

Session 2 • Double-DP specificational copular sentences and copular inversion

- in session 1, we treated the alternation in (1) along the lines of (2)
- (1) a. that man is my best friend
b. my best friend is that man
- (2) a. [TP [DP *that man*] [T=*is* [DP *my best friend*]]]
b. [TP [DP *my best friend*] [T+RELATOR=*is* [RP [DP *that man*] [RELATOR [DP *my best friend*]]]]]
- the predicate-initial specificational copular sentence in (1b) is derived via Predicate Inversion — A-movement of the predicate across the base position of its subject
 - Predicate Inversion is contingent, for locality reasons, on phase-extending movement of the RELATOR to a position immediately outside the small clause; the raised predicate lands in the specifier position of the raised RELATOR
- the obligatoriness of phase-extending raising of the RELATOR in Predicate Inversion constructions is supported in Den Dikken (2006) on the basis of the obligatory presence of the infinitival copula in (3b), the Predicate Inversion counterpart of (3a)
- (3) a. I consider that man (to be) my best friend
b. I consider my best friend *(to be) that man (* on a specificational reading)
- in (2b) there is an obvious landing-site for the raised RELATOR: the T-head, which is independently merged
 - so raising of the RELATOR in (2b) is a run-of-the-mill case of head movement to a position made available on independent grounds
 - but in (3), raising of the RELATOR to T is *not* available, on the standard assumption that *to* is the free-standing lexicalisation of T
[*note that it is plainly pointless to try to argue that in (3b) to and be form a complex head: to and be can be separated by adverbial material: I consider my best friend to not be that man*]
 - for (3b) we seem to need a head position between T and the RELATOR to which the latter can raise to extend the phase and make Predicate Inversion possible
 - Den Dikken (2006): the RELATOR raises to a small-clause external functional head ‘F’, the LINKER
- (4) [TP [DP *my best friend*] [T=*to* [FP [DP *my best friend*] [LINKER+RELATOR=*be* [RP [DP *that man*] [RELATOR [DP *my best friend*]]]]]]]
- raising of the RELATOR to the LINKER, whose presence cannot be independently guaranteed, must be *overtly signalled*, which accounts for the obligatoriness of the copula
[Den Dikken (2006: 146) points out that in non-finite Predicate Inversion constructions in which the functional category to which the RELATOR raises is independently guaranteed to be present and not in need of phonological support, no overt copula shows up — in *the best solution remains/becomes instant retreat* and *that makes the murderer John*, there is an ASPECTUAL head present in the structure immediately outside the small clause to which the RELATOR can raise; the presence of this aspectual head is guaranteed by the Aktionsart properties of the constructions in question]

- Den Dikken (2006) treats the head F merged outside the small clause as a mere ‘receptacle’ for phase-extending head movement, itself radically empty
 - F has no intrinsic features of its own; the RELATOR substitute for it when it moves up — as a result, after raising of the RELATOR up to F, the latter takes on all of the properties of the RELATOR
 - consequently, raising of the RELATOR to the LINKER predestines the derivation for a continuation involving Predicate Inversion (see Den Dikken 2007, 2013)
 - the LINKER will not be included in the structure unless there is a motive for its presence — raising of the RELATOR provides the motive
 - once the RELATOR has raised to the LINKER (via substitution), subsequent movement of the small-clause subject, *that man*, to the specifier position of FP is precluded: *that man* is already the specifier of the RELATOR prior to movement; raising of *that man* to SpecFP after movement of the RELATOR to F would merely reproduce a structural relation that is already present in the base
 - on the other hand, raising of the predicate to SpecFP is a perfectly fine continuation of the derivation: such raising is now legitimate (thanks to phase-extending movement of the RELATOR); and the result of Predicate Inversion is a new structural configuration not available previously in the derivation — there is an EFFECT ON OUTPUT, as required
- merging an empty ‘receptacle’ outside the small clause into which the RELATOR can substitute is on a par with merging an empty ‘receptacle’ as the specifier of a functional head into which a moving phrase can substitute, as in earlier principles-and-parameters approaches to phrasal movement (incl. early minimalism)

- (5)
- a. $[_{XP} (...) X (...) YP]$
 ⇒ merge F
 - b. $F [_{XP} (...) X (...) YP]$
 ⇒ project a specifier for F
 - c. $[_{FP} ___ [F [_{XP} (...) X (...) YP]]]$
 ⇒ substitute YP for the specifier of F
 - d. $[_{FP} YP [F [_{XP} (...) X (...) \cancel{YP}]]]$

- later versions of the theory (esp. bare phrase structure theory), however, have sought to collapse steps (5c) and (5d) into one
- Y(P) remerges with the projection of F; the result is projection of F, with Y(P)’s landing-site emerging as a specifier of F
 [NB: I write ‘Y(P)’ because, in bare phrase structure, there is no X/XP distinction]

- Q why must F project when Y(P) remerges with F? why can’t Y project?
- overt movement is driven by the need to check a ‘strong/EPP/OCC/Edge feature’
 - by hypothesis, a strong/EPP feature must be eliminated before the functional head that harbours it is included in a larger structure that no longer bears the head’s label
 - movement of Y(P) to check F’s strong/EPP feature must proceed within a structure that has F’s label; if Y were to project, as in (5d’), Y would be unable to check F’s strong/EPP feature, which would remain unchecked, causing a Full Interpretation violation in the interpretive components

- (5) d’. $*[_{YP} YP [_{FP} F [_{XP} (...) X (...) \cancel{YP}]]]$

- ‘reprojecting’ *phrasal* movement is impossible (*pace* Hornstein & Uriagereka 2002)

- *head* movement is not usually considered to be driven by the EPP — in fact, the EPP is customarily thought to be about movement to specifier positions only
[the *original* EPP most certainly was exclusively about specifiers — specifically, SpecIP; the ‘generalised EPP’ of Chomsky’s more recent work has continued to confine itself to specifiers of functional heads]
- the ban on reprojecting phrasal movement, which was derived from the EPP, should not necessarily carry over to head movement
- this opens up the possibility of recasting the analysis of phase-extending head movement *without* an appeal to an empty ‘receptacle’ (the LINKER) outside the small clause
- the idea that radically empty ‘receptacle’ heads like our LINKER in (4) exist, while close in spirit to the postulation of ‘proxy heads’ by Nash & Rouveret (1997), is not evidently ‘minimalist’
- we can avoid such ‘proxies’ by rethinking the head-movement operation taking place in (4) as an instance of reprojection (cf. Surányi 2008)

- (6) a. $[_{RP} [_{DP} \text{SUBJECT}] [_{\text{RELATOR}} [_{XP} \text{PREDICATE}]]]$
 Φ
 → raising of RELATOR outside RP with *reprojection*, extending Φ up to the reprojected RP
- b. $[_{RP} \text{RELATOR} [_{RP} [_{DP} \text{SUBJECT}] [_{\text{RELATOR}} [_{XP} \text{PREDICATE}]]]]]$
 $\Phi \llllllllll \Phi$
 → raising of predicate to the specifier of the reprojected RP
- c. $[_{RP} [_{XP} \text{PREDICATE}] [_{\text{RELATOR}} [_{RP} [_{DP} \text{SUBJECT}] [_{\text{RELATOR}} [_{XP} \text{PREDICATE}]]]]]$
 Φ

- NB it is equally impossible on a Den Dikken (2006)-style approach and on the reprojection analysis to think of movement of the RELATOR in Predicate Inversion constructions as ‘feature-driven’
- in Den Dikken’s (2006) original proposal, the RELATOR substitutes for an empty LINKER, which cannot result in feature checking
 - in the reprojection account, the RELATOR remerges with its own projection, which again cannot bring about feature checking
- movement of the RELATOR in Predicate Inversion constructions is *not* feature-driven movement: it happens ‘altruistically’ in order to facilitate movement of the predicate around the subject
- we should not think of this in teleological terms: it is not necessarily the case that the predicate ‘wants’ to invert with its subject and that the RELATOR raises in order to make that possible — rather, the RELATOR is *free* to remerge with its own projection and reproject; and when this happens, Predicate Inversion is automatic (recall the discussion towards the top of p. 2)
- note that this marks a significant step away from the emphasis on feature-driven movement in the minimalist programme

- if a head can remerge with its own projection and project again, the derivation of Predicate Inversion does not require that a radically empty ‘receptacle’ for movement be made available prior to movement
- moreover, phase extension is now truly automatic: reprojecting movement of the RELATOR ‘stretches’ the small clause up one notch, up to the level of the reprojected RP, which automatically becomes the phase boundary after movement of the RELATOR — it simply could not be any other way, viewed from this perspective

- it also follows immediately that the specifier position of the landing-site of the RELATOR is an A-position: the specifier position of the landing-site of the RELATOR is another specifier of the RELATOR itself; the RELATOR is intrinsically a mediator of an A-relationship (predication), hence the A-status of the derived specifier position follows as a matter of course
- with the help of reprojection, we can thus simplify the analysis of Predicate Inversion constructions such as the one in (3b), without setting up a ‘proxy head’ outside the small clause into which the RELATOR is substituted
- but there remain cases of Predicate Inversion in which the landing-site of the RELATOR is a pre-existing functional category, merged with the small clause on independent grounds — recall (2b), where there is no point in cutting the derivation up into two steps: (a) reprojecting movement of the RELATOR *cum* movement of the predicate into the specifier position of the reprojecting RELATOR, followed by (b) movement of the predicate and the RELATOR up to TP
- ALL Predicate Inversion involves phase-extending movement of the RELATOR — sometimes this involves reprojection (as in (3b), on the revised approach presented above); sometimes it is a case of adjunction to an independently merged and featurally contentful functional head (as in (2b))

ASIDE on feature inheritance (FI), the status of T, and reprojection (based on Den Dikken 2012)

- Chomsky (2008), Richards (2007:570): T lacks inherent feature content; it is a radically featureless ‘receptacle’ that inherits all of its feature content from C
- Q what would make it of interest to C to Merge with TP? what could Minimal Search find if C took a featureless TP as its complement?
 - if FI is an operation performed on a structure formed previously by Merge, then C is merging with the projection of an empty head, which, at the point of Merge, would make Minimal Search come up empty-handed
 - if Merge and FI are simultaneous, C in effect merges with itself, which would make Minimal Search pointless as well
- C can only merge with TP if T possesses one or more features of its own — non-probing features (on the hypothesis that probing features are the prerogative of phase heads)
 - whenever T is included in the structure, it has some non-probing feature content
 - whenever T lacks inherent feature content, it cannot be included in the structure
 - whenever T is not included in the structure, C merges directly with v^*P
- when T is not included in the structure and C merges with v^*P , Minimal Search makes it impossible for C to decide whether to establish a relation with the subject in Spec_{v^*P} or with v^* instead
 - the derivation crashes UNLESS v^* remerges with its own projection before C is merged and *reprojects*

- (7)
- a. $[_{v^*P} \text{SUBJECT } [v^*+V [_{VP} \forall \dots]]]$
→ *reprojecting head movement* (‘phase extension’)
 - b. $[_{v^*P} v^*+V [_{v^*P} \text{SUBJECT } [v^*+V [_{VP} \forall \dots]]]]]$
→ *Merge of C*
 - c. $[_{CP} C [_{v^*P} v^*+V [_{v^*P} \text{SUBJECT } [v^*+V [_{VP} \forall \dots]]]]]]]$
→ *FI from C blocked*

- in (7), FI down to the reprojecting v^* head is impossible: v^* is itself a phase head, and phase heads, possessing inherent probing features, cannot be the beneficiaries of FI
- since FI is impossible, the subject is forced to stay in its base position
[recall that raising the subject to the specifier position of the reprojected v^* is ruled out: since the subject starts out life as the specifier of v^* already, movement of the subject to the specifier position of the reprojected v^* would merely reinstate the configuration that is already in place in the base]
- v^* in (7) must have inherently valued ϕ -features in order for C's unvalued ϕ -features to be valued:
 - C cannot value its ϕ -features against those of the subject, which is too far away, trapped inside the domain of the extended v^* P phase
 - the only available goal for C's probing ϕ -features is the ϕ -feature bundle of v^* , which can only serve as a goal if it is inherently valued
- a finite verb with inherently valued ϕ -features does not depend on a subject for valuation — hence it survives perfectly well in the absence of a subject, i.e., in a pro-drop context (cf. Barbosa 1995, Alexiadou & Anagnostopoulou 1998)
- (7) derives the link that Alexiadou & Anagnostopoulou (1998) establish between verb movement, pro-drop, and lack of subject raising
- as an alternative to (7), we can merge a feature-bearing T-head with v^* P prior to merge of C
- if C has EPP, FI hands this EPP specification down to T, leading to raising of the subject to SpecTP

- (8)
- a. $[_{v^*P} \text{SUBJECT } [v^*+V \ [_{VP} \forall \dots]]]$
→ *Merge of T*
 - b. $[_{TP} \text{T } [_{v^*P} \text{SUBJECT } [v^*+V \ [_{VP} \forall \dots]]]]]$
→ *Merge of C*
 - c. $[_{CP} \text{C } [_{TP} \text{T } [_{v^*P} \text{SUBJECT } [v^*+V \ [_{VP} \forall \dots]]]]]]]$
→ **iff C has EPP: FI from C to T, followed by subject raising to SpecTP**
 - d. $[_{CP} \text{C}^{EPP>} \ [_{TP} \text{SUBJECT } [\text{T}^{>EPP} \ [_{v^*P} \text{SUBJECT } [v^*+V \ [_{VP} \forall \dots]]]]]]]$

- via (8), which is available in all languages that have feature-bearing T (incl. Indo-European pro-drop languages with verb raising, but not Salish), the theory accommodates preverbal subjects in SpecTP
- again we see that reprojection of the phase head (here v^*) and merger of a feature-bearing functional category to which the phase head can move exist side by side
- head movement of phase heads cannot be uniformly recast as reprojection — but it is clear, both from the realm of Predicate Inversion constructions and from the context of verb movement in finite CPs, that reprojection is a major player in the world of head movement

- back to Predicate Inversion and phase-extending head movement
- we have seen that phase-extending head movement, on which Predicate Inversion is contingent, sometimes targets an independently merged functional category (T in (2b)), via adjunction, and sometimes involves reprojection (as in (6))
- we have not seen any cases yet of *overt, physical* adjunction of a RELATOR to a small-clause external functional head — by which I mean cases in which the RELATOR and the independently merged small-clause external head are each individually spelled out by non-affixal lexical material
- it seems that such cases do exist
- I will mention one here (from Den Dikken 2006:chapter 5)

- the Qualitative Binominal Noun Phrase (QBNP) comes in two flavours (Napoli 1989, Doetjes & Rooryck 2001)
 - (i) attributive QBNPs: x is PRED in x 's (professional) capacity of being x
 - (ii) comparative QBNPs: x is like/compared to PRED
- the English QBNP in (9) is ambiguous between the two readings (though the attributive reading is more salient out of context); (10), on the other hand, is unambiguously comparative

- (9) that idiot of a doctor
- a. ... prescribed me the wrong medicine attributive QBNP
- b. ... just wrecked my car comparative QBNP
- (10) that jewel of a village comparative QBNP

→ attributive QBNPs but not comparative ones alternate, in English, with a ‘bare bones’ counterpart in which the two nouns are directly juxtaposed

- (11) that idiot doctor
- a. ... prescribed me the wrong medicine attributive QBNP
- b. #... just wrecked my car #comparative QBNP
- (12) *that jewel village [* as QBNP; okay as N–N compound]

- in both attributive and comparative QBNPs, the noun that comes first in the linear string denotes a property that is attributed to the referent of the second noun
- the projection of the first noun is a PREDICATE; the projection of the second noun is its SUBJECT

- from the grammaticality of (11) *qua* attributive QBNP we can immediately conclude that in such QBNPs the predicate can originate to the left of its subject *in the base*, without Predicate Inversion being involved
- attributive QBNPs are instances of REVERSE PREDICATION
- they involve the general RP schema for predication relations but do not, as in instances of CANONICAL PREDICATION, project the predicate as the complement of the RELATOR but instead merge the predicate as the *specifier* of the RELATOR — a ‘predicate-specifier structure’

- (13) a. [_{RP} *idiot* [RELATOR=*of* [*a doctor*]]] attributive QBNP
- b. [_{RP} *idiot* [RELATOR= \emptyset [*doctor*]]]

- in English, the RELATOR of the predication relation is lexicalised as *of* when its complement (i.e., the subject) has an article, but remains silent otherwise
- there is variation across languages with respect to the distribution of articles and overt RELATORS in attributive QBNPs
 - in Italian, the attributive QBNP systematically lacks an article but does have an overt RELATOR, *di*; the comparative QBNP has both *di* and a definite article preceding N2 — (14)
 - in Dutch, the attributive QBNP cannot have a ‘spurious’ indefinite article but does always have a RELATOR, *van*; the comparative QBNP has both *van* and a ‘spurious’ article — (15)

- (14) a. quell’ ignorante di dottore attributive QBNP
- b. quell’ ignorante del dottore comparative QBNP
- that ignoramus of(-the) doctor

→ too little is known about the distribution of reprojecting head movement at this time to be able to offer clear perspectives here

NB if the ‘spurious’ indefinite article is base-generated outside the small clause, it is not immediately clear why it does not engage in a ϕ -Agree relation (for number, in particular) with either the subject or the predicate nominal

→ in (2b), T does ϕ -Agree — though languages differ from one another with respect to the Agree-goal: in English double-DP specificational copular sentences, the copula Agrees with the raised predicate (*the problem is/*are the children*); in Dutch and Italian, it Agrees with the postcopular subject (Dutch *het probleem zijn/*is de kinderen* ‘the problem are/is the children’)

→ perhaps the lack of ϕ -Agree with the ‘spurious’ indefinite article is a consequence of the small size of the constituent noun phrases of QBNPs; but the question of how large the constituent noun phrases of comparative QBNPs are is actually a highly complex one (see Den Dikken 2006:ch. 5 for lengthy discussion); I will set the matter aside here, not thereby wishing to suggest it is unimportant

• Bennis, Corver & Den Dikken (1998) support their decision to base-generate the ‘spurious’ indefinite article *een* in the RELATOR position (not their terminology) on the basis of the complementary distribution of ‘spurious’ *een* and *als*, treated (following Aarts 1992) as a spell-out of the RELATOR

- (17) a. kolenschoppen van een handen comparative QBNP
 coal shovels of a hands
 b. handen als (*een) kolenschoppen
 hands like a coal shovels

→ these data will have to be reanalysed if we want to adopt (16’) instead of (16)

• there is reason, independently, to believe that it is probably not right to treat things like *as* and *like* as lexicalisations of the RELATOR

→ to see this, let us turn briefly to Predicate Inversion constructions in (Brazilian) Portuguese, which are revealing in this connection

• (Brazilian) Portuguese provides the same kind of evidence for the interconnection between Predicate Inversion and copula distribution that English does as well

→ in particular, in raising constructions, while the infinitival copula *ser* is otherwise optional (see (18a)), it becomes obligatory when the predicate inverts with its subject, as in (18b)

[all data below from Mariana Santos de Resenes, p.c., summer 2013; whether these facts are specific to Brazilian Portuguese or carry over to European Portuguese as well is unclear to me at this time]

- (18) a. a retirada da tropa parece (*ser*) a melhor solução (Brazilian Portuguese)
 the retreat of-the troop seems be the best solution
 b. a melhor solução parece *(*ser*) a retirada da tropa
 the best solution seems be the retreat of-the troop

→ the pattern replicates itself in ECM environments (cf. English (3)), but with an interesting twist: when Portuguese *considerar* ‘consider’ combines with *como* ‘as’ (cf. English *consider/regard as*), Predicate Inversion causes the present-participial form of the copula, *sendo*, to show up obligatorily alongside *como*, to its right, as in (19b)

- (19) a. eu considero o João *como* (*sendo*) o meu melhor amigo (Brazilian Portuguese)
 I consider the João as the my best friend
 b. eu considero o meu melhor amigo *como* *(*sendo*) o João
 I consider the my best friend as being the João

- an analysis of *como* ‘as/like’ as a lexicalisation of the RELATOR does not extend to Portuguese *como* — the grammaticality of (19a) with *como* + *sendo* precludes a treatment of *como* as a RELATOR: there cannot be more than a single RELATOR per predication relation; nor can *sendo* be treated as originating outside the RP (with *como* adjoining to its left) because *sendo* is not, by itself, possible in the complement of *considerar* (**eu considero o João sendo o meu melhor amigo*)
 [English *I regard you as being my best friend* poses the same problem for a treatment of *as* as a RELATOR; cf. **I regard you being my best friend*, **I regard my best friend as you*]
 → what underlies (19a) without *sendo* is something like (20) (where ‘F’ could be a complementiser)

(20) $[_{FP} \text{ o João } [F=\textit{como} [_{RP} \text{ } \cancel{\textit{João}} [\text{RELATOR}=\emptyset [\textit{o meu melhor amigo}]]]]]$

- (19a) with *sendo* included has more structure between *como* and the RP — a projection for the participial feature, which I will label ‘PtcP’ (aspectual in nature)
 → to get to (19b), the predicate nominal *o melhor amigo* needs to invert with its subject, which is contingent on phase-extending head movement of the RELATOR
 → such phase-extending head movement is impossible in (20): there is no place for the RELATOR to move to, given that the functional head projected immediately outside the small clause is occupied but (21) can feed Predicate Inversion, as in (22)

(21) $[_{FP} \text{ o João } [F=\textit{como} [_{PtcP} \cancel{\textit{João}} [\text{Ptc}=-\textit{ndo} [_{RP} \cancel{\textit{João}} [\text{RELATOR}=\textit{ser} [\textit{o meu melhor amigo}]]]]]]]]]$

(22) $[_{FP} \text{ o melhor amigo } [F=\textit{como} [_{PtcP} \cancel{\textit{melhor amigo}} [\text{Ptc}+\text{RELATOR}=\textit{sendo} [_{RP} \text{ o João } [\text{RELATOR} [\cancel{\textit{o meu melhor amigo}}]]]]]]]]]$

[NB: no adverbial material can be inserted between *como* and *sendo* in (19b) — this would follow immediately if *como*+*sendo* were an X⁰-level unit, but it will also follow from (22) if the landing-site of *sendo* is too high to permit insertion of adverbial material to its left]

- the Portuguese data at once confirm the close ties between Predicate Inversion and copula distribution and cast doubt on the idea that things like *as/like* are lexicalisations of the RELATOR
- if *as/like* and its ilk in other languages originate *outside* the small clause, the complementary distribution of *van* and ‘spurious’ *een* in Dutch (17b) can be accounted for in a way that is essentially very much like the approach taken by Bennis *et al.* (1998) — except that the ‘locus of competition’ between *van* and *een* is shifted one notch up the tree, to the head outside the small clause (rather than the RELATOR)
 [details remain to be worked out; I cannot undertake this here, but it is a good topic for someone who would like to write a paper based on the material discussed in this seminar]
- if this takes care of the most obvious argument for treating ‘spurious’ *een* as a RELATOR, and we can hence go ahead and assume that ‘spurious’ articles originate *outside* the small clause, this paves the way for a reanalysis of (16) as in (16′) — a ‘cleaner’ picture of the syntax of comparative QBNPs
- for much more detailed discussion of Predicate Inversion and the distribution of copular elements inside the complex noun phrase, see Den Dikken (2006:chapter 5)