}] \]

Computers break

- The [uN*] feature of T matches the [N] feature of computers. This is not sufficient to check the [uN*] feature because they are not local, so computers is moved up to SpecTP.

\[ \text{T'} \]
\[ \text{T} \]
\[ \text{vP} \]
\[ \text{v} \]
\[ \text{VP} \]
\[ < \text{V} > \]
\[ \text{NP} \]
\[ \text{computers} \]
\[ [N, \phi:3\text{pl, case}] \]

Computers break

- Once the [N] feature of computers is a sister to the T’ that has the [uN*] feature (the feature projects from T to T’—it’s the same feature), the [uN*] feature is checked.

\[ \text{TP} \]
\[ \text{NP} \]
\[ \text{computers} \]
\[ [N, \phi:3\text{pl, case}] \]
\[ \text{T'} \]
\[ \text{T} \]
\[ \text{vP} \]
\[ \text{v} \]
\[ \text{VP} \]
\[ < \text{V} > \]
\[ < \text{NP} > \]
\[ \text{computers} \]
\[ [N, \phi:3\text{pl, case}] \]
Computers break near me

- Now, let’s consider Computers break near me.
- Me is clearly accusative. There’s nothing here that can value a case feature as accusative. That’s why I chose break. All we’re adding to this is me (which has accusative case) and the P near.

**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.

**P checks accusative**

- So, in general: A preposition P...
- Has a [P] category feature
- Has a [uN⁰] feature, motivating a Merge with its object.
- T has [T], [uN⁰] (EPP), [uφ;], [nom]
- v has [v], [uInfl;], [uV⁰], and, if v assigns a θ-role, it has [uN⁰] and [acc].
Adverbs

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

• 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.
• vP 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].
  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 Merge 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, unInfl]` selects a `v unaccusative`.
  
  - By selecting for `v 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 `[unInfl]` feature, if Pass’ own `[unInfl]` 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

- The V moves up to adjoin to v to check the `[uV*]` feature of v.

- The Pass auxiliary is Merged (HoP).
  
  - `[Pass] matches, values, checks [unInfl:] on v.`

- [PassP] matches, values, checks [unInfl:] on v.

  ![Diagram](image1.png)

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

- Lunch was eaten

  ![Diagram](image2.png)

- Lunch was eaten

  ![Diagram](image3.png)

- Lunch was eaten

  ![Diagram](image4.png)
Lunch was eaten
• Lunch moves to SpecTP (checks [uN*] on T).

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?

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.

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
  ‘Four students bought books.’

• 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.