

C-selection and the verb phrase

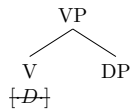
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1 Syntax vs. Lexicon

- A suggestion from Chomsky (1995): Merge is feature driven

- (1) Uninterpretable features scattered across the numeration get checked/deleted by merging constituents together with certain features



- **General question:** Where do these Merge features come from?

– Some options:

- * Option 1: the syntax (lexicon only contains category information)

PHON: h^g

SYN: V

SEM: λx . hug x

V is defined as having the feature [$\cdot D$]

- * Option 2: the lexicon (has both category and c-selection)

PHON: h^g

SYN: V, [$\cdot D$]

SEM: λx . hug x

– These options make very different predictions regarding cross-linguistic variation

- * On option 1, all lexical verbs are identical from the perspective of syntax \rightarrow the distribution of verbs and the structure of verb phrases should not vary much.
- * On option 2, lexical verbs can differ *syntactically* as well as phonologically and semantically. One verb could c-select for 7 arguments, another none, some might trigger movement while others don't, etc.

- **Reality:** somewhere in between these two predictions. Verb phrases don't all look identical, but they don't vary infinitely either.

*Many thanks go to Patrick Elliott, Sabine Iatridou, Norvin Richards, David Pesetsky, and the audience at MIT Ling Lunch for their feedback and attention to detail throughout this project. A special thanks goes to Kenyon Branam, who suggested that I think about selection in the first place. All mistakes are my own.

- Most verb phrases roughly take the shape: DP V (DP) (XP) (XP)
- **Proposal:** I'll take up a version of Option 1 – lexical entries specify an item's syntactic category; syntactic category pre-determines what c-selectional features it has and how it is to combine with other elements
 - * Where does variation in verb phrase structure come from?
 - C-selection is allowed to *fail* (Preminger, 2014; Longenbaugh, 2019) – not every feature that a category possesses needs to be checked in the course of a derivation
 - Some c-selectional features are *underspecified* – the feature $[\cdot X \cdot]$ can be checked by an element of any category

1.1 Move vs. Merge

- A second suggestion from Chomsky (1995):
 - (2) There is no operation *Move* – there are only Merge and re-Merge (or external and internal Merge)
- If Move is just Merge, and Merge is driven by features, then shouldn't movement be driven by the same features? (Adger, 2003; Müller, 2010)

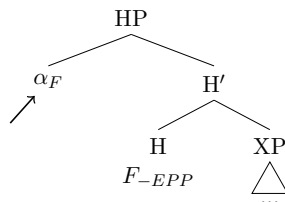
(3) A world in which Move and Merge both check the same features



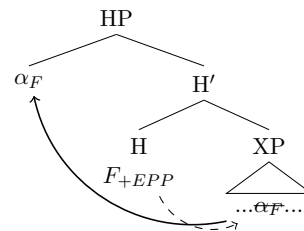
- But wait! (you might say) Aren't Merge and Move distinguishable by the fact that movement is mediated by *Agree*?
 - Movement is the process of $\text{Agree} \rightarrow \text{Merge}$ ($\approx \text{EPP}$), while Merge is just Merge without Agree

(4) A world in which Move is triggered by EPP features, while Merge is not

a. External Merge



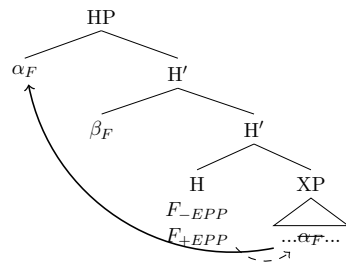
b. Internal Merge



- If Merge features are properties of category instead of individual lexical items, H must have the same features in every derivation involving H
 - If we assign H the feature F_{+EPP} , H should only be found in derivations like (4b)

- If we assign H the feature F_{-EPP} , H should be found in both derivations like (4a) and (4b)
- If we assign H both F_{+EPP} and F_{-EPP} , we should find derivations like (5)

(5) Internal+External Merge



- EPP features: a problem of complementarity

- Consider that raising and expletive insertion are in complementary distribution in English

- (6)
- Three large taxis arrived at the train station. (raising)
 - There arrived three large taxis at the train station. (expletive *there*)
 - *There three large taxis arrived at the train station. (*raising+expletive *there*)

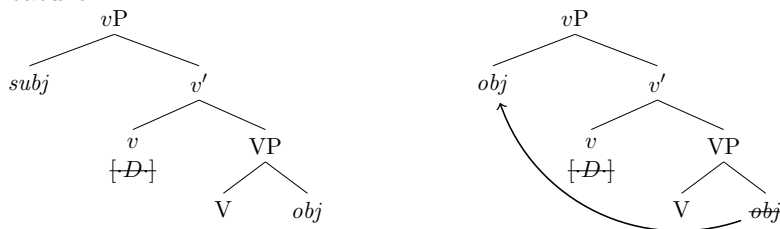
- Assuming that raising and expletive insertion target the same position, the complementary distribution of Move and Merge can only be described with general Merge features – if H had an EPP feature, either (6b) should be bad or (6c) should be good

* *It cannot be that ALL movement is controlled by EPP features*

- **Today:** Based on insights from Longenbaugh (2019), I'm going to entertain a world without the EPP and see how far we get

- Transitivity alternations come for free (Longenbaugh, 2019): a single *Merge DP* feature on *v*, henceforth $[\cdot D \cdot]$, licenses subjects of transitive clauses and raised subjects of intransitive clauses (based on the assumption that A-movement also stops in Spec *vP*, following Legate (2003); Sauerland (2003))

- (7) *v* doesn't need distinct features for transitive vs. intransitive clauses: just an ever present $[\cdot D \cdot]$ feature



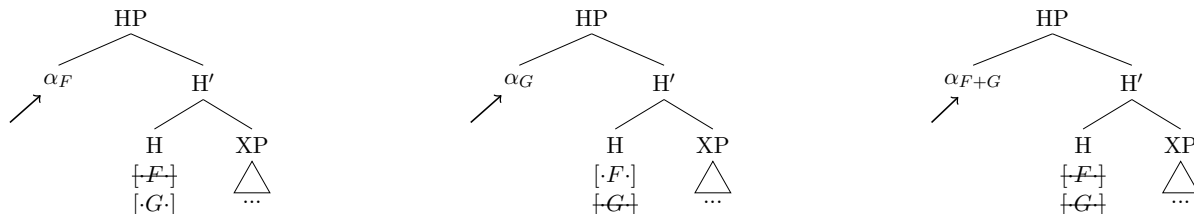
- **Goal for today:** develop of a uniform set of features and functional categories, and explore (some of) the resulting typology of verb phrases and alternations

1.2 Preview of proposal:

- (8) Background assumptions:
- Merge features on a head are *unordered* (Longenbaugh 2019, contra e.g. Adger 2003; Müller 2010), and can *fail* (Preminger, 2014)

- b. Feature Maximality/Multitasking/Free Rider condition: Given a head H with features $[F_1] \dots [F_n]$, if XP discharges $[F_i]$, XP must also discharge each $[F_j]$ that it is capable of (Chomsky, 1995; Pesetsky & Torrego, 2001; Rezac, 2013; van Urk & Richards, 2015; Longenbaugh, 2019)

- (9) Merging a bearer of F or G (but not both) checks one feature on H. Merging a bearer of *both* F and G checks both features on H.



- To understand the space of possible structures we can build, we need to establish an inventory of functional heads and Merge features

– **Proposal:**

- * Two functional heads in the verb phrase: V and *v* (Larson, 1988; Hale & Keyser, 1993; Chomsky, 1995; von Stechow, 1995, a.o.)
- * Three (non- \bar{A}) features: $[\cdot D \cdot]$ (for DPs), $[\cdot V \cdot]$ (so *v* can select VP), $[\cdot X \cdot]$ (unspecified, for an element of any category)

- **Result:** because D,V are instances of X, non-DP/VP arguments must be merged *first* in their selecting phrase

- * \rightarrow non-DP arguments may disrupt complementation relationships between heads and other selected arguments

• **Main takeaways**

- (10) Even though the lexicon may contain large amounts of idiosyncrasy (in terms of verb/argument meanings/pronunciations/requirements), the syntax only provides a much smaller set of possible structures from which to choose \rightarrow the syntax constrains the lexicon (Hale & Keyser, 2002)

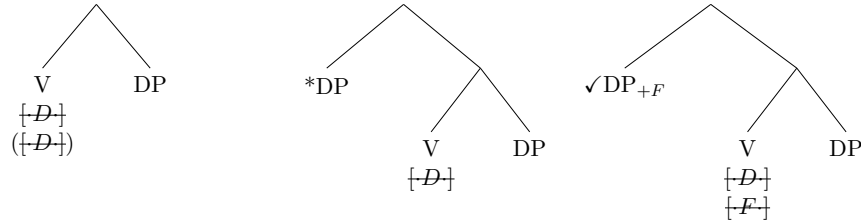
- (11) Highlight reel:

- UG provides two ways to build clauses with three arguments: I propose that this inherent structural flexibility in three-argument clauses explains the profile and prevalence of the dative alternation
- Passives of ditransitives: predicted to be symmetric, UNLESS there is also agreement and/or wh-movement, in which case we should get “dative intervention” and/or passivization restrictions involving the direct object

2 Building verb phrases

- Since Merge is feature driven, every argument introduced in a clause needs a corresponding Merge feature

(12) Only one DP licensed per phrase, unless licensed by another feature



• What features are involved in argument introduction?

– My proposal:

(13) Features for each verbal category

- a. $V = [\cdot D \cdot], [\cdot X \cdot]$
- b. $v = [\cdot D \cdot], [\cdot X \cdot], [\cdot V \cdot]$ (and $[\cdot wh \cdot]$ for wh-movement)

– **Important point:** because Merge features can fail, $[\cdot D \cdot]$ and $[\cdot X \cdot]$ do not represent *requirements* for DP/XP arguments! They just represent the *capacity* to host such arguments.

(14) Arguments of V:

- a. Jo enjoys fruit. (DP object)
- b. Amy turned blue. (AP object)
- c. Beth depends on Lauri. (PP object)
- d. Meg wants to go camping. (TP object)
- e. Jo thinks that Marmie likes carrots. (CP object)
- f. Meg introduced Jo to Lauri. (DP+PP objects)
- g. Amy told Beth that Marmie likes carrots. (DP+CP objects)

– Alternative proposal (rejected): V has $\{[\cdot D \cdot]; [\cdot A \cdot]; [\cdot P \cdot]; [\cdot T \cdot]; [\cdot C \cdot] \dots\}$

- * Following Grimshaw (1979); Pesetsky (1982); Elliott (2017), finding evidence for $\{[\cdot A \cdot]; [\cdot P \cdot]; [\cdot T \cdot]; [\cdot C \cdot]\}$ is not easy
- * S(emantic)-selection and l(exical)-selection account for the behaviors of clausal and prepositional complementation respectively

(15) Elliott (2017), example 150

- a. Sam promised/said/explained/thought that he would give an extra lecture.
- b. Sam promised/said/explained/thought something.

(16) Grimshaw (1979); Pesetsky (1982)

- a. Sue asked whether Bill likes carrots.
- b. Sue asked the time.
- c. Sue asked for the salt.

(17) L-selection for particular vocabulary items (Pesetsky (1995), p. 246, fn. 86, citing Donca Steriade p.c.)

- a. Sue relies **on**/***to**/***of**/***for** the bus.
- b. Sue bristled **at**/***to**/***of**/***for** Sally's insult.

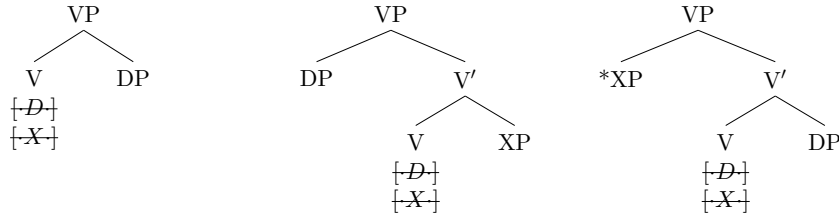
– **Two predictions:**

* Verbs can have two internal arguments: DP+XP, but not e.g. four: DP+AP+PP+CP

- (18) a. Beth told [Lauri] [about syntax].
 b. Jo told [Marmie] [that Beth likes carrots].
 c. *Jo told [Marmie] [blue] [about syntax] [that Merge is a structure building operation].

* Because D is an instance of X, XPs must Merge first!

(19) The two kinds of VPs: XP is only licensed if it is merged first.



- (20) a. I told (*about syntax) Lauri's favorite poet's cat (about syntax).
 b. I promised (*to eat a carrot) Marmie's mother's friend Ed (to eat a carrot).
 c. I told (*that the world is round) Beth's nephew's stuffed animal (that the world is round).

– **Result:** V can host at most two arguments, at most one of which is a DP – if an XP is licensed, it must have merged first (and therefore shows up further to the right than DP arguments, since XP must be a complement, which makes everything else a non-complement)

– **Implication:** To build a transitive clause, we need a second argument introducing head, *v*
 * *v* can also host DP and XP arguments

(21) Arguments of *v*:

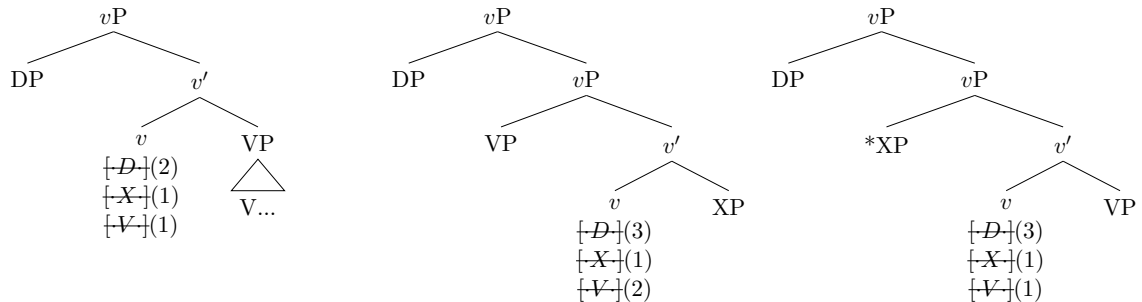
- a. Jo enjoys fruit. (DP subject)
 b. The book seems to Beth to be interesting. (experiencer PP subject)
 c. Amy was introduced to Lauri by Beth. (PP subject Collins 2005)
 d. Meg bet Amy.dat a day's pay that Jo would forget her scarf. (dative argument)

– *v* also needs an extra feature to select for VP

(22) Conditions on the orders of operations:

- a. DPs are always licensed → can be merged at any time
 b. non-DPs are only licensed if merged first → can only be complements of V and *v*
 c. *v* can't take both a VP and a non-DP complement → non-DP arguments of *v* force VP to become a specifier

(23) *v*P s: an XP (non-DP, non-VP) is only licensed if it merges first → makes VP a specifier.



• **Summary:**

- Verb phrases can have at most four arguments, at most two of which are DPs (i.e. the ability to have transitive clauses entails the possibility of max. four arguments)
- The number and category of arguments has implications for the complement-hood of VP
- The possible verb phrases we can build are tightly constrained

(24) Possible numbers/types of arguments in verb phrases containing just V and *v*.

arguments in V → arguments in <i>v</i> ↓	∅	DP	XP	DP+XP
∅		1DP	1XP	1DP,1XP
DP	1DP	2DPs	1DP,1XP	2DPs,1XP
XP	1XP	1DP,1XP	2XPs	1DP,2XPs
DP+XP	1DP,1XP	2DPs,1XP	1DP,2XPs	2DPs,2XPs

(25) Ascribing names to each structure.

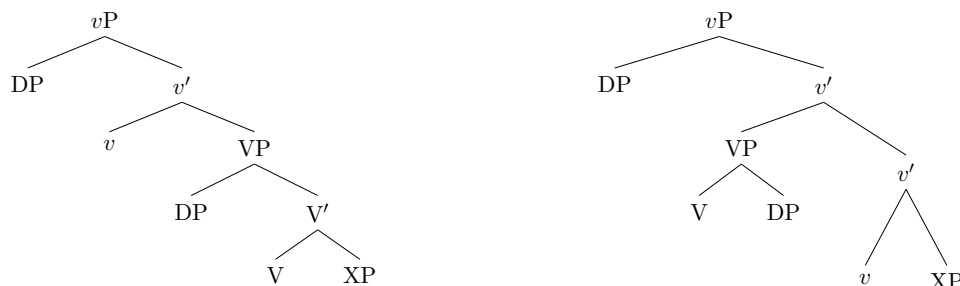
arguments in V → arguments in <i>v</i> ↓	∅	DP	XP	DP+XP
∅	<i>weather</i> verbs	unaccusatives	raising verbs	ditransitive unaccusatives
DP	unergatives	transitives	ECM verbs	ditransitives
XP	raising verbs	<i>star/puzzle/delight</i>	<i>seem/appear</i>	<i>find</i>
DP+XP	<i>wager</i>	ditransitives	<i>hear</i>	<i>bet</i>

• **A note on interpretation/UTAH:**

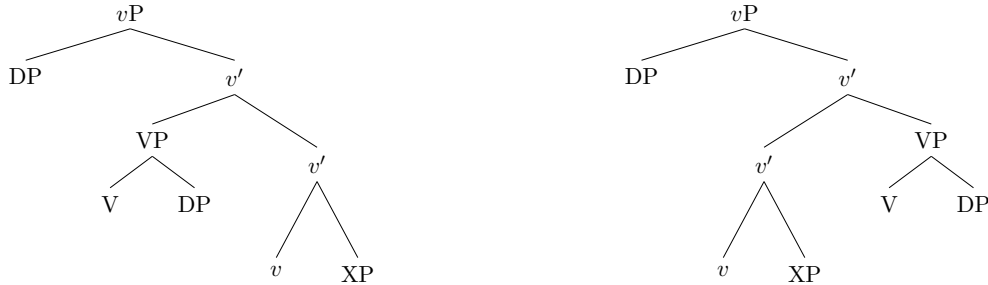
- I won't have time to give you a full theory of the syntax-semantics-morphology interface, but the following assumptions will do for now (hybrid neo-Davidsonian/FA approach):
- (26) DPs get their theta roles from the heads that introduce them (i.e. V often assigns its DP arguments some kind of “patient/theme”-like interpretation, *v* often assigns its DP arguments some kind of “agent/causer”-like interpretation; the precise thematic role assigned (or not assigned) depends on which verb/flavor of *v* is employed)
 - (27) XPs don't get their theta roles from V and *v*, either because they don't have theta roles (e.g. clausal arguments) or because they come with their own theta roles (e.g. prepositional phrases; *to Sue* ≈ *Sue* = *goal*, etc.)
 - (28) The interpretation of a DP is rigidly determined by which head licenses it; the interpretation of a PP is flexible, since it comes with its own theta marking

3 The dative alternation

(29) Two ditransitive structures



(30) VP extraposition affects word order



(31) Predicted interaction between word order and structural ambiguity

- a. DP V DP XP. (where DP can bind XP)
- b. DP V DP XP. (where DP cannot bind XP)
- c. DP V XP DP. (where DP cannot bind XP)

• What we find:

– In languages with a reported dative alternation (that I have looked at):

- * when the direct object *precedes* the indirect object, forwards and backwards binding are possible and scope ambiguities arise (Barss & Lasnik, 1986; Burzio, 1986; Larson, 1988, 1990; Aoun & Li, 1989; Pesetsky, 1995; Bruening, 2001, a.o.)

(32) DO-IO order: forwards and backwards binding

- a. Jo showed [Lauri and Amy_i]_{DP} [to each other's_i parents]_{XP} in the mirror.
- b. Jo showed [pictures of each other_i]_{DP} [to Lauri and Amy_i]_{XP}.

(33) DO-IO order: ambiguous scope

- a. I gave [a doll]_{DP} [to each child]_{XP}. *a > each; each > a*

- * when the direct object *follows* the indirect object, only forwards binding is possible, and only rigid surface scope

(34) IO-DO order: only forwards binding

- a. Jo showed [Lauri and Amy_i.dat]_{XP} [each other_i's parents]_{DP} in the mirror.
- b. *Jo showed [each other_i's parents.dat]_{XP} [Lauri and Amy_i]_{DP} in the mirror.

(35) IO-DO order: rigid surface scope

- a. I gave [a child.dat]_{XP} [each doll]_{DP}. *a > each; *each > a*

– This pattern is not unique to English

- * Japanese has the identical pattern: accusative-dative order is flexible for binding and scope; dative-accusative order is rigid for binding and scope (Hoji, 1985; Takano, 1998; Yatsushiro, 2003; Miyagawa & Tsujioka, 2004)

(36) *Japanese* binding in DO-IO order: forwards and backwards Miyagawa & Tsujioka (2004), ex. 61

- a. (?)John-ga [Hanako-to Mary]-o_i (paatii-de) otagai_i-ni
 John-NOM [Hanako-and Mary]-ACC (party-at) [each.other]-DAT
 syookaisita.
 introduced

‘John introduced Hanako and Mary to each other (at the party).’

- b. John-ga [otagai_i-no sensei]-o (paati-de) [Hanako-to John-NOM [each.other-GEN teacher]-ACC (party-at) [Hanako-and Mary]-ni_i syookaisita.
Mary]-DAT introduced
'John introduced each other's teachers to Hanako and Mary (at the party).'
(p.c. Shigeru Miyagawa)
- (37) *Japanese* binding in IO-DO order: only forwards Miyagawa & Tsujioka (2004), ex. 61
- a. John-ga [Hanako-to Mary]-ni_i [otagai_i]-o syookaisita.
John-NOM [Hanako-and Mary]-DAT each.other-ACC introduced
'John introduced Hanako and Mary to each other.'
- b. *John-ga [otagai_i-no sensei]-ni [Hanako-to Mary]-o_i
John-NOM [each.other-GEN teacher]-DAT [Hanako-and Mary]-ACC
syookaisita.
introduced
intended: 'John introduced Hanako and Mary to each other's teachers.'
(p.c. Shigeru Miyagawa)
- (38) *Japanese* scope Miyagawa & Tsujioka (2004), ex. 10
- a. Taro-ga [dono-nimotu]-mo [dareka]-ni okutta.
Taro.NOM every-package.ACC someone.DAT sent
'Taro sent every package to someone.' some > every; every > some
- b. Taro-ga [dareka]-ni [dono-nimotu]-mo okutta.
Taro.NOM someone.DAT every-package.ACC sent
'Taro sent someone every package.' some > every; *every > some
- * Greek also has the same pattern: DO-IO order is ambiguous for binding and scope, IO-DO order is not (Anagnostopoulou (2003) and Sabine Iatridou, p.c.)
- (39) *Greek* binding in DO-IO order (Sabine Iatridou, p.c.)
- a. O Gianis edhikse [ton Maria]_{DP} [s-ton eafton tis]_{XP} s-ton
the Gianis.NOM showed the Maria.ACC to-the REFL.ACC GEN in-the
kathrefti.
mirror.ACC
'John showed Mary to herself in the mirror.'
- b. O Gianis edhikse [ton eafton tis]_{DP} [s-tin Maria]_{XP} s-ton
the Gianis.NOM showed the REFL.ACC GEN to-the Maria.ACC in-the
kathrefti.
mirror.ACC
'John showed herself to Mary in the mirror.'
- c. O Gianis edhikse [tis Marias]_{XP} [ton eafton tis]_{DP} s-ton
the Gianis.NOM showed the Maria.GEN the REFL.ACC GEN in-the
kathrefti.
mirror.ACC
'John showed Mary.gen herself in the mirror.'

- d. *O Gianis edhikse [tu eaftu tis]_{XP} [tin Maria]_{DP} s-ton
 the Gianis.NOM showed the REFL.GEN GEN the Maria.ACC in-the
 kathrefti.
 mirror.ACC
 intended: ‘John showed herself.gen Mary in the mirror.’ (speaker intuition:
 extreme word salad)

(40) Scope: DO-IO order is ambiguous, IO-DO order is not

- a. O Gianis estile [kapiro grama]_{DP} [s-tin/se kathe efimerida]_{XP}.
 the Gianis.NOM sent some letter.ACC to-the/to every newspaper.ACC
 ‘John sent some letter to every newspaper.’ some > every; every > some
- b. O Gianis estile [kapias fititrias]_{XP} [kathe grama]_{DP}.
 the Gianis.NOM sent some students.GEN every letter.ACC
 ‘John sent some students every letter.’ some > every; *every > some

– Not every language looks exactly like English, Japanese, and Greek

* Spanish only has one word order available to it: DO-IO order

* Like English, Japanese, and Greek, Spanish DO-IO order is structurally ambiguous and identifiable by the availability of clitic doubling (Demonte, 1995; Cuervo, 2003)

(41) *Spanish* (Anagnostopoulou, 2003)

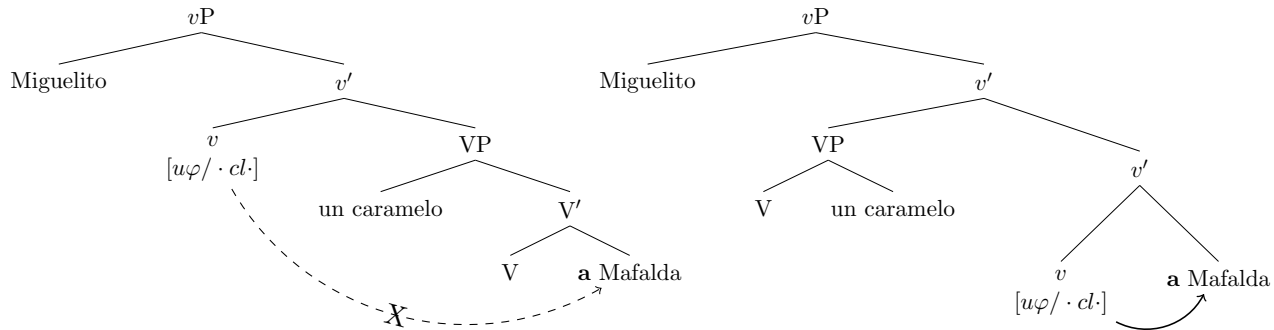
Miguelito (le) regaló [un caramelo]_{DP} [a Mafalda]_{XP}.
 Miguelito cl.DAT gave a candy a Mafalda

‘Miguelito gave Mafalda a piece of candy.’

(42) *Spanish* binding: clitic-doubled IOs are high; non-clitic-doubled IOs are low (Demonte (1995), ex. 9)

- a. El tratamiento psicoanalítico reintegró [a María]_{DP} [a sí-misma]_{XP}.
 the therapy psychoanalytic gave-back to Mary.DO to herself.IO
 ‘The psychoanalytic therapy helped Mary to be herself again.’
- b. *El tratamiento psicoanalítico reintegró/devolvió [a sí-misma]_{DP} [a María]_{XP}.
 the therapy psychoanalytic gave-back to herself.DO to Mary.IO
 intended: ‘The psychoanalytic therapy helped Mary to be herself again.’
- c. *El tratamiento psicoanalítico **le** devolvió [a María]_{DP} [a la estima de
 the therapy psychoanalytic CL-DAT gave-back to Mary.DO to the esteem of
 sí-misma]_{XP}.
 herself.IO
 ‘The psychoanalytic therapy helped Mary to be herself again.’
- d. El tratamiento psicoanalítico **le** devolvió [a la estima de sí-misma]_{DP} [a
 the therapy psychoanalytic CL-DAT gave-back to the esteem of herself.DO to
 María]_{XP}.
 Mary.IO
 ‘The psychoanalytic therapy helped Mary to be herself again.’

(43) Spanish XPs don’t change form – IO bears an overt P-like head, clitic doubling tracks position



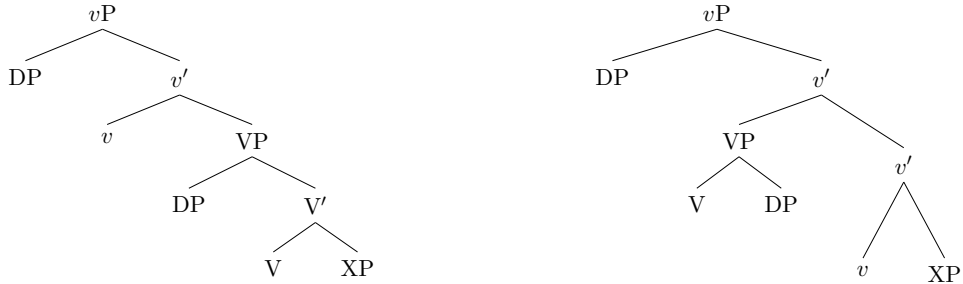
• **Interim Summary:** in every language we have seen so far (English, Japanese, Greek, Spanish), we observed...

(44) Observed interactions between word order and structural ambiguity

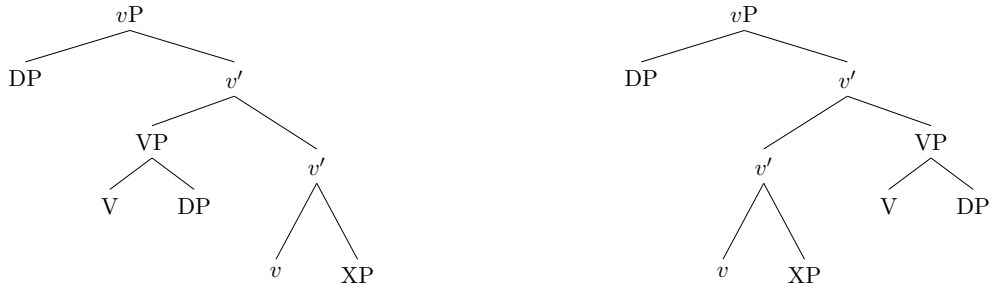
- a. DP V DP XP word order: DP can bind XP or vice versa
- b. DP V XP DP word order: DP cannot bind XP

– Such behavior is expected on the present approach: DP XP word order is compatible with *two different structures*, while XP DP order is only compatible with one structure

(29) Two ditransitive structures



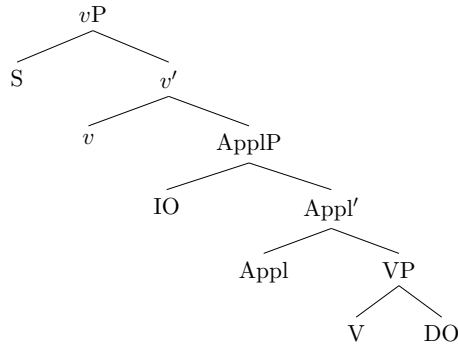
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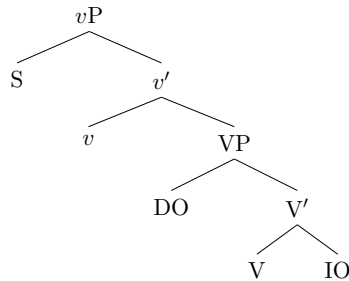
• Why this approach is more successful than others:

– Canonical ditransitive structures:

(45) Double object construction



(46) Prepositional dative construction



- Theories differ regarding whether one of these structures is derived from the other (e.g. *Dative shift*, as in Larson 1988, Baker 1997: 91), or whether they are just independently generated options (as in Harley 2002, Harley and Jung 2015, Harley and Miyagawa 2016: 21)
 - * The transformational theory is attractive for languages like Japanese, which independently has scrambling: if the base order is IO-DO, then DO scrambling to yield DO-IO word order has two possible binding outcomes (surface vs. reconstructed), as we find
 - Problem: not every language that shows this pattern has independent movement strategies, so why should so many languages randomly have object movement in this case?
 - * The base generation theory is attractive for languages like English, which otherwise lack object movement
 - Problem: accounting for backwards binding
- **Upshot:** On the present approach, languages are proposed to have the dative alternation because UG makes two structures available for ditransitive clauses
 - One of these structures is compatible with two different word orders, which accounts for backwards binding

3.1 A binding theory

- Why do XP arguments of v asymmetrically bind arguments of V (irrespective of word order) when there is no c-command?

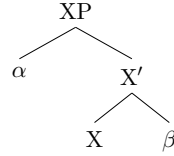
(47) Binding theory:

- a. α binds β iff α and β are coindexed, and (i) or (ii):
 - i. α and β m-command each other and α asymmetrically c-commands β
 - ii. α asymmetrically m-commands β

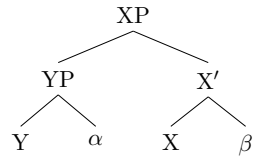
(48) M-command: α m-commands β iff every *maximal projection* that dominates α dominates β

(49) C-command: α c-commands β iff every *node* that dominates α dominates β

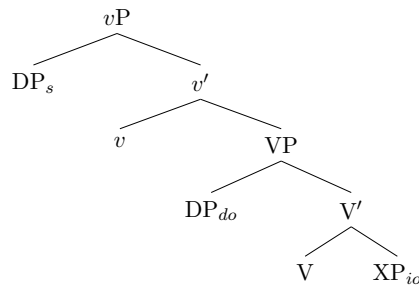
(50) a. If α and β m-command each other, but α asymmetrically c-commands β , α binds β and not vice versa



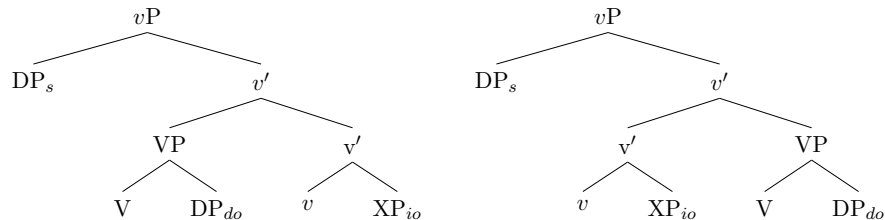
b. If β asymmetrically m-commands α , β binds α and not vice versa



(51) a. DO asymmetrically c-commands IO: DO binds IO and not vice versa



b. IO asymmetrically m-commands DO: IO binds DO and not vice versa



• What's left: explaining scope ambiguities!

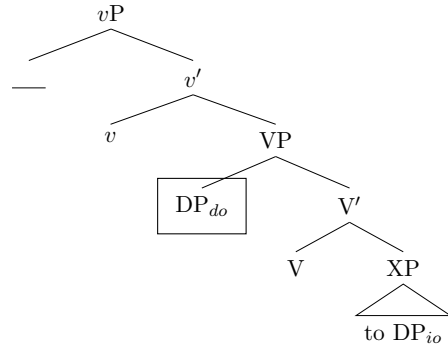
- To explain scope ambiguities, we need to understand how direct and indirect objects move
- Let's go to passives and wh-movement
- **What we find:** when the indirect object is an argument of v , either the indirect object or the direct object can passivize, *unless...*
 1. v has a φ probe – then v must probe the indirect object first
 2. the indirect object has \bar{A} -features – then it must move first

4 Passivization and wh-movement

- Passives: suppression of a DP subject leaves unchecked a $[\cdot D \cdot]$ feature on v that can license movement

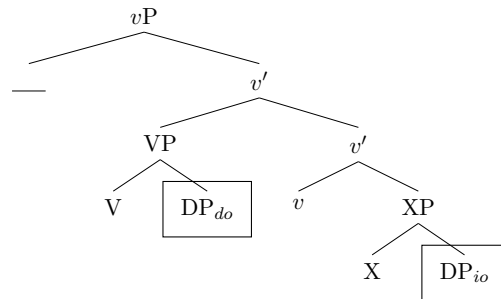
- Assuming relativized minimality: the “highest/most local” DP raises to subject position
- Passives of ditransitives:
 - * One of the ditransitive structures unambiguously promotes the direct object

(52) Passive with a low IO: only the DO can raise due to relativized minimality.

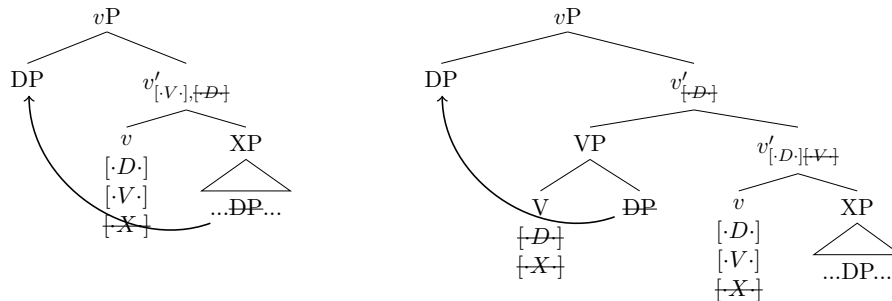


- * The other ditransitive structure ambiguously promotes either argument

(53) Either the DO or the IO can raise, since neither c-commands the other.



(54) Note: there are two stages in the derivation at which an indirect object can move, either before or after VP-merge; direct object can only move after VP-merge



- Proposal: the timing asymmetry in IO vs. DO movement is visible in dative intervention effects
 - Greek shows this with obligatory clitic doubling of the IO in passives
On the present approach: clitic doubling precedes VP-Merge
 - Norwegian shows this when an IO wh-moves in a passive
On the present approach: wh-indirect objects move before VP-Merges

4.1 Greek dative intervention

(55) Greek asymmetrical passive: no IO passive, and DO passive requires IO-clitic doubling

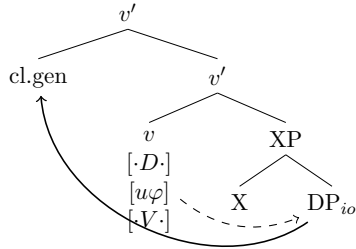
- a. *I Maria stalthike to grama.
the Maria.NOM sent.nonact.3s the letter.ACC
intended: ‘Mary was sent the letter.’
- b. To vivlio ?*(tis) charistike (tis Marias).
the book.NOM cl.GEN award.NACT the Maria.GEN
‘The book was awarded to Mary.’

- Proposal: clitic doubling is mediated by φ -agreement (Béjar & Rezac, 2009; Preminger, 2014)
 - Locality of Agree Béjar & Rezac (2009): a φ probe must look downward before it can percolate to the next node
 - Clitic doubling (along the lines of Béjar & Rezac 2009; Preminger 2014):
 - * Case Accessibility: Accessibility to Agree is determined according to the Revised Moravcsik Hierarchy: unvalued Case > dependent Case > lexical and other Case Bobaljik (2008); Preminger (2014)
 - * Proposal: attempting to agree with an inherent case-marked argument results in clitic doubling instead of full φ -agreement

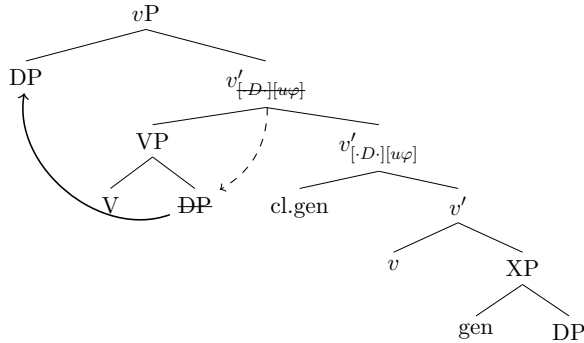
(56) *Multitasking* (van Urk & Richards, 2015) (revised)
If there are two available operations, A and B, where A checks more features than B, the derivation chooses A

(57) Greek passives:

- a. Step 1: Merge XP complement. Step 2: probe complement, which copies genitive feature (represented as a clitic)



- b. Step 3: Merge VP. Step 4: probe into VP. Step 5: Move DP.



4.2 Norwegian “dative intervention” in wh-questions

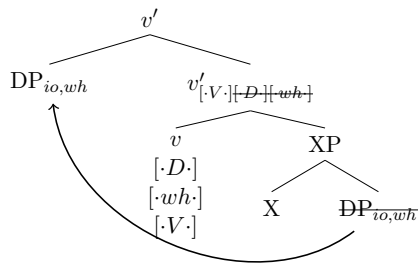
- Norwegian doesn’t have a φ probe on v , so passivization is symmetric

- (58) Norwegian symmetrical passive
- Jon ble gitt boka.
Jon was given the.book
 - Boka ble gitt Jon.
the.book was given Jon
- (Haddican and Holmberg 2015:145)

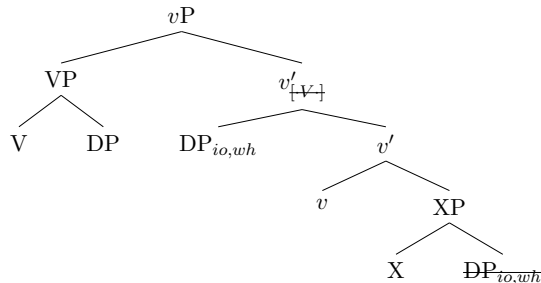
– *However*, Norwegian shows an interaction between passivization/wh-movement

- (59) Norwegian IO-wh-movement bleeds DO-passive (Holmberg et al. 2019 and references there)
- Hvem ble gitt boka?
who was given the.book
'Who was given the book?'
 - *Hvem ble boka gitt?
who was the.book given
intended: 'To whom was the book given?'

- (60) Norwegian wh-movement in passives:
- Step 1: Merge XP complement. Step 2: wh-move indirect object



- Step 3: Merge VP. The end.

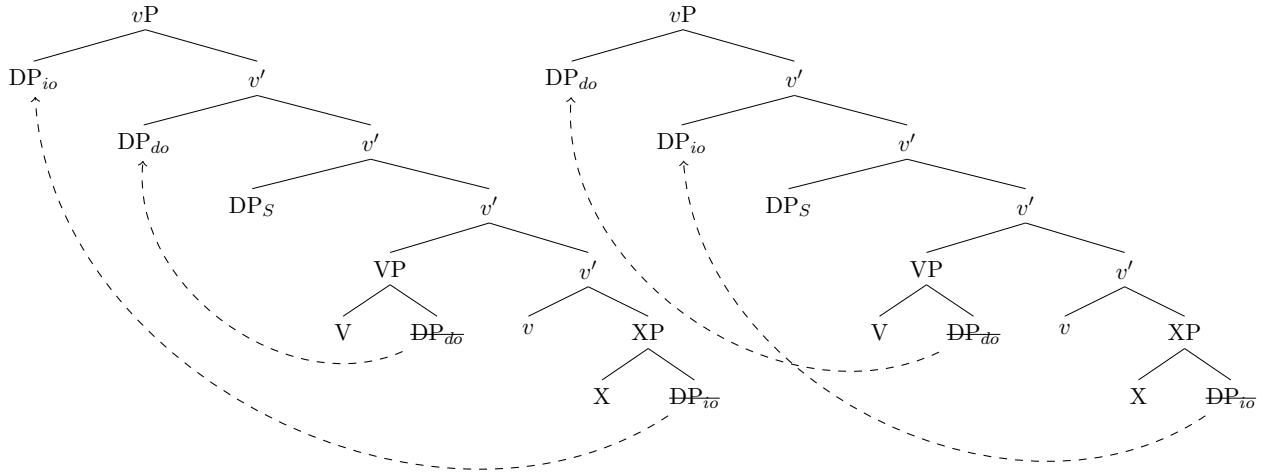


- Note: the indirect object *could not have moved as an XP rather than a DP*
 - If XP were the wh-phrase, it would check the $[+wh]$ feature in situ, and never get to the edge of vP at all (and thus never wh-move assuming any version of the PIC)
- **Result:** indirect objects don't have to passivize, but if they independently Agree with v or \bar{A} -move, they do so *before* the direct object has been introduced in the clause
 - Leads to obligatory clitic doubling in Greek
 - Leads to IO-wh-movement bleeding DO-passivization in Norwegian
- Back to scope ambiguities:

- Recall that indirect objects introduced by *v* take obligatory high scope over direct objects

(61) I gave [a child.dat]_{XP} [each doll]_{DP}. *a > each; *each > a*

- (62) Either argument of a double object construction can passivize: why does the IO take rigid scope over the DO if they both QR?



- Richards (1997): Multiple wh-movement tucks in
 - Bruening (2001): QR also tucks in, and obeys superiority
 - Rigid high scope of the IO comes about if it QR's before the DO does

(63) **IO-DO movement generalization:** *if* the IO moves/agrees at all, it does so before VP is merged, and hence before the DO moves/agrees

5 Conclusion

- Main claims:
 - (64) C-selectional features are properties of syntactic *categories* rather than individual lexical items
 - (65) C-selectional features can be checked by internal or external Merge
 - (13) Features for each verbal category
 - $V = [\cdot D \cdot], [\cdot X \cdot]$
 - $v = [\cdot D \cdot], [\cdot X \cdot], [\cdot V \cdot]$ (and [*wh*·] for wh-movement)
- Main results:
 - (66) A typology of verb phrase structures with at most four arguments, at most two of which are DPs
 - (67) non-DP arguments must be complements
 - (68) Flexibility in the position of XP arguments gives rise to alternations, e.g. the dative alternation

- a. Predicted word order-scope interaction: DP-XP order is structurally ambiguous, while XP-DP order is not
- (69) Passives of ditransitives: either DO or IO can passivize, unless the IO agrees/wh-moves/QRs → in that case, the IO must agree/move before the DO is merged

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