On the nature and distribution of successive cyclicity

Successive-cyclic movement via an escape hatch on the edge of a subordinate clause (Comp in the early literature, SpecCP in more recent work) has long been a staple of the generative-syntactic approach to the formation long-distance A′–dependencies. The purpose of this paper is to argue in detail that it does not exist.

1 Successive-cyclic movement through the CP–edge is theoretically problematic — it raises an insuperable 'trigger problem', and would stand out as a lone exception in the realm of movements to A′–specifier positions in the left periphery, which are otherwise consistently terminal (e.g., there is no movement from a subordinate focus position to a matrix focus position). We argue for a primitive difference between A′–specifier and adjunction positions: the former are terminal landing-sites; the latter feed onward movement.

2 With SpecCP a terminal landing-site, successive-cyclic A′–movement may only proceed via *v*P–edge adjunction positions, as in Rackowski & Richards' (2005) analysis, wherein it is the Agree relationship between the matrix *v* and the complement–CP that 'opens up' the CP, allowing movement out of CP without a stop-over on its edge. Evidence that successive-cyclic movement uniquely via *v*P–edges exists comes not only from Tagalog (Rackowski & Richards' source) but also from Chamorro and Hungarian. In Hungarian, this derivation is responsible for outputs of long A′–fronting in which the matrix verb systematically shows definite (DEF) agreement inflection and the extractee bears a morphological case corresponding to the Case it checks in the embedded clause — e.g. nominative for extraction of the subject of an embedded finite clause.

(1) a. hány lány akar-od hogy jöjjön?
how.many girl(NOM) want-2SG.DEF that come-3SG
b. DP=*hány lány* ... [$_{vP}$ ~~DP~~ [$_{vP}$ *v* [$_{VP}$ *akar-od* [$_{CP}$ *hogy* ~~DP~~ *jöjjön*]]]]

3 Alongside (1), Hungarian exploits three additional strategies for the formation of long A′–dependencies. One is a resumptive prolepsis strategy, with accusative *hány lány-t* originating in the matrix VP and binding a null resumptive pronoun in the subordinate clause that shows semantic agreement with its grammatically singular but notionally plural antecedent, and which itself controls plural inflection on the lower verb:

(2) a. %hány lány-t akar-sz hogy jöjjenek?
how.many girl-ACC want-2SG.INDEF that come-3PL
b. DP=*hány lány*t_i ... [$_{vP}$ ~~DP~~ [$_{vP}$ *v* [$_{VP}$ *akar-sz* ~~DP~~ [$_{CP}$ *hogy pro*$_i$ *jöjjenek*]]]]

4 *Wh*-scope marking (or 'partial *wh*-movement') is another option: the *wh*-constituent moves no further than the embedded focus position, its scope being indicated by the accusative *wh*-expletive *mit* in the matrix clause. The *wh*-subject of the embedded clause checks ϕ-features and nominative Case downstairs, and has no feature-checking relationship with the matrix *v*, from which it is separated by a phase boundary. At no point does the 'real' *wh*-constituent move out of the embedded clause to replace the *wh*-expletive (i.e., there is only an *indirect dependency* between the *wh*-expletive and the 'real' *wh*; see Dayal 1994, Horvath 1997).

(3) a. mit akar-sz hogy hány lány jöjjön?
what-ACC want-2SG.INDEF that how.many girl(NOM) come-3SG
b. SM=*mit* ... [$_{vP}$ ~~SM~~ [$_{vP}$ *v* [$_{VP}$ *akar-sz* ~~SM~~ [$_{CP}$ *hogy* DP=*hány lány jöjjön*]]]]

5 The last strategy for forming long A′–dependencies in Hungarian is represented by (4a), which is in complementary distribution with (2a) across speakers. Here, as in (2a), the *wh*-constituent checks accusative Case and definiteness against the matrix *v*; but unlike in (2a), the embedded verb shows grammatical singular agreement, apparently checked by *hány lány* rather than by a (null) plural resumptive pronoun. Movement of *hány lány* from the embedded nominative Case-checking position into the matrix accusative Case-checking position is impossible: chains do not have two structural Case-features. We argue that the *wh*–DP moves *locally*, within the embedded clause, and stays there, as in (3): (4) is a hidden *wh*-scope-marking construction.

(4) a. %hány lány-t akar-sz hogy jöjjön?
how.many girl-ACC want-2SG.INDEF that come-3SG
b. SM+FF$_{DP}$=*hány lányt* ... [$_{vP}$ ~~SM+FF$_{DP}$~~ [$_{vP}$ *v* [$_{VP}$ *akar-sz* ~~SM+FF$_{DP}$~~ [$_{CP}$ DP=∅ *hogy* ~~DP~~ *jöjjön*]]]]

CONCORD

6 More specifically, we argue that in the derivation of (4a), the *wh*-constituent checks nominative Case and agreement in the embedded clause, and then terminally A′–moves to the SpecCP position of the subordinate clause. It is not spelled out there, however, because all of its remaining features are subsequently shared, via CONCORD, with the *wh*-scope marker generated in the matrix VP (cf. also Felser 2001 for a precursor on 'interrogative concord' in *wh*-scope marking). Concord gives the scope marker all the formal and semantic features of the 'real' *wh*-constituent *except* for those uninterpretable features that had already been checked in the lower clause. So after concord, the scope marker is fully featurally identical with the *wh*-phrase in SpecCP, except for Case: an accusative Case feature is deployed on the scope marker to ensure proper Case-checking in the matrix clause. Thus, the concordial scope marker, which raises to the matrix focus position, is spelled out as *hány lány-t* 'which girl-ACC'. Its spell-out in the matrix clause, in a position that asymmetrically c-commands the position of the lower *wh*-phrase, forces the full deletion of its featurally identical twin in the lower SpecCP (as per Kayne 1994). The concordial *wh*-scope-marking derivation in (4b) circumvents the Case problem posed by (4a) by not positing successive-cyclic movement of the embedded subject. Since (4a) looks at first like a prime candidate for an analysis in terms of successive-cyclic movement via SpecCP (with the embedded subject checking Case- and ϕ-features against the lower T, and subsequently checking Case and definiteness against the higher *v*), the fact that it cannot be so analysed is very significant.

7 A difference between 'regular' scope marking as in (3) and concordial scope marking as in (4) is that while the former involves an *indirect* dependency between the scope marker and the 'real' *wh*-constituent, in (3) there is a *direct* dependency between the two. Both direct and indirect dependency thus exist in the realm of scope-marking constructions, but they deliver different outputs: 'classic' *wh*-scope marking *always* involves indirect dependency (Bruening 2006); direct dependency *always* delivers concordial scope marking.

8 In (4) *all* the remaining features of the *wh*-constituent in the lower SpecCP are copied over to the scope marker (i.e., both ϕ-features and D-features), in a case of *full*-concordial scope marking. Full feature concord causes the scope marker upstairs and the *wh*-constituent downstairs to look identical, resulting in full deletion downstairs. A logical possibility is that the scope marker and the *wh*-constituent agree only in ϕ-features. In such *partial*-concordial scope marking, *(a)* the upstairs *wh* is always a *bare wh*-word (because it inherits nothing but the ϕ-features), and *(b)* the partially concordial scope marker and the downstairs *wh*-constituent are both allowed to be spelled out (because the identical ϕ-features of the two *wh*-elements are not in a c-command relationship). This description characterises the so-called *wh*-copying construction (*who do you think who won the race?*, attested in a variety of languages, including child English, though not in adult standard English). By analysing '*wh*-copying' as partial-concordial scope marking, we avoid the thorny questions posed by analyses that literally invoke the spell-out of multiple copies of the same *wh*-constituent. '*Wh*-copying' is predicted not to exist in languages that spell (embedded) *wh*'s out in a position lower than SpecCP: concord is subject to locality conditions; no CP phase boundary may intervene between the members of a concord relationship. Hungarian spells out its *wh*'s in a CP–internal focus position, and hence, while extraordinarily well-stocked in types of A′–dependencies, it lacks precisely the '*wh*-copying' construction.

9 With 'classic' *wh*-scope marking, '*wh*-copying' and certain cases of apparent successive-cyclic *wh*-fronting all analysed in terms of a generalised *wh*-scope-marking strategy, we expect there to be significant empirical connections between these three types of A′–dependencies. Indeed there are such connections, as will be discussed. There are differences as well (though these are less profound than the previous literature has made them out to be) — but those, too, can be understood in the present approach, as a function of the extent to which featural concord obtains: no concord at all, partial concord (ϕ-features only), or full concord.

10 Successive-cyclic movement via SpecCP does not exist. Successive cyclicity remains an option, via *v*P–edges; resumptive prolepsis and scope marking, with varying degrees of concord, take care of the rest. The resulting theoretical typology of long A′–dependencies is both descriptively and explanatorily adequate.

Bruening 2006, *LI* 37:25–49 • Dayal 1994, *NLS* 2:137–70 • Felser 2001, *JGL* 5–38 • Horvath 1997, *NLLT* 15:509–72 • Kayne 1994, MIT Press • Rackowski & Richards 2005, *LI* 36:565–99 • Stepanov & Stateva 2006, *Lingua* 116:2107–53