On Parallel Copying: Evidence from Cantonese
Jackie Y.-K. Lai / *University of Chicago*

Prelude. The nature of the copying mechanism in UG is not well understood. Two existing options include (i) spellout of multiple chain links (Nunes 2004; Kandybowicz 2006; Cheng & Vicente 2013 on Mandarin V-doubling a.o.); and (ii) a Move-and-Elide analysis (à la Merchant 2001), where some XP has evacuated from an ellipsis site in one of the two identical copies generated, yielding the impression of copying (Ott 2014; Cheung 2015; Abe to appear a.o.). This paper argues for the existence of a third option, called *parallel copying* (P-Copying). The main evidence comes from a little noticed phenomenon attested in colloquial Cantonese, termed *dislocation copying* ('DC'), where the sentence particle SP is appended with some syntactic material (i.e. the 'cauda') contained in the host clause *S*.

(1) [keoi tingjat   heoi Toibak]*S* aa, [**keoi**]*cauda*
     3.SG tomorrow go   Taipei   SP   3.SG
     'He is going to Taipei tomorrow.'

Explicating 'P-Copying'. The availability of this novel option in a language hinges on the availability and the exact featural make-up of SPs. I assume that Cantonese SPs are left-headed C-elements (Law 1990; Cheng 1991; Tang 1998), which is compatible with both the more restrictive view of antisymmetry of syntax (Kayne 1994) and the existence of directionality parameters (see Takita 2009 for such a view; notice that Cantonese is a head-initial language just like Mandarin), as well as supported by Cheung's (2009) other empirical evidence that Cantonese CPs are head-initial. Since SPs surface sentence-finally, they trigger obligatory TP-fronting, which I take to have the effect of de-focussing (Simpson & Wu 2002). This insight is implemented by assuming that Cantonese SPs bear the strong uninterpretable feature $[*u{-}\text{Foc}]$, which triggers overt movement of the TP bearing its interpretable counterpart $[-\text{Foc}]$, yielding the canonical linear order. By contrast, Cantonese DC obtains when there is an additional functional category DeFoc° present in the numeration. Featurally, DeFoc° is also $[*u{-}\text{Foc}]$, which thus attracts TP to its Spec as well. Hence, TP moves to Spec-DeFocP and Spec-CP *simultaneously* (Chomsky 2008), resulting in two independent A′-chains $(\text{TP}_i, \text{TP}_k)$ and $(\text{TP}_j, \text{TP}_k)$ anchored to the same foot, and the 'cauda' is the remnant of a deletion operation that applies to the intermediate TP-copy (i.e. TP_j in (2b)).

(2) a. [CP TP_k [C′ $C_{\textbf{SP}}$ [<TP_k>]]]   ($\rightarrow$ a canonical Cantonese sentence; i.e. *without* DC)
    b. [CP TP_i [C′ $C_{\textbf{SP}}$ [DeFocP TP_j DeFoc° <TP_k>]]]   ($\rightarrow$ a Cantonese DC sentence)

More on DeFocP. Accordingly, Cantonese DC structurally differs from a canonical sentence in the additional presence of a functional projection FP sandwiched between CP and TP (in canonical cases, C° directly takes TP as its complement). While the notion of DeFocP may strike the reader as conceptually odd, notice that this is merely an implementation of Zubizarreta's (1998) ingenious proposal on 'p-movement' within a feature-checking system. Recent studies like Takano (2014) also utilise the negative counterpart of the focus feature (which he refers to as $[-F]$) in deriving certain Japanese postposing phenomena, and crucially, Lee (2017) offers independent evidence for the existence of DeFocP *within* Cantonese. An important support for DeFocP in (2b) is that the cauda of Cantonese DC cannot be accented, although accenting Cantonese pronominals is entirely possible elsewhere; cf. (3) and (4).

(3) keoi zau-zo   gwaa {keoi / *KEOI}   (4) {keoi / KEOI}, ngo   zanhai hou jansoeng
     3.SG leave-PFV SP   3.SG   3.SG   3.SG   3.SG   1.SG really very admire
     'He has left.'   '{Her / HER}, I really admire a lot.'

Were FP a focus-related functional projection (i.e. FocP), the prosodic contrast in (3) would be hard to explain. Notice also that the cauda is compatible with old/given information; (5B), which involves DC, is a felicitous response to (5A). (*Mingzai* is the topic of the exchange.)

(5) A: Mingzai zungji keoi   gaa.   B: hai aa, Mingzai zungji keoi gaa Mingzai.
     Ming   like   3.SG   SP   yes SP Ming   like   3.SG SP Ming
     'Ming likes her.'   'Yes, Ming likes her.' [Cantonese DC]

And while treating FP as a TopP may be tempting, the cauda may not contain the topic marker *ne*, commonly assumed to instantiate Top° in Chinese (Gasde and Paul 1996; Paul 2015).

(6) keoi tingjat heoi Sauji aa, keoi (*ne)   [based on (1)]

Consequences. The current proposal explains many of the intricate properties of Cantonese DC, namely (i) the cauda may not contain an overt SP; (ii) may be a non-constituent; (iii) may not correlate with an object phrase in *S*; and (iv) an overt SP is obligatory, as (7)–(10) show.

(7) *ngo sik-zo   faan laa, ngo laa   (8) keoi gamjat wui heoi Sauji aa, keoi gamjat wui
     1.SG eat-PFV rice SP 1.SG SP   3.SG today will go   Seoul SP 3.SG today will
     'I have already eaten.'   'He is going to Seoul today.'

(9) ngo zungji keoi aa, {ngo / *keoi}   (10) ngo wui wan keoi {aa / *∅} ngo
     1.SG like   3.SG SP   1.SG   3.SG   1.SG will find 3.SG   SP   1.SG
     'I like her.'   'I will find him.'

First, the impossible occurrence of an overt SP in the cauda follows straightforwardly from the fact that the proposed structure contains exactly one C°. **Second**, non-constituent caudae are entirely expected under the current account, since the cauda is not formed via direct extraction, but is the remnant of deletion. Notice that even if TP dominates a [−Foc]-marked constituent γ, DeFoc° may still not directly attract γ, since TP (itself [−Foc]-marked) would always constitute a closer goal (intervention by dominance; see Müller 2011). No non-constituent extraction thus need be admitted to derive (8). **Third**, since DeFoc° may only attract TP, clearly to yield an object cauda as in (9) the subject and the verb must have been deleted in the intermediate TP-copy, which violates the standard assumption that syntactic deletion targets constituents (see Sailor and Thoms 2014 for recent discussion). **Lastly**, P-copying crucially hinges on the presence of overt SPs, which hence must be present. I assume that covert SPs do *not* bear [*u−Foc], since it is unclear what it means for phonologically null elements to come into focus (according to Simpson & Wu 2002, once TP moves past an SP, the SP will be left in the prominent sentence-final position, which receives a focus interpretation). DC sentences with a covert SP, then, are underivable in the current account.

The proposal also predicts that embedded subjects may not appear in the cauda, and this prediction is borne out; cf. (11) and (12), which indicate that islands are not a relevant factor.

(11) *nei zidou [ngo ngoi keoi] ge, ngo   (12) *nei zidou [[ngo ngoi keoi] ni-go sisat] ge, ngo
     2.SG know 1.SG love 3.SG SP 1.SG   2.SG know 1.SG love 3.SG this-CL fact SP 1.SG
     'You know that I love him.' [*non-island*] 'You know the fact that I love him.' [*CNPC*]

Against Spellout of Multiple Links. Suppose instead the three copies of TP in (2b) are links of a *single* movement chain. This would mean that TP moves from Spec-DeFocP to Spec-CP. But since the former is a criterial position, this movement should be illegitimate. Notice that the complex *wh*-phrase in (13a), which has satisfied the Q-criterion, may not further undergo movement (known as 'Criterial Freezing', Rizzi 2006, 2010; see also Lasnik & Saito 1992).

(13) a. John wonders [which author Q [Mary likes <which author>]]
     b. *which author does John wonder [<which author> Q [Mary likes <which author>]]?

Also, this would entail spellout of multiple chain links, raising the question of why and when this is possible. Typically, the cause of multiple spelled-out copies is morphological (van Riemsdijk 1989; Landau 2006 a.o.), which is not what we have in the current case of DC.

By contrast, two independent A′-chains are formed in (2b), and in each chain it is always the *highest* link that gets spelt out, the ordinary case with Internal Merge (see Nunes 2004 on chain linearisation). [NB: parallel movement in (13b) would *not* result in grammaticality, as there is only one intermediate Spec-CP position, already occupied. This means one of the chains would violate locality, the *wh*-phrase moving *directly* to the matrix Spec-CP position.]

Against Move-and-Elide. A recent analysis (Cheung 2015) argues exactly that Cantonese DC involves 'Move-and-Elide': two identical CPs are first generated, and some XP evacuates from the ellipsis site in the second CP prior to TP-deletion, which yields the cauda. Since two CPs are involved underlyingly, it is unclear why (7) is bad, and also why an overt SP is obligatory as in (10); given that covert SPs exist, it is not clear why two identical CPs with covert SPs cannot be generated in the first place. But importantly, the object restriction is now mysterious, as there exists no natural reason why an object in a non-island configuration may not move; i.e. [CP DP$_{obj}$ [TP DP$_{subj}$ V <DP$_{obj}$>]]. To capture the object restriction, Cheung thus invokes the extra machinery of 'αP-ellipsis', which obligatorily deletes (at least) VP. The operation is *ad hoc*, since (i) it is not attested elsewhere; and (ii) deletion is generally optional. But a more serious problem with obligatory αP-ellipsis is that the account undergenerates, since the cauda can be a full TP, e.g. *ngo zungji keoi aa, ngo zungji keoi* (cf. (9); and I will show in the presentation that this cannot just be two sentences in juxtaposition). Hence, αP-ellipsis cannot be obligatory, which means we lose our account for the object restriction.

By contrast, the option of a full TP cauda comes free under the current account, since nothing forces deletion to apply in the intermediate TP-copy—deletion is entirely optional.

Implications. This paper proposed the novel option of *P-copying*, which, on empirical grounds, must be recognised. If the proposal is basically correct, it offers further support for the existence of parallel movement and the head-initiality of Cantonese CPs. Moreover, the current proposal holds the prospect of reconciling conflicting evidence for monoclausal and biclausal structure in the dislocation literature on E. Asian languages like Japanese & Korean.

Selected references. Cheung 2015: Bi-clausal sluicing approach to dislocation copying in Cantonese, *International Journal of Chinese Linguistics*. Simpson & Wu 2002: IP-raising, tone sandhi and the creation of S-final particles, *JEAL*.