Syntax Beyond Merge: Objects

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Outline

I. The problem: The distinction between DP complements and DP specifiers is real but not adequately represented in most current syntactic theories.

II. The framework: Syntax Beyond Merge: syntactic rules/constraints evaluated over linear projections of hierarchical, Merged, structures.
   a. A bonus: The framework automatically provides a satisfactory approach to Pesetsky's Cascade vs. Layering "paradox."
   b. Real advantage: better account of vP structure and the low vs. high applicative distinction.

III. C-Command vs. Head Projections: LCA vs. Mirror, and an answer to an old puzzle

IV. (Looking ahead: Linearization within the framework unifies Greenberg Principle 20, Brody's Mirror, the Final over Final condition, and Holmberg's Generalization.)

Foreword

- There’s not much in the way of a unifying framework for analytic work in syntax. Claims about such things as the relationship between syntactic category and selection, for example, are hard to evaluate without a broad theory in which both category and selection are deeply. Compare Distributed Morphology within the subfield of Morphology

Toward a unified syntactic framework

- The “Beyond Merge” project is meant to be:
  - Positive: acknowledge and incorporate the productive leading ideas of different researchers and research traditions
  - Inclusive: Remember Relational Grammar? There are MANY current and not so current syntactic (sub)theories with deep insights to offer.
  - Forward looking: Developed with an eye to integration with neurolinguistics.

I. The Problem

- Recent approaches to argument structure, following in particular Larson's insights in his VP shell theory, have collapsed the distinction between direct objects, indirect objects, and ECM subjects.
- However, Soo-Hwan Lee, in his 2023 NYU dissertation, discovered a strong asymmetry between direct objects and other VP internal complements – this asymmetry resonates throughout the syntactic literature, if you're inclined to acknowledge it.

Soo-Hwan Lee (2023)

- Nominative and Dative in Korean have honorific counterparts

NOM	*i∼ka*	DAT	*hanthey*	ACC	*(l)ul*	VOC	*(y)a*
HON.NOM	*kkeyse*	HON.DAT	*kkey*	*HON.ACC	N/A	HON.VOC	ø

- But Accustive does not.
- Generalization: a situation that calls for honorific case doesn't trigger an honorific case counterpart to a regular case if the argument is an object.

Is this a generalization about case and direct objects or just about the availability of honorific ACC?

- Test cases: NOM Objects (complements to the verb) should not show honorific NOM even though the morphological form exists.
- Where to look:
  - Psychological predicates: DAT subjects and NOM objects.
  - Passives of double complement constructions, where DAT/ACC ACC becomes NOM ACC in the passive.

No honorofic NOM on NOM objects

- Psych verbs: Dative subject, NOM object. In these sentences, the DAT subject can trigger honorific agreement on the verb, not the NOM.

(1)할아버지께　　소녀가　　무서우시다

- grandfather-HON.DAT girl-NOM scary-HON

(2) 소녀에게　할아버지가　무섭다

- girl-DAT　grandfather-NOM scary
- BUT, no HON NOM on the object in (2).

- *Passives of some DAT ACC constructions, where the DAT becomes the subject and the object becomes NOM, pattern the same. However the data here are subject to lots of dispute in the literature (not a dispute over the distribution of honorific case, just over the possibility of NOM objects and DAT subjects in passives).*
- *E.g., passivization of NOM DAT ACC adversative possessor raising construction (I-NOM grandfather-DAT photo-ACC tore, Grandfather-DAT photo-NOM tore-PASS, which is grammatically parallel to the psych verb construction in (18))*

French: Passive requires complement to v, reflexives “come from” complement or specifier positions

	Passive	Se-Reflexive
Direct Objects	English: He was shoved. French: Un cadeau a été offert à Jean. (A gift was offered to John)	French: Il s’est frappé. (He hit himself) Le français se parle ici. (French is spoken here)
Indirect objects =specifier of double object construction	English: He was given a book. French: *Il a été donné un livre.	French: Jean s’est offert un cadeau. (John gave himself a gift)
Embedded subjects = Raising to subject	English: He was claimed to have left. French: *Il a été dit à avoir parti.	French: La voiture s’est retrouvée à foncer dans la rue. (The car ended up speeding down the street)

French passives require a complement (direct object), while se reflexive clitics can “come from” specifier positions

- John was thought to have left early.
- *Jean a été croit (à) départer en advance.

- John was offered a gift.
- *Jean a été offert un cadeau.
- Un cadeau a été offert à Jean.

- Jean s’est offert un cadeau.
- La voiture s’est retrouvée à foncer dans la rue.
  - The car began careening down the street.
- Il s’est mis à pleuvoir.
  - It began to rain.

II. The Framework

- Hierarchical syntactic structure is built via recursive Merge. This yields familiar tree structures.
- However, much of syntax involves constraints or rules that are defined over subparts of a tree: linear "paths" through the tree, moving from node to node.
- For example, rules/constraints that involve a c-command relation between elements require a certain type of path from one of the elements to another. See e.g. Kayne's old work on "unambiguous paths," where he explicitly conceives of c-command constraints governing paths in a tree.

T. Graff and Stony Brook students/colleagues

- Suppose that things like Case Marking, Agreement, Binding… that involve c-command (and relativized minimality) are computed NOT at Merge but rather OVER linear projections of the hierarchical structure that results from recursive Merge.
  - This idea is borrowed, both intuitively and formally, from Phonology, where the canonical example is vowel harmony, computed over a linear projection of (some) vowels from a (perhaps hierarchical) phonological representation: vowel harmony involves ADJANCENT segments on this projection.
- Formally, in computational terms, these Merge plus projections grammars are Tier Based Strictly Local grammars, a subset of the regular grammars on the Chomsky hierarchy. That is, syntax might be not just NOT context-sensitive-PS-grammar-complex but even lower on the Chomsky Hierarchy than context free PS grammars.

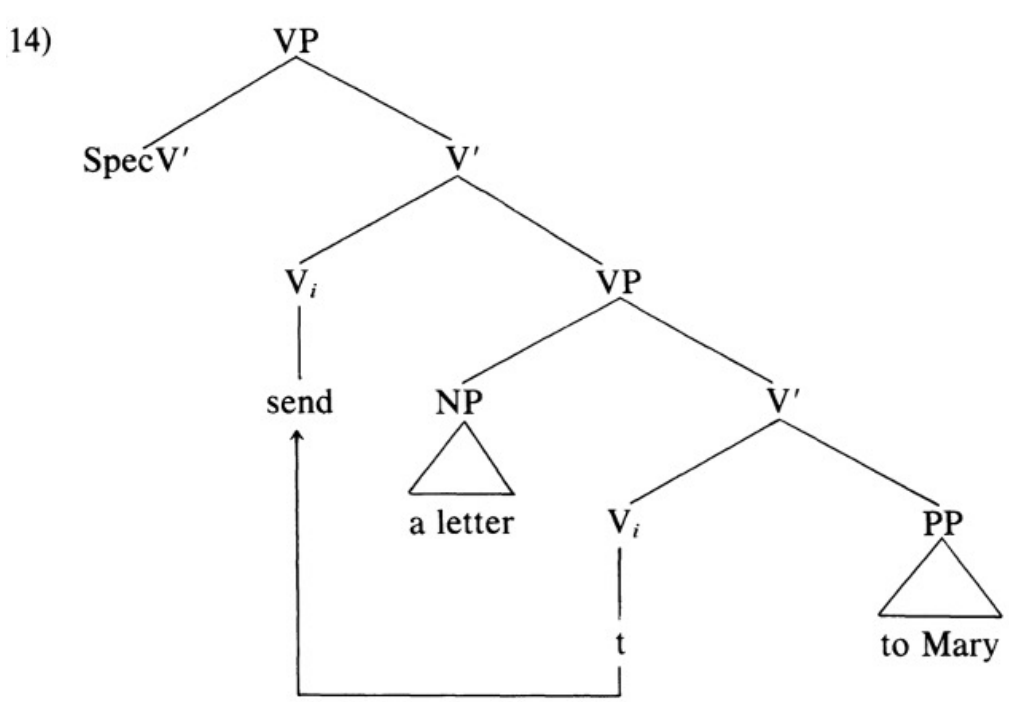
In my current adaptation of the Graf-type system….

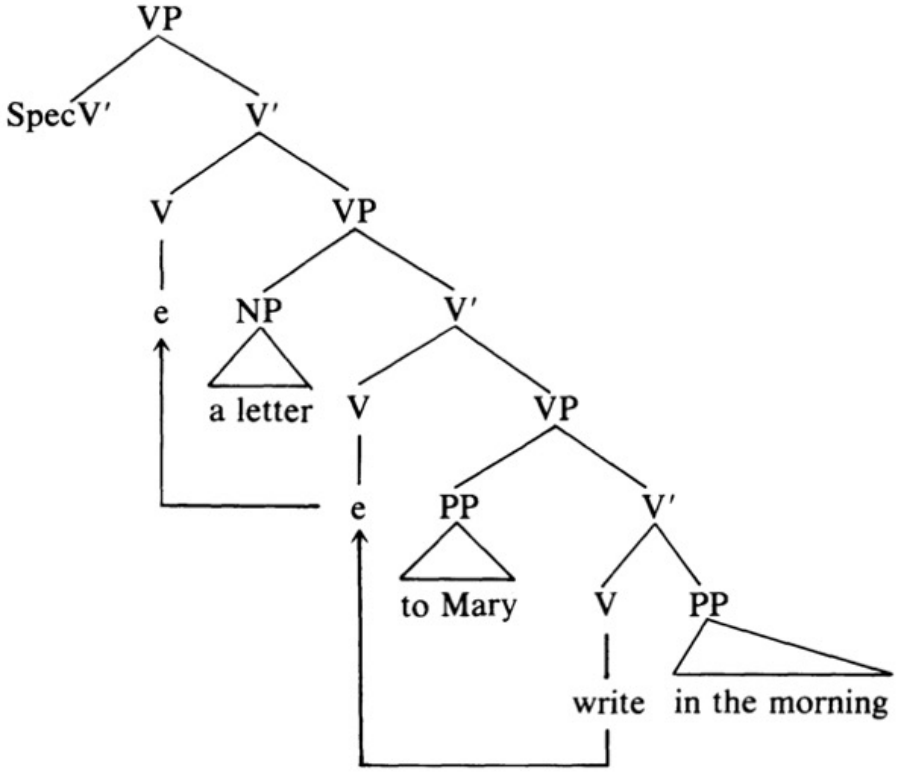
- *I am not concerned with following the formal strictures necessary to ensure that I'm working within the Tier Based Strictly Local grammars.*
- *Rather, I'll informally do my work over linear projections of Merged trees such that constraints are ~strictly local – I hope.*
- *That is, I would like to try rigorously adhering to the restrictions of a constrained grammatical formulism,*
- *But I believe in triangulating to such a restricted grammar via motivated analyses of relevant data.*
- *(My advisor called me an empiricist – fondly, I hope)*

Objects vs. Specifiers

- Many approaches to syntactic argument structure have leveled any special significance to the position in which an argument of a verb is first Merged into the syntax.

Larson: Note how indirect object switches from complement to specifier with the addition of a temporal PP

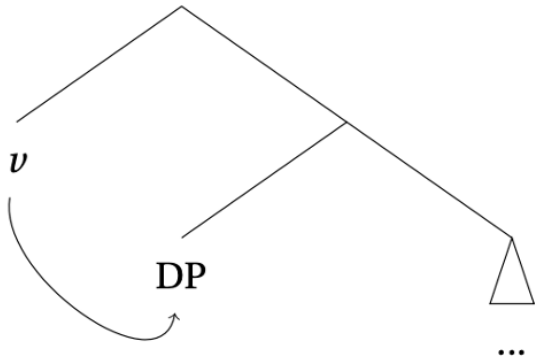




The syntactic configuration that identifies direct objects has been undertheorized

- Larson: objects equally well Merged as complements or specifiers to a v head – no intrinsic difference between these positions, neither syntactic nor semantic nor phonological.
- Kayne et al.: Perhaps all objects must move at least once, to a specifier position, making “specifier” the common position for all objects (and subjects).
- ECM (“exceptional case marking) is a problematic relation: if we add it to our inventory of relations, not clear why it should be local (why from a head into the subject position of its complement).

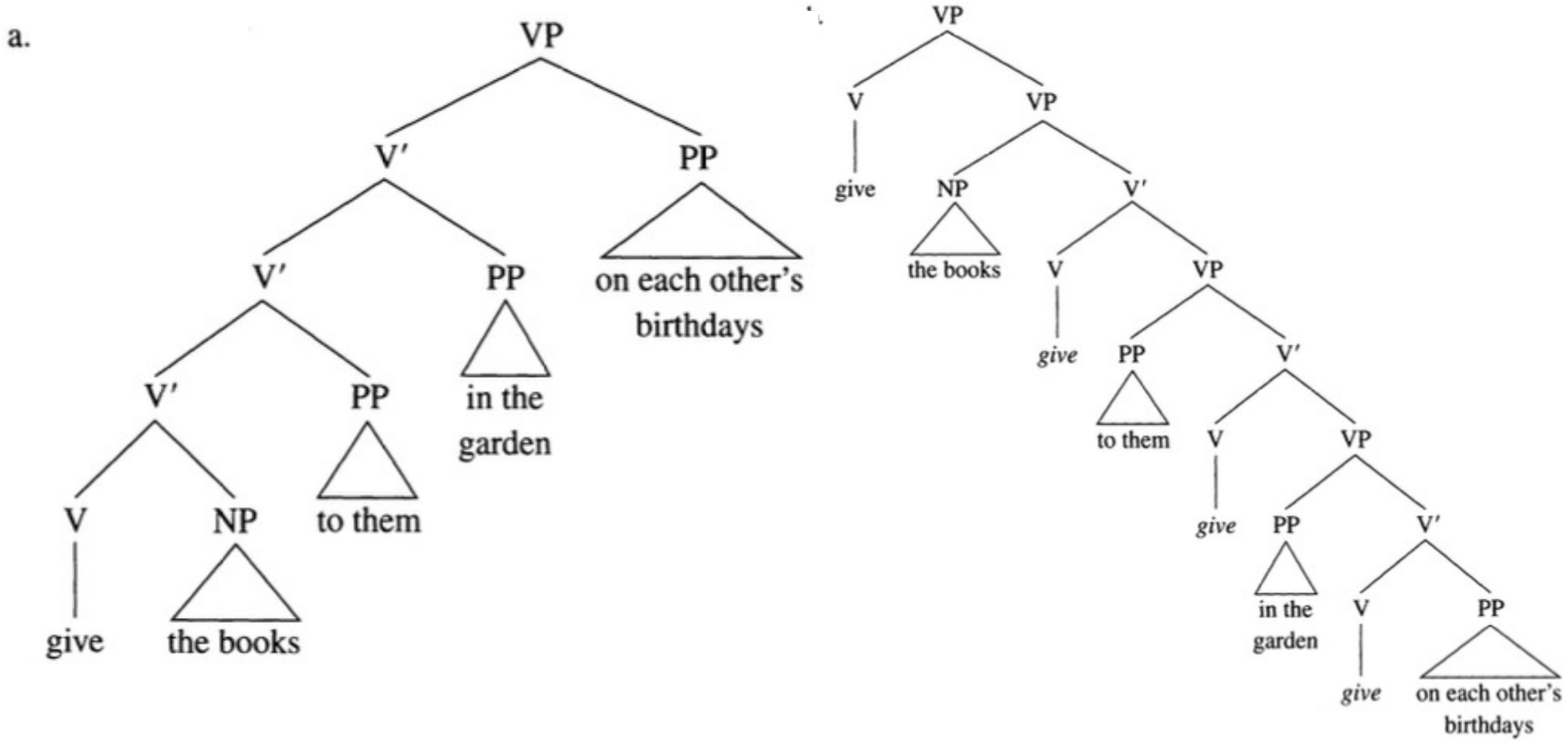
ECM – since not a relation defined over Merger, why is it strictly local? Cf. longish distance Tense agreeing with object in Nominative object constructions, e.g., in Icelandic.



Suppose all objects are Merged as complements to a verb or a preposition

- What about ECM constructions:
  I consider John to have overstepped his authority.
- If we analyze ECM as raising to object, and create a constituent that has the raised object as a complement to the verb, on standard assumptions about c-command, the object would not c-command its trace in subject position of the complement.
  - I [consider John] [t to have overstepped his authority]
- Approach: objects of verbs and prepositions DO c-command out of the VP, PP

- Recall the cascade vs. layering paradox: both a problem for c-command among NPs and PPs and for c-command OUT OF PP



For the cascade motivating data, see Pesestsky as well as Phillips (2003)

- John gave the children presents on each other's birthdays.
- John gave presents to the children on each other's birthdays.
- John was given presents by the children on each other's birthdays.
- John gave presents to no children on anyone's birthday.

Cascades vs. Layering: c-commanding out of PPs and VPs

- Canonical story: semantic scope (recursive modification), as well as constituency tests such as ellipsis, argue for a layered structure for a VP containing multiple PPs.
- However, Barss & Lasnik (1986) c-command tests argue for a “cascade” structure for the VP, as you might get from Larsonian shells.
- Issue One: How do we allow c-command out of PPs?
- Issue Two: Getting VPs with multiple complements to share a structure with VPs with multiple PP adjuncts (what Larson solves via a Theta List approach to UTAH). Why do semantically outer PPs behave as if they are LOWER than complements within the VP.

Proposal for Issue One, c-commanding out of VPs & PPs

- Suppose that c-command is not directly a tree relation. Rather, it is a linear relation over a representation that is projected from the Merge tree (or the Derivation Tree, if you like).

Implementation

- There is only one syntactic head that Merges with phrases qua phrases.
  - Now called “R,” for “Relator” to nod at e.g. Den Dikken’s work on a general L or Linker. (In my work it is a generalization of the i* motivated in Wood & Marantz as replacing Appl, voice, p, poss, etc.)
  - Closely follows work by Newman & Shushurin

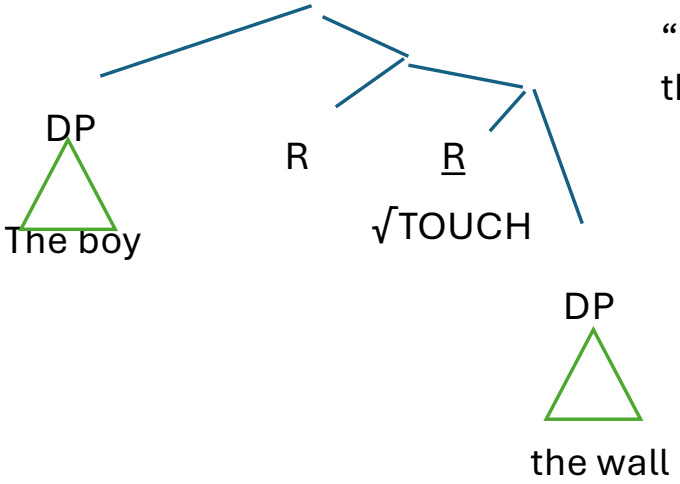
The c-command linear projection

- R precedes its complement on the c-command projection.
- Specifiers of R precede the R plus complement of R on the c-command linear projection of a Merge tree = Linear Correspondence Axiom
- Within specifiers and complements, the same linearization principle is applied recursively to phrases within these constituents.
- So, the complement and specifier within a specifier of a head will both c-command phrases within the complement of the head.
- These considerations yield a total c-command ordering of all the phrases in a Merge tree.

- However, for purposes of evaluating rules/constraints dependent on c-command, we don’t want phrases to c-command out of, e.g., sentences.
- So, linear c-command projections must stop at phase boundaries.
- But PPs and VPs, not being phases, allow their internal complements to join c-command projections outside the PP and VP – that is, objects c-command out of PPs and VPs, as needed to allow for raising to object.

First part of Cascade vs. Layering “paradox” solved with c-command “projection”

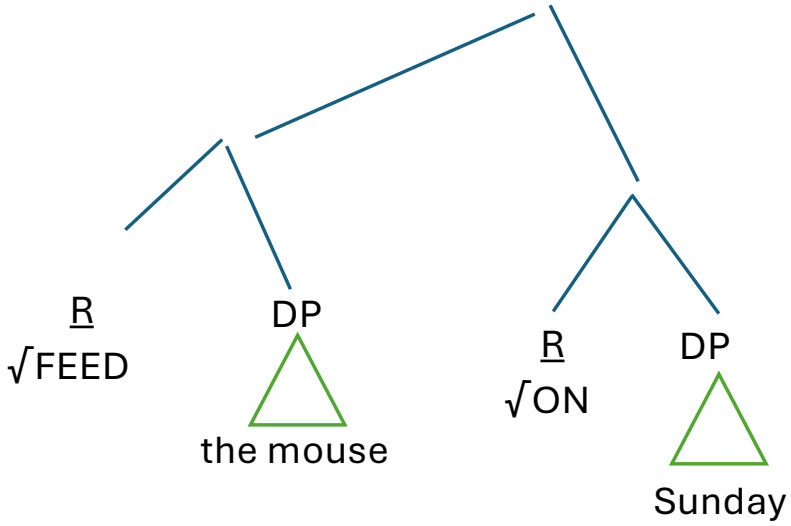
[The boy] R [[R [the wall]]]



C-command projections

“Feed the mouse” is the specifier of “R on”

[[R the mouse] [R [Sunday]]



Most important upshot: a direct object can be a sister to the verb but still c-command into a phrase structurally higher than its mother phrase (a particular instantiation of “m-command”)

- NOTE:

1. Noone’s brother reserved any table.
2. I consider John proud of his children (only) on each other’s birthdays.
3. I presented John and Mary’s dogs to each other’s pets.

- …
- Possessors on the edge of DPs may escape the DP phase and c-command out (1., 3.)
- DPs in PP complements of Adjectives within a VP are not in a phase that blocks them from c-commanding “out” into a following adjunct PP (2.)

Second issue for cascades vs. layering

- What about the “layering” of constituents that displays in the Merge structure that “on Sunday” modifies “feed the mouse” in “They feed the mouse on Sunday”?
- Prepositions connect VPs with modifiers, like temporal modifiers. The VPs are the 2nd Merge with the P that introduces the modifier, so the VP is in the specifier position of the P with respect to the modifier as complement. The P connection between the VP and its object gives us “layering” compositionality.

What is the structure of multiple argument VPs given this kind of approach?

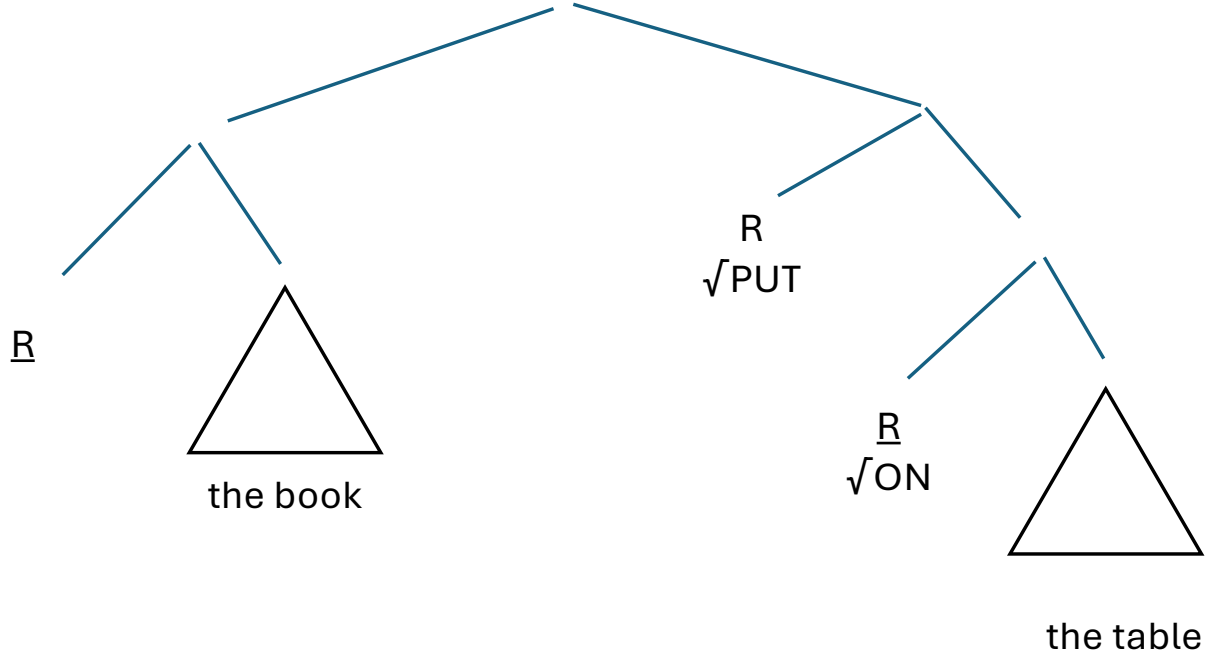
- …put the book on the table. (kinda resultative)
- …color the table green. (resultatives)
- …consider John foolish. (small clauses)
- …persuade John to leave. (object control)
- …consider John to have left. (raising to object)
- And of course,
- …give John a book.
- …give a book to John.

Autonomous syntax: same syntax, varying interpretations

- These multiple complement structures essentially parallel the "feed the mouse on Sunday" structures with "adjunct" PPs.
- In place of the preposition ("on") we find a piece of the verb relating a complement (parallel to "Sunday") to the rest of the verb phrase ("feed the mouse").
- Compare: put the book on the table vs. feed the mouse on Sunday
- THE DIFFERENCE: the two R's in "put the book on the table" are part of the extended projection of the verb – they head Merge as well as being involved in phrasal Merge of the phrases they head.

Put the book on the table

C-command project: [R [the book]] [R [R [the table]]]



Head projections: integrating the "spine" of extended projections with the c-command projection

- Two "types" of Merge
- Phrasal Merge – first and second Merge with R
- Head Merge – create a complex head, where one head is "part" of the other head, as in Adger's recent book.
- When [R the book] Merges with [R(put) [on the table]]
  - The two "R phrases" phrasally Merge, creating a specifier for R(put)
  - The two R's head Merge, where the R(put) becomes part of the higher R
- Parallel to the c-command projection of R's and phrases, Merge defines a head projection of heads and their parts
- Ordering of heads is accomplished over a linear head projection from the Merge tree

- From linear head projection, we start at the “bottom” (defined in terms of parts and wholes) of the projection
- From the bottom, we do Vocabulary Insertion and Brody “Mirror” ordering
  - We either Mirror, with the lower head ordered to the left of the higher head, yielding a “final” (in the Final over Final constraint sense) suffixal structure (the higher head is a suffix to the lower head)
  - Or we fail to Mirror, yielding an “initial,” prefixal structure
  - In the linearization of a linear head projection, once we fail to Mirror, we no longer can Mirror for the rest of the way up the projection
  - This yields the Final over Final condition, Greenberg’s Universal 20, etc.

- In general, if a verb takes multiple complements, we will assume that each complement is sister to a R head and that, then, a two complement verb contains 3 R's, one for each vP internal complement and one (voice) for the external argument.
- …[R [the book]] [R+PUT [on the table]]. (kinda resultative)
- …[R [the table]] [R+COLOR [green]]. (resultatives)
- …[R [John]] [R+CONSIDER [foolish]]. (small clauses)
- …[R [John]] [R+PERSUADE [PRO to leave]. (object control)
- …[R [John]] [R+CONSIDER [trace to have left]. (raising to object)

Some other details of the proposed system

- The Marantz (2022) (Nash Festschrift) Theory of “lexical” categories, n, a, v, p.
- The extended i* system (extended from Wood & Marantz (2017).
  - Replace i* AND v with a “Transitivity Head” Tr (=R).
  - Like Kastner & Oseki’s (2017) Trivalent Voice, R may have one of three feature values.
  - Trivalent R: R [+D], R [-D], R [ø]
- Verbs are (at least) two R phrases, usually with a root adjoined to the lower R head (R now subsumes voice and v, so verbs are combination of voice and little v, which are both just R heads)
- Prepositions are a single R head with an adjoined root.

Nouns and adjectives

- Nouns and adjectives (for languages in which adjectives look nominal) are Gender heads. (Cf. Kramer and others' idea that little n is the locus of gender features; we say that the gender feature IS the little n head.)
- Nouns are Gender heads with a specified value, G[+value], while adjectives are a Gender head with an unspecified value, G[αvalue]
- Whatever "concord" agreement comes down to, adjectives will get their G feature valued via concord.
  - English: nouns are mostly "common" gender.
- (Note: this is for languages with "nominal" adjectives; languages like Japanese with "verbal" adjectives will have R heads for their adjectives.)

Replacement for “Case Theory” (or any theory of the licensing of DPs, beyond their Merger to a R [+D] head)

- Shushurin (2022): * Phi Phi, in a minimal domain – can’t have two DPs in a minimal domain.
- Here: * Phi Phi is a constraint on the c-command projection.
- R heads may mark a locality domain on the the c-command projection, which divides minimal domains. Similar to * on v* in Chomskyan systems, as explained in Manzini’s recent work.
- Nominative Accusative languages: the lowest R [+D] on the verbal “spine” of R heads is R to creates two minimal domains, one each for the subject and object.
- Double object languages (English and some Bantu languages, but not French or German): an additional R head below voice to create two minimal domains within the vP.
- Kinyarwanda multiple object type languages (a subset of the double object languages): all R heads in the verbal spine can be R.

When * Phi Phi replaces Case Theory

- *Nie (2020) argues on the basis of multiple argument languages that "introduction" of a DP via Merger to a [+D] head isn't sufficient to license a DP in the structure.*
- *Why? We know from multiple object languages that, say, having a high applicative on top of a low applicative structure, or having a high applicative on top of a causative of a transitive verbs, is fine semantically, and should be generated by "introduction" Merge in all languages that have applicatives and causatives, at least.*
- *Some Bantu languages, however, don't allow high applicatives of low applicatives or high applicatives on top of causatives of a transitive verb – situations that would create more than two objects – while others do.*
- *This is a syntactic parameter, not a semantic (or mophophonological) one.*
- *So, "Licensing" needed in addition to "introduction" (Merger) – here, licensing via the creation of local domains on the c-command tier.*

Note: similar idea to Dependent Case

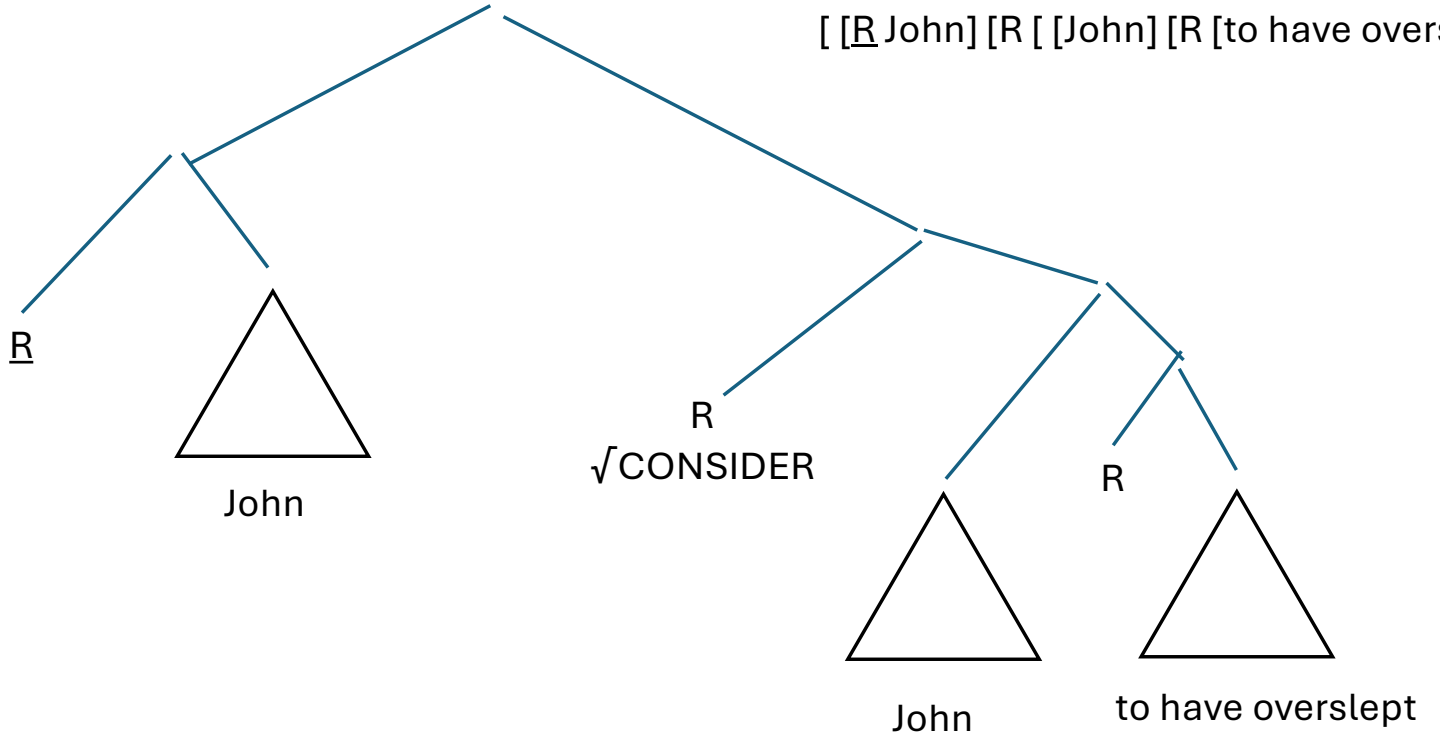
- *ERG dependent on "unmarked" object = ERG and ABS in the same domain, one needs to be made oblique.*
- *NOM ACC languages: v separates external and internal arguments into distinct domains – both can be "unmarked"*

Raising to Object

- For each of our multiple complement constructions, the tree will be the same as for “put the book on the table” with the second complement replacing “on the table.”
- “ECM” = raising to object
- Need to move the subject of the second complement to the object of R position in the specifier position of the lower verb piece.
  - Normal “side-ways” movement, although I’m not endorsing the movement analysis of control.
- Links in an A-chain need to be in the same minimal domain, so no R separating the indices of the links in the c-command projection.

A-chains don’t violate *Phi Phi since there’s only one distinct DP in the minimal domain under R

C-coomand projection:
[[R John] [R [[John] [R [to have overslept]]]



However, the A trace in the A chain is an anaphor, and Reinhart & Reuland suggest that Principle B demands that anaphors be “reflexive marked”

- John sees himself: the coreference between “John” and “him” within a minimal domain (the “predicate” for R & R) is licensed by “self” as a reflexive marking.

Think of passives, unaccusatives, and raising verbs (including raising to object verbs)…

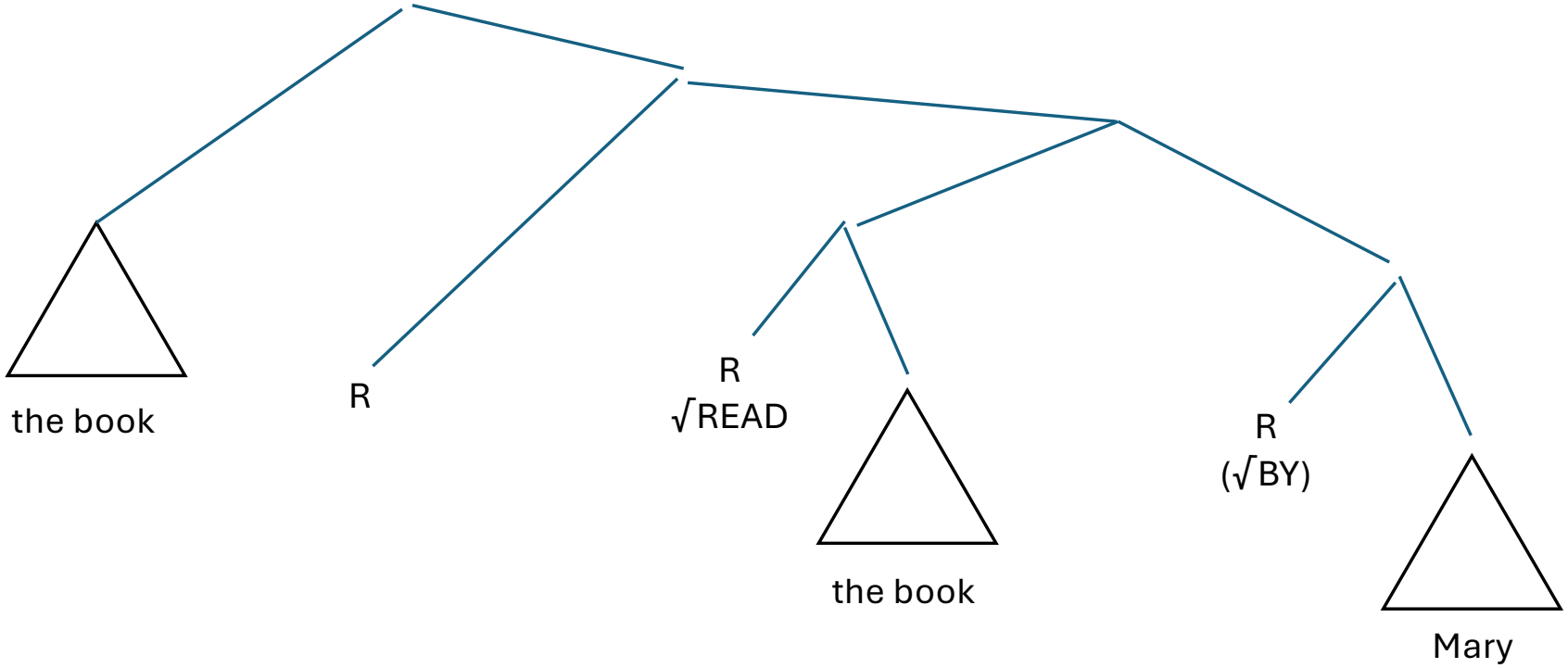
- as having feature that licenses A-chains

- Crucially, in French reflexive constructions (for unaccusatives, passives, etc,, as well as “real” reflexives), the reflexive clitic is Merged WITH the direct object, and reflexive-marks it (good for either true reflexives or unaccusatives). The reflexive clitic is joined to the verb as part of the linearization of the head projection, so it “Mirrors” with the verb from below, and surfaces as a pro-citic. Meanwhile, the stranded object A-moves to a subject position, leaving a trace identified as an anaphor by reflexive-marking,

Passive in English

C-command projection:

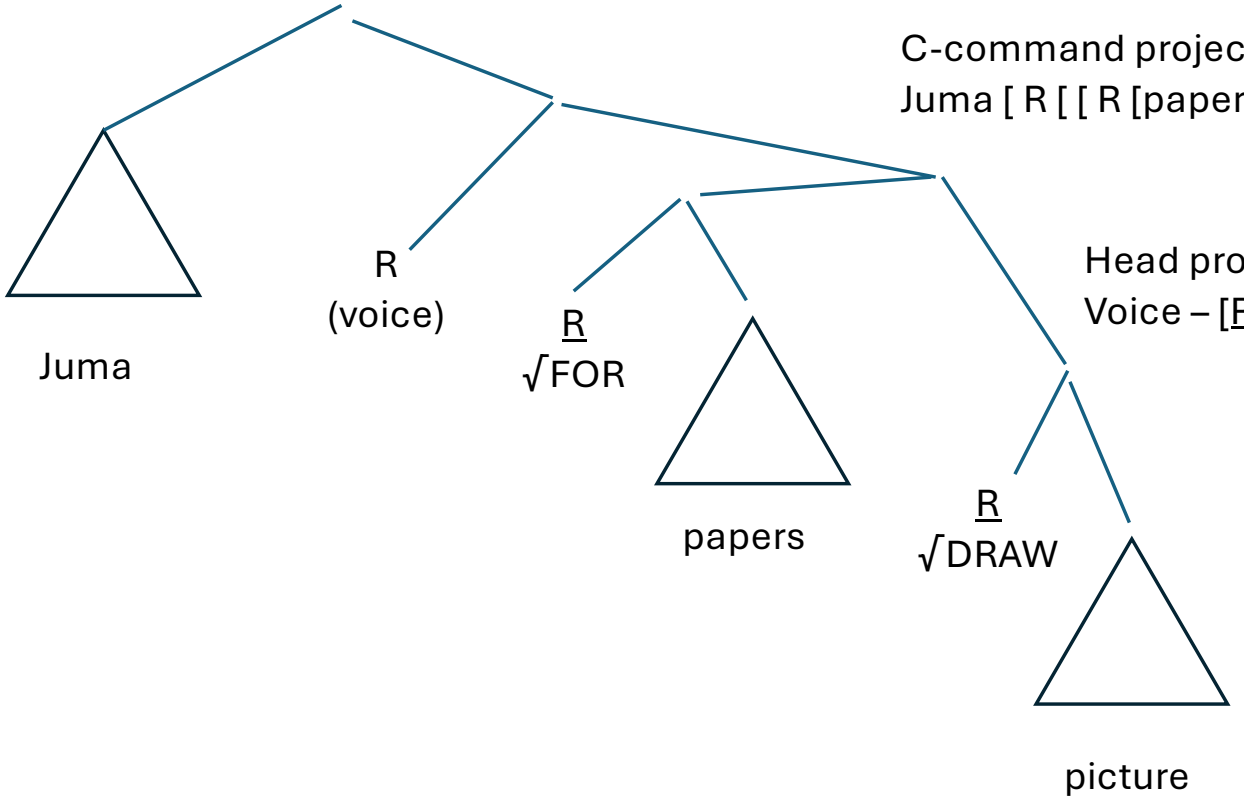
[The book] [R [[R [the book]] [R(by) [Mary]]



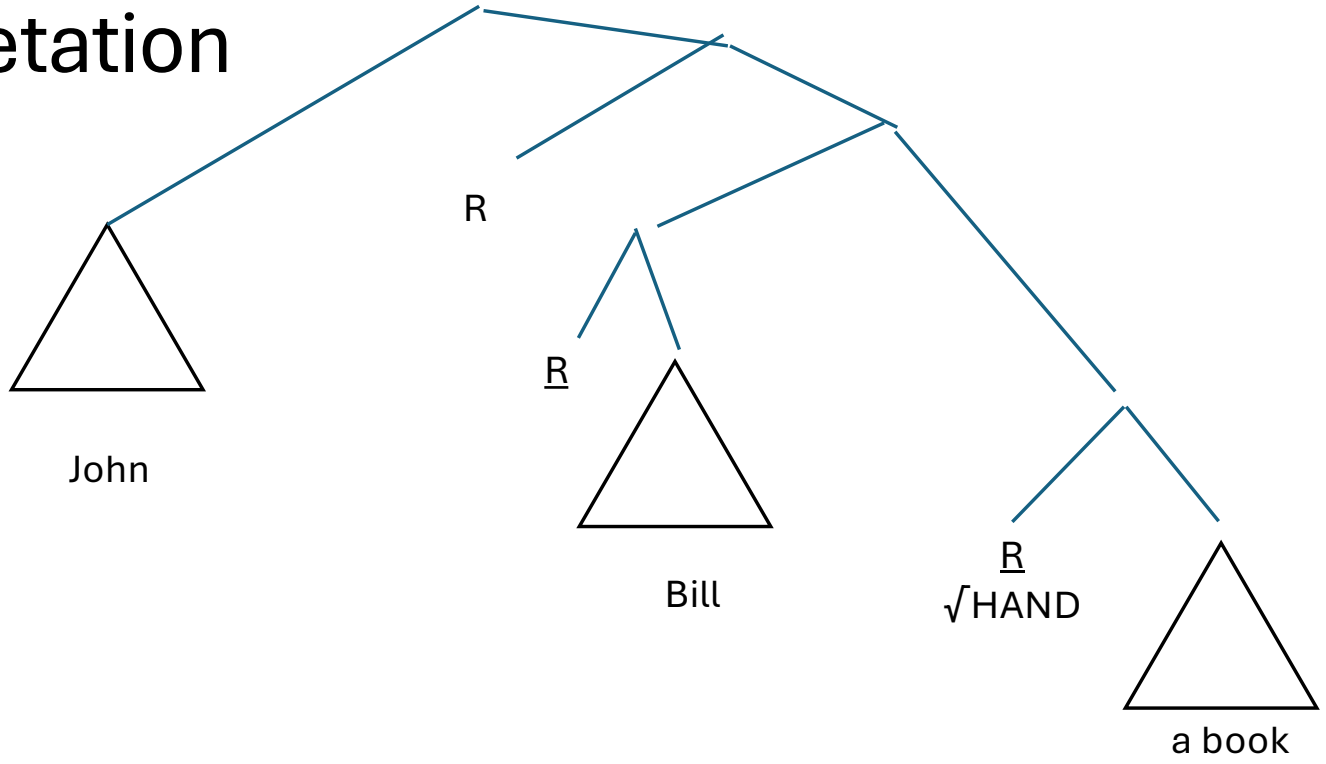
High vs. Low applicatives

- High applicatives involve an applicative head taking a DP, applied object, in its specifier and a VP in its complement position.
- The applicative head of an R +DP Merger that introduces the applied object AND has been Merged with a root, almost always corresponding to an overt Vocabulary Item, that will, like a Preposition, determine the thematic role of the applied object.
- The analysis, then, looks very much like old-fashioned P-incorporation theories of applicatives in that the structure of the high applicative construction mirrors that of benefactive ”for” constructions, just reversing the specifier and complement relations between the DP and the VP involved.

a. *Juma a-li-chor-e-a* *ma-gazeti* *picha*[5] **(Benefactive)**
Juma 1-PST-draw-APP-FV 6-paper 10.picture
'Juma drew pictures for papers.'



Low applicatives are mostly equivalent to high applicative structure, minus the root and plus the possessor transmission of “have,” i.e., the interpretation



A reminder….

- John handed a boy every book. Frozen scope = one boy
- A boy had every book. Frozen scope = one boy
- John gave Bill the willies
  - Bill got the willies.
  - Bill had the willies.

Low applicative structures embed ”have”: Rootless, two transitive R, “delayed gratification”

- Myler on predicate possession. As in Wurmbrand’s account of restructuring predicates (like “begin”), the subject of “have” gets the external theta role of the object of “have.”
- (And Wood & Marantz argue for “delayed gratification” on the basis of possessor raising constructions, as in Japanese adversative causatives.)
- That low applicatives embed the syntax and semantics of ”have” predicate structures, see Harley, among others. E.g., “X has Y” and “Z gives X Y” both show frozen scope between X and Y.

Autonomous syntax

- High and low applicatives have essentially the SAME syntax
- Differences between them have to do with semantic interpretation
  - E.g., to get the transfer of possession reading, you need to have the two DPs in the “have” configuration.
  - To get, e.g., a benefactive interpretation of the applied object, you need an extra root, so high applicatives involve an overt affix (generally) while low applicatives, which involve two R’s in a partcular configuration and no root to derive the possessive relation, have no extra root.

NOTE

- *The "delayed gratification" passing of the possessor role is NOT syntax.*
- *Thus, the syntax of the low applicative construction is necessary for delayed gratification, but doesn't force delayed gratification.*
- *The syntax of the low applicative without the transmission of the possessor role would likely cause "theta criterion" problems at the LF interface – without a root on the 'higher' Tr, there is no semantic role to assign to the position of the goal.*

Low Applicatives in Languages with only one R

- The double object construction in language like English exploit the 2 available R's to separate two domains:
  - The exernal argument in a different domain from the two internal arguments.
  - The goal is in a different domain from the theme.
- However, languages like French and German (among many many others) can construct a low applicative by using DAT case or a preposition to separate the higher goal from the lower theme. This puts the goal (plus preposition) in the specifier of one of the Tr's that make up the transfer of possessor construction (with passing up of the possessor role from lower theme to higher goal).
- Korean does this for its DAT ACC transfer of possession constuctions, putting the goal in a specifier position (not a complement position, where honorific case marking would be possible).

Romance, other ACC DAT “give” languages, DAT may c-command the ACC, even to its right.

- Pineda, A. (2020). Double-Object Constructions in Romance: The Common Denominator. Syntax, 23(3), 203-240.
- Catalan – note irrelevance of clitic doubling

(15) a. El tractament (li) va retornar [$_{DO}$ l’ estima de si mateixa$_i$] [$_{IO}$ a
the therapy DAT= returned the esteem of herself *A*
la Maria$_i$].
the Maria
‘The therapy returned to María her regard for herself.’

b. El tractament (?/??li) va retornar [$_{DO}$ la Maria$_i$] [$_{IO}$ a si mateixa$_i$].
the therapy DAT= returned the Maria *A* herself
‘The therapy returned Maria to herself.’

Italian

(iii) ?Mario mostra [$_{DO}$ se stessa$_i$] [$_{IO}$ a Maria$_i$].
Mario shows herself *A* Maria
'Mario shows herself to Maria.'

French

(ii) a. Marie a donné [$_{DO}$ son$_i$ crayon] [$_{IO}$ à chaque garçon$_i$].
Marie has given his pencil *A* each boy
'Marie gave his pencil to each boy.'

b. Le rédacteur a envoyé [$_{DO}$ son$_i$ livre] [$_{IO}$ à chaque auteur$_i$].
The editor has sent his book *A* each author
'The editor sent his book to each author.'

English: Backwards c-command from the indirect to the direct object has been claimed to exist, but the judgements are meh.

- ???His lame Halloween costume gave any willees to no one that saw it on entering his party.

- John showed each other's pictures to all the family members.
- ??John placed each other's badges on all the family members.

- The teachers showed his place to every boy that entered the classroom.
- ??The teachers prepared his seat for every boy that entered the classroom.

Newman (2023) about the English cases

- “In this section, we investigate a puzzling interaction between word order and binding possibilities in the dative alternation, and show that such an interaction is predicted by the typology of verb phrases in §3. The interaction is shown in (38): when the indirect object (XP) follows the direct object (DP) in (38a,b), the direct object can either bind or be bound by the indirect object. When the indirect object (XP) precedes the direct object (DP) in (38c,d), however, the indirect object can bind the direct object but not vice versa.”

- What the current theory predicts, but the judgements are not shared by all.

How do we derive “backwards” c-command?

- We said that phrases are ordered on the c-command projection, following the LCA.
- So order should track c-command.
- Proposal (general proposal – does a lot of work in my system):
  - In addition to phrasally Merging with their compements, R’s also head Merge with their objects
  - Direct objects are ordered via Mirror with their R’s, yielding object-verb (Mirror), or verb-object (no Mirror) orders
    - (see e.g., Final over Final Condition effects in Finnish)
  - So, in French and other one R languages, verb-object adjacency is fixed on the head projection, while the relationship between verb+object and the indirect object is determined by the LCA over the c-command projection.

Back to French: An application to passives and clitic reflexive constructions.

- Suppose now in French we build a double object construction like that for “donner NP à NP” but we don’t employ a P and leave a bare DP in the specifier position of our change of possession construction.
- Since French gets only one R, this will leave the goal and the external argument in the same minimal domain, violating *Phi Phi.
- UNLESS the goal and the external argument position have identical indices because they are members of an A-chain.
- The reflexive clitic reflexive-marks the DP to which it initially Merged.

Assume the Kayne/Marantz/…. Theory of reflexive clitic constructions, where the object A-moves to the external argument position (or spec of TP)

- French reflexive clitics can Reflexive-mark (identify as anaphors) DPs in either specifier or complement position.
- HOWEVER, only the French clitics, and not the French passive morphology, can Reflexive mark a specifier.
- Meaning that we predict reflexive constructions in French that move the higher object of the double object construction, but not corresponding passives.
- And we expect French reflexive clitics for raising to subject constructions, where the A trace is also in a specifier position, but not correponding passives that create raising to subject constructions, as in English.

French: Passive requires complement to v, reflexives “come from” complement or specifier positions

	Passive	Se-Reflexive
Direct Objects	English: He was shoved. French: Un cadeau a été offert à Jean.	French: Il s’est frappé.
Indirect objects =specifier of double object construction	English: He was given a book. French: *Il a été donné un livre.	French: Jean s’est offert un cadeau.
Embedded subjects = Raising to subject	English: He was claimed to have left. French: *Il a été dit à avoir parti.	French: La voiture s’est retrouvée à foncer dans la rue.est.

Summary

- We started with a puzzle about the distribution of honorific case in Korean and A movement in French that seemed to argue for a strict specifier/complement distinction.
- We sketched an approach to the puzzle that required objects to c-command out of PPs and VPs.
- This approach centered on the application of syntactic rules/constraints locally on linear projections of the Merged syntactic tree, not over the Merged tree directly.
- This separation of linear c-command projections from hiearchical Merged structures dissolved the Cascade vs. Layering paradox (layering = Merged structure = input to LF interpretion, cascade = c-command projections = input to syntactic constraints).

- We then came full circle back to the specifier/complement distinction, arguing that the Beyond Merger approach to syntax provides an explanation of a puzzling asymmetry between passives and reflexive clitic constructions in French.

IV. Linear Ordering

- What determines the linear order of heads from a Merged tree
  - Assuming that the relative order of phrases follows the LCA
  - Via LCA over the c-command projection
- Brody's "Mirror" theory: heads are ordered in the anti-LCA order via a projection of the heads from the Merged structure.
- Here: Start at the bottom of a head projection (often the root of a verb or noun). As one goes up the head projection, one can join each lower head with the next head up, in mirror order (= head movement and left adjunction). At some point, one can stop this Mirror ordering; remaining heads in the head projection follow LCA order, where higher = lefter.

Lots of recent work on this issue circling around similar solutions

- Head movement literature: Gribanova & Harizanov, Arregi & Pietraszko
- Mirror Theory and Spans: Adger, Svenonius
- f-sequences and word formation: Nano-Syntax
- Remnant movement: Koopman & Szabolcsi, Cinque
- Final over Final: Sheehan, Holmberg, Roberts

Don’t have time to show this in detail, but…

- This separation of head ordering and phrase ordering provides insights to a number of generalizations in the literature on order.
- And replaces recent theories of head movement in the syntax.

- Big question:
  - How do the complex heads derived via ordering on the head projection get ordered with respect to the phrases, that are ordered on the c-command projection?
  - Answer: the phrasal complements to R are included on a head projection with the extended projections of R and are ordered via. Recall that all phrases are introduced by a R. This (should) fix phrasal order with respect to complex heads, with phrase – phrase ordering following from the LCA.

Greenberg Universal 20; Current approach is a variant of the Cinque/Koopman approach

- For Determiner Adj Number Noun, we assume a fixed underlying hierarchy in that order.
  - Greenberg: Order before the Noun is fixed in the Det Adj Num Noun order
  - The Det Adj Num constituents may appear AFTER the head noun in mirror order: N Num Adj Det.
  - OR in other orders (less commonly)
- Starting from the bottom of the head projection, from the Noun, we implement Mirror order recursively, until we stop, then take LCA order for the rest of the projection.

Greenberg Universal 20; Current approach is a variant of the Cinque/Koopman approach

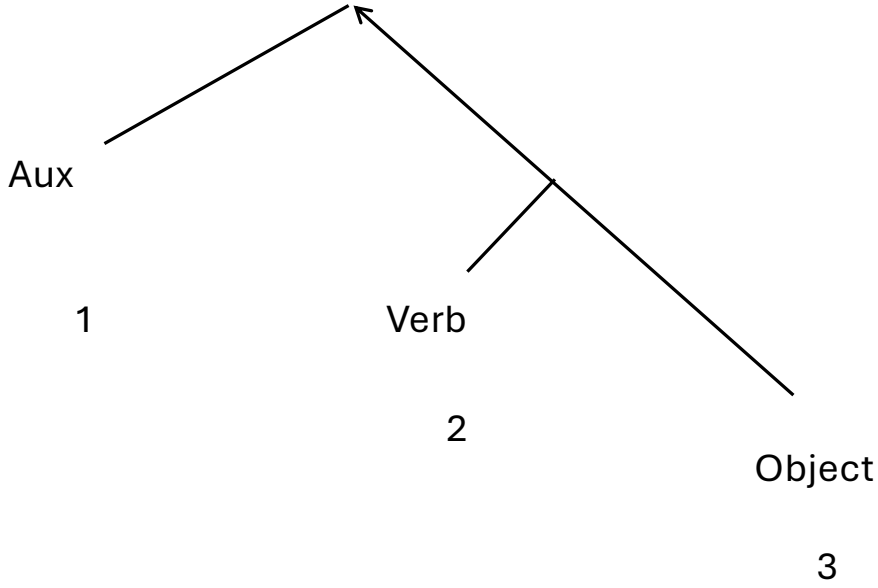
- Just this much yields Baker's Mirror Principle order: Hierarchical top first order up until the head, then Brody Mirror from head "up," with the principle that, the closer you are in hiearchical order to the head, the closer you are in linear order.
- HOWEVER, given the hiearchy: [1 [2 [3 [4]]]], Baker's Mirror allows 2 3 4 1, where 4 is the head of the structure, while this violates Universal 20.
- No Adj Num N Det. [We'll see this is a violation of the Final over Final condition, since it's "final" (Det) over "initial" (Adj before Noun)]

The Final over Final Constraint Holmberg, Sheenan, Roberts…

- Finnish:

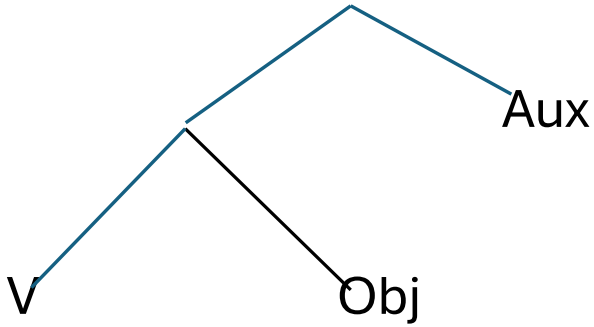
(18) a.	Milloin Jussi olisi kirjoittanut romaanin?		[Finnish]
	when Jussi would.have written novel		
			[Aux [V O]]
	'When would Jussi have written a novel?'		
b.	Milloin Jussi olisi romaanin kirjoittanut?		[Aux [O V]]
	when Jussi would.have novel written		
c.	Milloin Jussi romaanin kirjoittanut olisi?		[[O V] Aux]
	when Jussi novel written would.have		
d.	*Milloin Jussi kirjoittanut romaanin olisi?		[[V O] Aux]
	when Jussi written novel would-have		

Final over Final



*Final over Initial

- Obj V Aux
- 3 2 1
  - Mirror, Mirror
- Aux V Obj
- 1 2 3
  - (LCA, LCA – no Mirror)
- Aux Obj V
- 1 3 2
  - Mirror, LCA
- *V Obj Aux
- 2 3 1
- LCA, Mirror



Final over Final

- Identifying situations that might yield bad “surface” Final over Initial configurations vs. situations that LOOK like Final over Initial configurations but are arguably not (like Mandarin Verb Object under sentence final Cs) ain’t easy.
- However, this approach seems promising.

Holmberg's Generalization

- In mainland Scandanavian, with Verb Object order, an object pronoun may be pronounced BEFORE negation, which is ordered before the verb, as long as NEITHER THE VERB nor ANOTHER complement-like VP constituent appears OVERTLY after negation,

Holmberg's Generalization

(1)a. Jag kysste **henne** inte [VP t_V t_O]
I kissed her not

b. *Jag har **henne** inte [VP kysst t_O].
I have her not kissed

c. *...att jag **henne** inte [VP kysste t_O].
that I her not kissed

a'. (*)Jag kysste inte henne.
I kissed not her

b'. Jag har inte kysst henne.
I have not kissed her

c'. ...att jag inte kysste henne.
that I not kissed her

(2)a. *Jag talade **henne** inte med t_O.
I spoke her not with

b. *Jag gav **den** inte Elsa t_O.
I gave it not Elsa

c. *Dom kastade **mej** inte ut t_O.
they threw me not out

a'. Jag talade inte med henne.
I talked not with her

b'. Jag gav inte Elsa den
I gave not Elsa it

c'. Dom kastade inte ut mej.
they threw not out me

Analysis

- To order the object (pronoun) before Negation in the extended projection of the verb, one must start at the bottom of the relevant linear head projection, which here is the lowest complement.
- Object to the left of Negation is Mirror order, so one must successively choose Mirror order up the head projection from the lowest complement, pick up the direct object, as desired, plus the verb.
- This derives a head cluster: (Lowest Compement) V Obj Negation
- Only overt Obj and Negation are licit in this cluster; the Lowest Complement, if any, and the Verb must be null (e.g., traces).