

On FORMCOPY and the Form of Copy Raising

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Abstract

This paper revisits the phenomenon of English copy raising in light of recent developments in minimalist theorizing (Chomsky 2019 et seq.), in particular the separation of copy formation (FORMCOPY) from movement (Internal Merge). After reviewing the empirical facts and previous analyses, an attempt is made to recast the copy-raising dependency in terms of an (overt) M-gap (Chomsky 2021). Despite some initial appeal, this approach soon proves unviable, due to its incompatibility with unavoidable assumptions regarding the phase-internal and/or obligatory application of FORMCOPY. An alternative analysis afforded under the weak conception of Transfer (Chomsky 2008), exploiting the possibility of what is here dubbed ‘dislocal’ movement of previously transferred material, is argued to yield a more straightforward account of the observed hyperraising profile.

1. Identifying a problem

Until fairly recently, the simplest conception of Merge in conformance with the Strong Minimalist Thesis (SMT) was as summarized by Chomsky (2014) in *Minimal Recursion*:

“It is commonly held that I[nternal] M[erge] is more complex than E[xternal] M[erge], requiring the operations Form-Copy, Rmerge, Copy identification, and Copy deletion. But that is unwarranted. **There are no operations Form-Copy or Rmerge, just Merge in its simplest form, satisfying [the] N[o] T[ampering] C[ondition] and hence yielding copies.** Copy

*It is a privilege and a pleasure to be able to contribute something both familiar and new to Gereon’s richly deserved Festschrift. Gereon’s creative, eclectic, impeccably rigorous and often daringly original work has been an inspiration to me ever since I first encountered it in person at CGSW 17 in Reykjavik (2002), and it was an honour to have him as one of my PhD examiners. I will be forever grateful to Gereon for the opportunity to spend five stimulating years in Leipzig as a postdoc, expanding my linguistic horizons well beyond my minimalist comfort zone.

identification is based on a straightforward property, easily detectable at the phase level. Copy deletion follows from elementary third factor considerations.” (Chomsky 2014 (2012b: 13); my emphasis.)

In his latest writings, however, Chomsky (2019, 2021, 2023) has revisited the definition of Merge and argued for a more restrictive conception, MERGE, which operates on workspaces, mapping one derivational state to the next in conformance with a resource constraint (*Minimal Yield*) that limits possible outputs. The details of this re-conception do not concern us here, beyond one remarkable development. In a striking volte-face, a separate operation or rule of FORMCOPY is invoked in order to identify occurrences at the phase level, and thus to create discontinuous elements, overturning the previously held position quoted above which explicitly rejects such an operation.¹ Copies are now distinguished from repetitions (unrelated instances of the same syntactic object) via FORMCOPY (FC) rather than by the respective operations of Internal and External Merge. With copy formation now severed from (internal) Merge, the possibility emerges of independently externally-merged items being identified by FC and thus interpreted as a single, discontinuous element – that is, chains may now arise from EM as well as IM. Chomsky (2021) refers to such EM configurations with deleted lower copies as M(arkovian)-gaps, and proposes that PRO in (obligatory) Control instantiates such an M-gap.²

The predicted existence of M-gaps opens up a rich empirical testing ground for the new theory (what Chomsky 2021 calls the “enabling function” of the SMT), which should in turn help refine the properties of FC (which are somewhat inconsistently defined in Chomsky 2021 and 2023): e.g., is it phase-internal, constrained by the Phase Impenetrability Condition (PIC),

¹(Chomsky 2021:17); whilst previously unnecessary, the need for FC now follows as a consequence of the strict Markovianism of the MERGE system (Andreas Blümel, p.c.). There is a partial rollback in Chomsky (2023), in which FC is recast as an automatic mechanism applying phase-internally rather than a separate operation that would add to the list of “admissible operations” (2023: 6), though it remains the case that copy-identification is divorced from Internal Merge.

²Thus FC identifies the pair <*John*₁, *John*₂> in *John*₁ tried ~~*John*~~₂ to win as an M-gap, with deletion of *John*₂ applying under FC-identity with *John*₁. (Chomsky 2021:25) further suggests that anaphor binding (Principle A of the Binding Theory) is likewise the result of FC; reflexive pronouns would thereby set a precedent for overtly realized M-gaps, which we make use of below. See Blümel & Kitahara (2023) for an application of FC to null subjects in Romance and Greek that analyses *pro* as an M-gap.

or can it apply across phases? Does it apply automatically to all identical elements in a c-command relation within the relevant domain (as in Chomsky 2023), or is it optional (Chomsky 2021)? In an attempt to broach some of these questions from a different angle and, in doing so, to challenge the viability of the FC approach to copy identification, it seems appropriate to return here to an old syntactic chestnut which I first worked on during my time at Leipzig, under Gereon's inspiring and generous mentorship, and which has long proved a useful testing ground for minimalist advancements (including Probe-Goal Agree in Rezac 2004; the Activity Condition and phase theory in Fujii 2005): namely, English *copy raising*, which on the face of it has all the hallmarks of an (overt, externalized) M-gap. I first summarize its major properties, as identified by previous researchers, in section 2, before arguing in section 3 that these can best be understood in terms of direct (CP-skipping) A-movement under the weak conception of Transfer of Chomsky (2008, 2012a, 2013). Finally, in section 4, an M-gap alternative is mooted which quickly proves unworkable, at least under current formulations of FORMCOPY, leading to the conclusion that the earlier system, in which copy identification is simply the result of Internal Merge (IM), is to be preferred.

2. Identifying copies across clauses

2.1. The phenomenon: It looks like it might be Raising

Alongside the standard raising alternation in (1a-b), English famously exhibits another raising-like alternation, illustrated in (1a-b).

- (1) a. It seems [that John has lost his wallet].
 b. John seems [___ to have lost his wallet].
- (2) a. It seems [as if John has lost his wallet].
 b. John seems [as if he has lost his wallet].

The cross-clausal dependency in (2b) has come to be known as *Copy Raising* (CR): that is, this is a kind of raising that leaves behind an overt copy (a 'pronominal trace') in the embedded subject position, where standard raising (cf. (1b)) leaves an empty copy (trace).³ CR has a long history of interest and inquiry in the generative tradition. It was first noted in Postal (1971, 1974) and

³See Polinsky & Potsdam (2006) for how CR fits into a larger typology of related dependencies.

described and analysed in Rogers (1971, 1972, 1974), where it became known as the ‘Richard transformation’ (due to examples such as *Richard seems like he is in trouble*). It has since been a major focus of such works as Lappin (1984), Heycock (1994), Moore (1998), Potsdam & Runner (2001), Asudeh (2002), Asudeh & Toivonen (2004, 2012), Rezac (2004), Fujii (2005), Snider (2005), Landau (2009), and others.

These (and other) works have identified CR constructions in numerous languages apart from English (e.g. Hebrew, Turkish, Swedish, Greek, Romanian, Irish, Bantu languages), often under the more general rubric of *hyperraising*, i.e. raising out of finite clauses as in (3), which is normally excluded in languages like English.⁴ Examples of licit hyperraising in languages other than English are given in (4b) and (5).⁵

(3) *Hyperraising*

*John seems that [___ is happy]

(4) *Brazilian Portuguese hyperraising* (Boeckx et al. 2010)

a. Parece/acabou que os estudantes viajaram mais
seem.3SG/finished.3SG that the students traveled.3PL more
cedo
early
‘It seems/turned out that the students travelled earlier.’

b. Os estudantes **parecem/acabaram** que **vijaram** mais
the students seem.3PL/finished.3PL that traveled.3PL more
cedo
early
‘The students seem to have travelled earlier.’/‘The students ended up travelling earlier.’

⁴In terms of the *Derivation By Phase* system of Chomsky (2001), this exclusion followed from a conspiracy of the Phase Impenetrability Condition and the Activity Condition. Such instances of finite raising were originally excluded as violations of Chomsky’s (1973) *Tensed S Condition*, which banned raising out of finite clauses in general, as in such structures as **John seems (that) ___ has solved the problem*.

⁵See, for example, Zeller (2006) and Carstens & Diercks (2009) on hyperraising in Bantu, Nunes (2008) on hyperraising in Brazilian Portuguese, and Ura (1994) for a wider crosslinguistic survey.

- (5) *Greek hyperraising out of subjunctive clauses* (Alexiadou & Anagnostopoulou 1998)

Ta pedhia dhen **fenonte** na **doulevoyn**
 the children not seem.3PL SUBJ work.3PL
 ‘The children do not seem to work.’

In English, finite raising (in the form of CR) is restricted to *verbs of perception* (*sensation* or *appearance*) whose clausal complement is introduced by the predicative complementizers *as if / as though / like* – these include *sound, feel, taste, smell, look*, as well as the standard raising verbs *seem* and *appear*.

- (6) a. It looks [like this book has never been read].
 b. This book looks [like it’s never been read].
- (7) a. It sounds [like John’s got a lot of making-up to do].
 b. John sounds [like he’s got a lot of making-up to do].

Given that hyperraising is normally excluded in English, the existence of CR raises a number of important empirical and theoretical questions if this is genuinely a case of raising. We might first ask why we would want to treat CR as raising at all (indeed, most accounts avoid a movement analysis in favour of base generation of the matrix subject, a point to which we will return in section 2.2). There are many reasons for doing so. Firstly, the relation between the matrix subject and the pronominal copy in CR is the same as that between the matrix subject and the A-trace in standard raising: The matrix subject is the thematic subject of the embedded clause (i.e. it receives its θ -role in the embedded clause), as becomes abundantly clear when we apply the classical tests for raising versus control. As (8) shows, CR is possible with expletives and idiom chunks, which are incompatible with (raising to) thematic positions. (The following examples are from Potsdam & Runner 2001, unless otherwise indicated.)

- (8) a. There looks like there’s gonna be a riot.
 b. There seems like there’s likely to be a unicorn in the garden.
 c. The shoe seems like it’s on the other foot. (Snider 2005:2)
 d. The shit seems as if it’s likely to hit the fan very soon.
 (cf. Fujii 2005:44)

It thus appears that CR-verbs are monadic, just like standard raising *seem/appear*: They do not assign a θ -role to their subjects; in other words, the matrix subject position is nonthematic.

Secondly, the coreferential pronoun in the embedded subject position is *obligatory*, and it stands in an A-relation with its antecedent: it requires a local, c-commanding antecedent, cf. (9a-d), respecting the usual conditions on A-chains, such as the ban on superraising, as in (9e-g), where *the shoe / John* intervenes.

- (9) a. *Jody seems like it's raining. (Asudeh & Toivonen 2004)
 b. *Bill appears as if Mary is intelligent. (Lappin 1984)
 c. Bill_i appears as if he_{i/*j} is intelligent.
 d. *Bill_i's mother appears as if he_i is intelligent.
 e. *The other foot appears like the shoe is on it.
 (Potsdam & Runner 2001)
 f. *There seems like John expects there to be an election.
 g. *The shit appears as if John expects it to hit the fan very soon.

It thus appears that CR involves a canonical A-chain, just like standard raising. The obligatory identification (i.e. referential identity) of the matrix subject and the embedded pronoun is something that a movement account lends itself to particularly well, since Internal Merge (as originally conceived) creates copies, i.e. duplications of the self-same, identical item, without the need for the attendant complications and machinery of a binding-through-Agree approach (see section 2.2 below). Looking ahead to section 4, if such identification is now the result of FORMCOPY, then the latter must apply obligatorily to capture these facts (contra Chomsky 2021, but in accordance with Chomsky 2023).

Nevertheless, it seems clear that not all instances of CR have the properties in (8)/(9), and so not all instances of CR are necessarily to be treated as movement; in FORMCOPY terms, FC cannot be obligatory after all. Apparent examples of CR that do not conform to the usual conditions on raising do exist, especially with the physical perception verbs (*look, smell, feel, taste, sound*), as Asudeh (2002) in particular makes clear. Not least, an obligatory copy in the subject position of the embedded clause is *not* always necessary, as has been recognized since at least Rogers (1974):

- (10)
- a. He seems like his gums are bothering him. (cf. Snider 2005:4)
 - b. Richard smells like Gonzo has been baking. (Asudeh 2002)
 - c. Your car sounds like you need a new clutch. (Heycock 1994)
 - d. He seemed like there was no longer any turmoil or emotion over doing the tough things. (Landau 2009)
 - e. The sky appeared as though the clouds themselves had been stripped of life. (Landau 2009)

Crucially, however, there is a semantic difference between the examples in (10) and those in (8)/(9): The matrix perception verb is interpreted thematically here, suggesting that it assigns a particular θ -role to its subject. This role has been dubbed ‘PSource’ (for *perceptual source*) by Landau (2009); cf. also Asudeh & Toivonen (2012). Its interpretation is such that the matrix subject provides a direct stimulus responsible for triggering the perceived state of affairs specified in the complement clause, i.e. an auditory, visual/textual, gustatory, tactile, or olfactory stimulus as appropriate to the verb’s meaning, rather than a second-hand or indirect stimulus in which no actual looking, taste, smell, noise, etc., is involved.

With the verbs *seem* and *appear*, this thematic, ‘PSource’ interpretation is paraphrasable as *give the impression/appearance that* (cf. Rezac 2004:133), or by using the non-CR dyadic verb of appearance *act like* (Potsdam & Runner 2001, Snider 2005), as in (12b). True (nonthematic) CR, on the other hand, is paraphrasable as in (2a)/(6a)/(7a), i.e. by using a nonthematic, expletive subject and a propositional CP complement; cf. (11b):

- (11) ‘True’ CR (= nonthematic; matrix subject cannot be interpreted as a PSource)
- a. Mark Twain_i seems like he_i was a good man.
 - b. = It seems like Mark Twain was a good man.
 - c. ≠ Mark Twain is acting like he was a good man.
- (based on an example from Landau 2004)

(12) 'Apparent' CR (= thematic)

- a. He seems like Kim just dumped him.
- b. = He's acting like Kim just dumped him.
- c. ≠ It seems that Kim just dumped him.

(Potsdam & Runner 2001, Rezac 2004)

The consensus amongst authors is that we must therefore distinguish between true CR (genuine, non-thematic, monadic) and apparent CR (pseudo, thematic, dyadic), on principled interpretive grounds (cf. Potsdam & Runner 2001, Rezac 2004, Snider 2005, Landau 2009);⁶ where these authors differ is on where (and how) this line is to be drawn (for example, Landau 2009 would allow (10a) and (12), with an object pronominal copy, to be true CR).

The examples in (8) and (9e)-(9g) support this conclusion: Whenever raising is forced (i.e. whenever CR is forced to be true CR, not apparent CR), as with expletives and idiom chunks (i.e. items that resist movement to a θ -position), the coreferential copy in the embedded subject position is obligatory (compare the incompatibility of these items with paraphrasing by the thematic *acts like* predicate: **There acts like ... / *The shit acts like ...* on an idiomatic reading).

Other tests, such as those for control versus raising, then ought to confirm this split as well. For example, paraphrasing via passivization is only possible with raising predicates (which involve movement to a non- θ -position) – thus *John seems to have fixed the car* means about the same as *The car seems to have been fixed by John*, whereas *John tried to fix the car* is a rather different proposition from *The car tried to be fixed by John*. We therefore predict that such a passive paraphrase should be available only with true CR, not with apparent CR. This seems about right, as (13)-(14) show, thus confirming the thematic nature of the matrix subject position in the latter case.

(13) *True CR*

- a. John_i seems like he_i's fixed the car.
- b. = The car_i seems like it_i's been fixed by John.
- c. = It seems like John has fixed the car / It seems like the car has been fixed by John.

⁶Heycock (1994) is perhaps the only dissenting voice, claiming that CR is always of the latter type, i.e. that a coindexed copy is never obligatory, even with a nonthematic matrix subject.

For some speakers at least, (13b) paraphrases (13a) as *John* is the fixer and *the car* the fixee in both; both can be paraphrased as in (13c). The crucial point here is that, for such speakers, (13a) can be uttered having only seen the car and not seeing John; it's not necessarily a statement about John's appearance.

(14) *Apparent CR*

- a. The car seems like John has fixed it.
- b. \neq John seems like the car has been fixed by him.

Here again, *John* is the fixer and *the car* is the fixee in both variants, but the two sentences do not mean the same as each other, due to the additional *PSource* role that each receives when in the matrix subject position. Whereas *the car* is the perceptual source in (14a), *John* is in (14b): (14a) is about John's appearance whereas (14b) is about the car's. (Those speakers who do not allow (13a) to be paraphrased by (13b) take *seem/appear* with CR to be necessarily thematic, i.e. always requiring a *PSource* subject.)

It should be noted, however, that CR and the judgements as to whether it is true (nonthematic) or apparent (thematic) are open to prodigious amounts of dialectal or interspeaker variation. In the following, I will restrict myself to what Landau calls the "restrictive" dialect of English, i.e. that which constitutes the 'true', 'genuine' CR that underlies the analyses of Potsdam & Runner (2001), Rezac (2004), Fujii (2005) and others. In this variety, a nonthematic CR subject (indicating 'true' CR) requires a copy in the embedded subject position, forming an A-chain (as per raising proper).⁷

2.2. Previous analyses: There seem like there might be some problems

Despite the similarities between true CR and standard raising, very few existing analyses treat CR as actually being derived by movement (i.e. by the same mechanism as raising proper), preferring to base-generate the subject in the matrix clause and implement the dependency with the embedded pronominal

⁷Like Potsdam & Runner (2001), the analysis I'll put forward in section 3 also allows for true CR to obtain with a thematic matrix predicate, i.e. movement to a θ -position in terms of the *Movement Theory of Control* (Hornstein 2001, 2003), leaving a subject copy in the embedded clause. The one-way implication, then, is from a nonthematic matrix subject to true CR (and thus the need for an embedded subject copy), not from a thematic matrix subject to apparent CR.

problem for movement accounts, namely why the lower copy is spelled out overtly in CR but not in standard raising (we return to this in section 3).

Although the lack of scope reconstruction with CR poses a significant problem for movement accounts, Fujii (2005), in a rigorous attempt at a genuine movement account of CR,⁹ provides evidence that CR does indeed reconstruct for *binding*:

- (17) *True CR* (= movement):
- a. [Stories about [each other]_i]_j seem like [they_j have frightened [John and Mary]_i].
 - b. [Pictures of his_i mother]_j seem as if [they_j will aggravate [every boy]_i].
- (18) *Apparent CR* (= base-generation):
- a. *[Stories about [each other]_i]_j seem like [[John and Mary]_i like them_j].
 - b. *[Rumours about his_i mother]_j seem as if [Bill expects them_j to aggravate [every boy]_i].

Fujii's argument is that, if we assume a Belletti & Rizzi (1988)-style analysis of the argument structure of psych-predicates, in which the experiencer starts out in a position c-commanding the theme as in (19), then the binding of the anaphor/variable is possible if true CR reconstructs after all.

- (19) ... seem like [_{TP} [_α stories about [each other]_i] T [_{VP} (_{t_α}) frighten [_{VP} [John and Mary]_i t_{frighten} t_α]]]

By contrast, apparent CR, which does not involve movement, lacks these binding possibilities, as in (18). It may therefore be the case that true CR must involve IM (and thus copying) after all.¹⁰ In sum, base-generation approaches to the A-chains implicated in CR, such as Potsdam & Runner (2001) and

⁹Nevins (2004) also sketches a movement approach, albeit briefly, and without addressing the scope issue. Boeckx (2001) suggests that CR might be captured in terms of resumption, which (depending on the kind of resumption assumed) would treat the copy as a resumptive pronoun stranded by movement.

¹⁰Strictly speaking, insofar as the embedded subject copy in (17) is the PF realization of a full copy of the respective matrix nPs (*stories about each other*, *pictures of his mother*, etc.), reconstruction for binding here is only in fact required within the embedded clause (i.e. from the position of *they* to the base position). This will allow us to reconcile the lack of reconstruction

Rezac (2004), face the problem of accounting for (17), whilst raising accounts like Fujii's have to say something about (15)/(16).

Base-generation-plus-Agree approaches to CR additionally face further problems which would be avoided if CR were treated as movement (IM). For example, such accounts fail to exclude examples of the kind in (20) from the domain of possible CR structures.

(20) *There seem as if [a lot of people are intelligent].

Further, in treating the obligatory coreference (variable-binding) relation between matrix subject and pronominal copy as resulting from Agree, accounts such as Rezac's face a problem common to all attempts to derive coindexation and anaphoric dependencies purely from ϕ -Agree (cf. Landau's 2004 analysis of obligatory control, Reuland 2005 on binding). The problem is that ϕ -features (Person, Number, Gender) alone are insufficient to narrow down the reference to single out a unique, unambiguous binder. Thus *himself* in *Bill hit himself* has to refer specifically to *Bill*, not to just any third-person singular male. The currency of ϕ -Agree is not fine-grained enough to provide accurate indexing information.¹¹ By contrast, identity comes for free from movement *qua* copying, i.e. Internal Merge, which creates multiple inscriptions (occurrences) of the exact same item (copies). Building on Hornstein (2001), I therefore take the simplest account of obligatory coreference (including anaphoric binding, pronominal/variable binding with sloppy identity, etc.) to be that which treats it a consequence of the one operation in our minimalist arsenal that we already know to deliver identity, namely Internal Merge. The question to which we shall return is whether the severing of copy identification (FORMCOPY) from IM, as in Chomsky (2021, 2023), is equally or even better able to capture these facts.

for scope in (15)/(16) with the availability of reconstruction for binding in (17) in sections 3-4 below.

¹¹Rezac (2004) thus has to appeal to special coindexation features as an additional kind of ϕ -feature for this purpose. Aside from this problem, there's the fact that a probe's features are uninterpretable at the semantic interface and thus deleted; their use for mediating binding, as in Agree approaches to anaphoric dependencies, is thus doubly dubious, as they cannot feed interpretation at SEM. See also Kratzer (2009), who argues that Agree is what we get precisely in the *absence* of binding; instead, a syntactic mechanism more akin to movement ('feature transmission') is required for semantic binding.

An IM approach to CR (such as Fujii's) is therefore to be preferred, insofar as the problems that stand in its way can be adequately addressed. As we will argue in the next section, the main technical problem standing in the way of a movement approach to CR, namely that it involves movement out of a transferred domain (in violation of the PIC), falls away under the conception of Transfer suggested in Chomsky (2008) precisely when an overt copy is left behind inside the lower phase, which circumvents the PIC-barred modification of transferred material (cf. Chomsky 2012a, 2013).

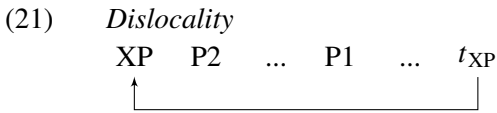
3. Overt copies, scope freezing, and identification through Internal Merge

Let us then consider in more detail the problems that CR poses both for raising/IM accounts in general, and for an analysis based on weak Transfer (Chomsky 2008, 2012a, 2013) in particular.¹² As desirable as it may be to put the raising back into copy raising, there are three major issues that need to be addressed in order for this to be a viable approach. Firstly, there is the question of how IM is possible at all, given that weak Transfer permits only probing of the transferred material (cf. footnote 12). In particular, cyclic linearization applies at the phase level and fixes the internal ordering of the transferred domain, so that further modifications are excluded (cf. Richards 2004, 2007) – spelled-out inactive material is internally frozen in place (though may be moved *en bloc* and thus interpreted elsewhere, as through piedpiping, roll-up movement, and so on; cf. Obata 2011). Secondly, there is the question of why CR, unlike standard raising, requires the embedded subject 'trace' position to be overtly pronounced – that is, why CR leaves an overt copy. Thirdly, we must account for why this kind of A-movement, unlike others, cannot reconstruct for scope (cf. (15)/(16)).

All three of these problems, I would like to contend, can be immediately understood if CR involves a direct (non-successive-cyclic) movement that skips the edge of the intermediate CP phase and directly targets the matrix

¹² Under the 'weak' conception of Transfer referred to here and assumed below, transferred material internal to a lower phase does not "disappear", but is "immune from further changes" (Chomsky 2013:42); it may be "inspected", but not "modified" (Chomsky 2012a:6), i.e. it may value a higher probe, but not be assigned a value by that probe or be moved, the latter restriction following from cyclic linearization, as elaborated below.

clause, as schematized in (21); for ease of exposition, let us call this *dislocal* movement.



Such a ‘dislocal’ derivation is only possible if Transfer of the CP phase (P1 in (21)), and thus the PIC-boundary between P1 and its complement, is weak (in the sense of footnote 12). This still leaves a (weak) PIC-boundary that CR must traverse, even though such boundaries normally only admit Search (e.g. Agree: access to a higher probe).¹³ My claim is that it is precisely because IM applies here to material that has already been (weak-)transferred that it must both leave an overt copy in the lower position and be (scope-)interpreted in the higher position. That is, both of these properties are Transfer-induced freezing effects at the interfaces: freezing of linear order at PHON/PF, and freezing of scope relations at SEM.

Turning first to the overt copy requirement, the realization of multiple copies along a movement chain is most naturally treated as a consequence of the linearization procedure (in the mapping from syntax to PF); see Bošković (2001), Grohmann (2003), Nunes (2004), and many others for pioneering models of multiple spell-out phenomena.¹⁴ In particular, we might assume that cyclic linearization (linearization by phase), as in Richards (2004, 2007), Fox & Pesetsky (2005), might force the realization of certain copies within a phasal domain. Fujii (2005) offers a cyclic linearization account of overt copy spell-out with CR, such that the pronominal copy is forced to be pronounced as the highest non-edge copy in its phase. Although it relies on certain

¹³Chomsky (2021:18) returns to the stricter, ‘strong’ view of Transfer in which even Search into a lower phase is barred by the PIC.

¹⁴Apart from the question of why the lower copy is realized at all, the fact that it is always realized as a pronoun warrants an explanation too. Plausibly, some ‘economy of spell-out/pronunciation’ principle might suffice to ensure that only enough features are realized as are required for satisfying the PF demand for realization (cf. Pesetsky 1998, Fujii 2005). For example, on the resumption approach of Boeckx (2001, 2003) and Nevins’s (2004) Case-peeling approach, this would just be the D head. If lower-copy spell-out with CR is indeed forced by PF considerations (as seems reasonable), then the PF-motivated last-resort realization of additional phonological material might well involve the insertion of functional items alone (i.e. no lexical roots, yielding a simplex pronominal).

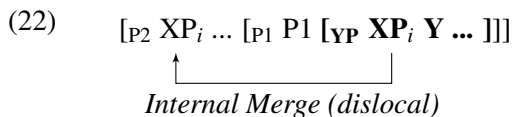
assumptions about the PIC which are not adopted here, his essential insight – that the lower copy is forced to be pronounced just if A-movement can skip the CP phase – is precisely the effect that we wish to achieve, and which I contend follows straight away from the nature of weak Transfer as described above.

On standard assumptions (cf. Chomsky 2007, 2008), valuation of the embedded C's ϕ -probe triggers (weak) Transfer of its TP complement. By cyclic linearization, all inactive items inside that TP are then ordered with respect to each other. It does not matter which particular linearization algorithm is assumed here; the point is simply that the embedded subject, whose Case has been valued by the embedded C, is part of that transferred inactive material. Its linear order with respect to the other items in the transferred TP is thereby fixed and cannot subsequently be altered.¹⁵ As Chomsky (2008, 2012a) suggests, this rules out (non-vacuous) movement of transferred material. Any such movement of this material to a higher phase would require a revisiting of the dead phase in order to update its ordering instructions so that the moved material could be pronounced in its new raised position instead of the lower position in which it was already linearized – the kind of countercyclic tampering that phases are designed to exclude, thus simplifying the computation. It is therefore not possible for a transferred subject in an expired phasal domain to undergo subsequent movement out of that domain and have its earlier spell-out overwritten such that it not be pronounced in the lower position. Once transferred and linearized, the transferred material cannot subsequently become a 'trace', i.e. have its spell-out (externalization) cancelled.

Viewed in this way, however, there is in fact nothing that prevents weak-transferred material from undergoing further IM – that is, nothing prevents us from *raising the dead*. All that follows is that any such resurrection (i.e. movement of transferred material) cannot affect the realization of the lower position. Such IM will therefore fail to result in the usual movement profile in which just one copy (the highest copy) is realized. Dead-raising occurs too late to go back and cancel or delete the externalization/spell-out orders that were already put in place for the lower phase. We thus predict that IM out of a (weak-)transferred domain will result in obligatory lower-copy

¹⁵Only by using the phase edge (i.e. successive-cyclic movement), which would require the subject to be active (e.g. *wh*-active), could the subject escape linearization in the lower TP; cf. Richards (2004), Fox & Pesetsky (2005).

externalization. Further, since this movement is not Transfer-triggered (i.e. it is not what Chomsky 2000 called *Indirectly Feature-Driven Movement* (IFM): the automatic displacement of active material to the phase edge to avoid Transfer), it will not involve movement via the lower phase edge. Rather, the relevant material is inactive, and IM of this material takes place long *after* the lower phase is transferred, hence bleeding movement via the edge. This ‘dislocal’ cross-phasal movement profile is schematized in (22), where XP is an inactive embedded subject that is transferred, linearized and pronounced as part of YP at P1, prior to creation of the higher copy at P2.



The overt lower copy of CR is thus entirely as expected if CR is raising the dead, i.e. movement of previously transferred inactive material which therefore proceeds directly (dislocally), skipping CP. We can adduce the usual kind of evidence for (absence of) successive-cyclic movement to support the conclusion that CR skips the CP edge, such as the lack of a position for floating quantifiers (following Sportiche’s (1988) analysis of stranded quantifiers):

- (23) a. The children (*all*) seem [CP/TP (*all*) to be happy].
 b. The children (*all*) seem [CP (**all*) as if they’re happy].

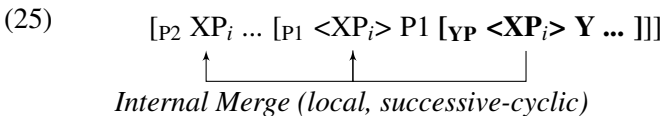
Only standard raising (23a), not CR (23b), exhibits evidence of a touchdown position at the left edge of the embedded clause. More convincingly, though, the evidence for edge-skipping dislocal movement from the PF-interface (freezing of the externalization of the lower copy) is corroborated by the scope-freezing effect at the semantic interface, which we can take to be the SEM equivalent and correlate of lower-copy spell-out/externalization, as I now argue.

The crux of Fujii’s (2005) analysis of lower-copy spell-out with CR is that the two realizations are each the head of a separate chain at PF. That is, linearization essentially treats CR as creating two chains, each of which is separately linearized and pronounced, due to the skipping of the intermediate edge position. We have derived this same result from weak Transfer and the movement of inactive material (‘raising the dead’). By not proceeding via the edge, a single movement chain comes to be treated as two separate chains for

interpretation at the interfaces – in effect, the cord is severed by not using the edge. This now speaks to the more general problem alluded to in section 1 to which Chomsky has repeatedly returned, namely the question of how copies (formed by IM) are distinguished from repetitions (formed by independent instances of external merge (EM) of the same lexical item), as in (24).

- (24) a. He arrived he. (copies; single realization)
 b. He thinks he is invincible. (repetitions; both are realized)

Prior to Chomsky (2021) and the introduction of FORMCOPY, Chomsky’s conjecture was as stated in the opening quote in section 1, namely that the difference between (24a) and (24b) is readily “detectable at the phase level” – essentially, the phase head ‘knows’ whether a given occurrence is created by EM or IM (see also Chomsky 2012a:5). How does it know this? Chomsky (2019:43-4) appeals to the “duality of semantics” and theta-positions to make the requisite local distinction. Another possibility is that the relevant difference between (24a) and (24b) – and the difference that the phase head has local access to in deciding which (if any) copy to pronounce – is whether or not the phase edge has been used. Two inactive repetitions of the same item in two separate phases will not be linked via the intermediate phase edge (cf. (22)), and so each will receive a separate realization – each is a separate candidate for linearization.¹⁶ By contrast, if the two items are created by IM and the edge is used (such as the unaccusative vP edge in (24a)), then the relevant item has undergone IFM as an active element and is not yet ready for Transfer, linearization and externalization in the lower phase. This is the standard non-local, cross-phasal dependency profile, as schematized in (25), where <XP> is an active lower copy that escapes Transfer and linearization at P1.



Crucially, if IM proceeds in a dislocal manner, as in (22), i.e. not via the edge, then this will look like an independent repetition (EM) at the phase level, at least for such purposes as copy deletion – dislocal movement will then be treated in the same way as (24b), not (24a).

¹⁶See Collins & Groat (forthcoming) for other possibilities.

Dislocal movement, then, essentially produces repetitions as far as the interfaces are concerned. Although generated by IM, the skipping of an intermediate phase edge severs the link, creating two identical items in disconnected positions. The result at PHON, as we have seen, is multiple copy realizations. At SEM, it is scope freezing, as in (15)/(16), due to the absence of a path, via linked phase edges, to a lower reconstruction site. The higher copy in (15a) and (16a) can therefore indeed be formed by IM (and thus identity of reference imposed at the higher phase level), but whilst the higher phase ‘knows’ that it has sourced X internally, from the existing workspace (rather than from the lexicon), and thus ‘knows’ that X is not to be interpreted as an independent repetition for referential purposes, this nevertheless comes too late to cancel or alter any interpretive PHON/SEM instructions already established for X in the lower, transferred phase.

If, as we are claiming, dislocal IM is essentially treated as non-movement (EM) at the two interfaces for the purposes of linearization and scope/reconstruction, creating two separately interpreted ‘chains’, then the question arises as to why we would want to treat CR as IM at all. Instead of raising, FORMCOPY could more straightforwardly provide the missing link between the two chains, yielding the requisite identification of the matrix and embedded subject positions. Let us consider this possibility in more detail.

4. FORMCOPY-Raising?

At first blush, FC seems well suited to deliver a simple and transparent account of (true) CR; its properties, reviewed in section 2, follow immediately. The lack of (A-)reconstruction for scope in (15)-(16) is as expected if the two clauses are linked only by FC, with separate EM-insertions of the matrix and embedded subjects. Indeed, Chomsky (2023:10) offers just such an account of the difference in reconstruction possibilities between (26a) and (26b):

- (26) a. One interpreter each seemed *t* to be assigned to the diplomats.
 b. *One interpreter each tried PRO to be assigned to the diplomats.
 (Chomsky 2023:10 (4))

Only the IM’d instance of *one interpreter*, i.e. the one in (26a), has a reconstruction site (*t*) in which it can be interpreted below *each*. PRO is an M-gap (a copy formed by FC) that is “inserted in-situ by EM”; it is otherwise

unrelated to the matrix subject. On an FC account of (true) CR, the latter would similarly instantiate an M-gap and thus be expected to pattern with (26b), rather than with (26a); hence (15)-(16) fall into line.¹⁷ Reconstruction for binding (cf. (17)) would follow from the interpretive identity imposed on copies through FC (Chomsky 2019, 2021 calls this the principle of *Stability*); the embedded subject can then reconstruct for binding within the embedded clause (see footnote 10 above).

The fact that the ‘M-gap’ in CR is overt (externalized), rather than a trace (deleted), would follow from the same considerations of cyclic linearization that yielded this effect on the IM ‘raising-the-dead’ approach put forward in the previous section. Indeed, we might make the generalizing assumption that all cross-phasal FC (by contrast with phase-internal FC) will be associated with an overtly realized, rather than empty or deleted, M-gap.

It is here, however, that we start to run into problems with the FC approach to CR, and ultimately with FC more generally. Chomsky (2023) requires that FC be strictly limited to the phase, i.e. to be PIC-constrained, a consequence of its being a Search operation (cf. footnote 13 above); Chomsky (2023:6 (fn.13)) states explicitly that FC observes the PIC. This allows Control (obligatory PRO) to be analysed as FC (Chomsky 2021, 2023, taking non-finite Control CP to be non-phasal), but would bar an FC account of CR. There are, moreover, strong empirical arguments for this restricting of FC to the internal phase domain, and these relate to the attendant question of whether FC is optional (Chomsky 2021) or obligatory (Chomsky 2023), a position which is forced to shift across those two papers. It is worth following the logic through in some detail.

The problem is simple transitive clauses, as in (27) (Chomsky 2021:25).

(27) John saw X (where X = John)

If FC applies obligatorily, then the result is **John saw*, with a reflexive interpretation. Instead, we get *John saw John*, where the two *Johns* are distinct, i.e. repetitions, referring to different individuals. The conclusion Chomsky reaches is that “like other operations, FC is optional” (*ibid.*). The illicit option (i.e. application of FC, yielding **John saw*) is then ruled out by a particular

¹⁷Chomsky here makes the clarifying generalization that reconstruction (interpretation) is in the theta-position. True CR would challenge this, at least insofar as it involves a non-thematic (non-*PSource*) matrix subject, as it does for some speakers (see section 2.1).

formulation of “Theta Theory” (given in Chomsky 2021:21): *John* here would purportedly be receiving two theta-roles from the same assigner, which is barred.

However, Chomsky (2023) reverts to the more standard view of argument structure in which V (here *saw*) assigns only the internal theta-role; the external role is assigned by the VP (i.e. by {V, Object}; equivalently by v^*), and so the unavailable option for (27) is no longer ruled out by Theta Theory (which he then dispenses with altogether as a departure from SMT). Addressing such configurations as (27), Chomsky (2023:8-9) devises an approach to IM that essentially segregates the A- and A-bar systems, placing theta-marked phrases into a “box” reserved for higher phases, thereby removing them from consideration for Merge to the thematic external argument (EA) position. The result is that *John* and X in (27) cannot be related by IM. But this does not address, much less solve, the problem discussed above for (27), namely why two instances of EM of *John*, one in the object position, one in the EA position, cannot be identified by FC, which after all is conceived precisely to operate independently of Merge (internal or external). We get the first hint of how this is to be accounted for in footnote 29 of the cited paper, in which Chomsky states that **many people like themselves*, a would-be FC configuration with deletion of the lower copy, is “barred by PIC” (Chomsky 2023:15 (fn. 29)). That is, FC in configurations like (27) – simple transitive clauses – must be blocked by a phase boundary, presumably the one between v^* and its complement VP. This is then stated more explicitly in a discussion of the contrast between (27) and (28), “a single phase” (Chomsky 2023:16):

(28) John₁ [arrived ~~John~~₂]

Taking the “verbal phase [to be] v^* with its internal arguments”, with EA “enter[ing] in the next phase”, the contrast between (27) and (28) now follows, with “PIC blocking any relation that crosses the PIC barrier, in particular the copy relation [FC]” (Chomsky 2023:16 (fn.30)).

In fact, for (29) to follow, it is furthermore crucial that FC be *obligatory*, not optional, in order to force deletion of *John*₂. As pointed out above, this reverses the position in Chomsky (2021), in which FC was concluded to be optional. Now, Chomsky (2023:14 (fn.28)) pivots to the opposite assertion, namely that “FC applies obligatorily (as is natural, given that it simply identifies a structural relation)”, which in turn allows FC to be delisted as an operation in

its own right (cf. footnote 1). FC must in any case be obligatory in order to block lower-copy externalization of the M-gap in Control configurations and thus ensure a null ‘PRO’, with no possibility of *John*₂ being overtly realized in *John*₁ *tried John*₂ *to win*.

In sum, we arrive at two assumptions that must be made for FC to be workable at all: (i) FC is PIC-constrained, unable to cross a PIC boundary; (ii) FC is obligatory. At least the first of these renders FC incompatible with Copy Raising, which crosses a finite CP phase boundary.

One might seek to rescue an FC account by postulating a weaker form of FC, perhaps applying at the interface rather than within the narrow syntax, with the opposite properties to syntactic FC: essentially, this would be an interpretive procedure that crosses phase boundaries and applies optionally; as suggested above, being cross-phasal, it would yield an overt (externalized) rather than empty (deleted) M-gap/copy.¹⁸ The problem, however, is (as always) the simple cases, as in (27). Consider the even simpler pronominal variant, (29).

(29) He_j [saw him_{i/*j}]

As above, the option of *not* applying FC simply yields two repetitions, as in the available construal, i.e. *He* and *him* are independent instances of EM and thus interpreted disjointly. But this is not enough. To yield the obviation effect (i.e. Principle B), FC cannot just be optional; it must obligatorily *not* apply. There is no possibility, even as an option, for the interpretation *He* = *him* in (29), yet nothing excludes the application of a Merge-independent FC to these two instances of EM, identifying them as copies. FC thus seems to run into problems more generally, beyond CR, at least if it is to be extended to Principles A/B of the Binding Theory (cf. footnote 2).

The simplest route to capturing the full range of facts considered above is surely based on the opposite implication: not from absence of FC to EM (i.e. repetitions), but from EM to absence of a copy relation, and from IM to the presence of one. That is, we need to reassociate the copy relation with IM. Given that tight association, there is no need (indeed, no place) for a dedicated procedure of copy-formation, FORMCOPY, divorced from Merge. Instead, there is just IM, which remains the simplest and most natural source of identity in the system (Hornstein 2013). Richards (2020) offers an approach

¹⁸This has actually been proposed in a GLOW Asia XIII (2022) abstract, entitled “On Two Types of Form Copy”, whose author I have been unable to identify.

to Principles A and B from this perspective, deriving the obviation effect in (29) from respective derivational choices of IM and EM. If tenable, the analysis of CR proposed in section 3 provides further demonstration of this IM-identity connection.

5. Conclusion

The preceding sections have sought to offer indicative arguments, proceeding from a case study of English copy raising, that an independent mechanism of copy identification such as Chomsky's (2021, 2023) FORMCOPY may be redundant, and indeed unworkable, both in analysing this particular cross-clausal dependency and for copy relations in general. In terms of referential identity and the difference between copies and repetitions, we have made crucial use of the phase edge to draw this distinction. We have exploited the technical possibility of 'dislocal' movement under weak Transfer, which circumvents the phase edge, thereby yielding occurrences that fall somewhere between copies and repetitions: they are treated as repetitions for certain interpretive purposes at the interface (those that are part of the lower phase's computation, prior to movement taking place), but they are repetitions of a referentially identical nature, effectively copies, for binding purposes. The following three-way typology emerges:

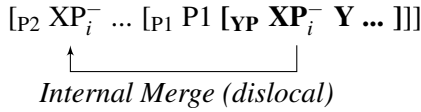
- (30) a. Internal Merge, within a phase or via the phase edge, produces *copies* (single interpretation at each of PHON and SEM):¹⁹

$$[P_2 \mathbf{XP}_i^- \dots [P_1 \langle \mathbf{XP}_i^+ \rangle P_1 [\mathbf{YP} \langle \mathbf{XP}_i^+ \rangle \mathbf{Y} \dots]]]$$

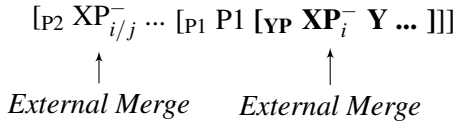
Internal Merge (local, successive-cyclic)

¹⁹In (30), a + superscript indicates activity, and a – superscript indicates inactivity; heads P1 and P2 are phases, and YP is the nonphase complement of the P1 phase head. Boldface indicates a domain that has been transferred upon valuation of P1. <Angled brackets> indicate an unpronounced lower copy.

- b. Dislocal movement of inactive material under weak Transfer produces *identified repetitions* (each separately linearized at PHON and separately interpreted for scope at SEM).



- c. External Merge produces *incidental repetitions* (each separately linearized at PHON and separately interpreted for scope and binding/reference at SEM).



It is (30b), the new possibility explored in section 3, which is where FC may yet have a distinctive role to play. If the problems brought out in section 4 can be overcome, it could well offer an alternative account of identified repetitions, including CR, in terms of M-gap configurations. As we have argued, however, even here, IM (*qua* ‘raising the dead’) may remain the simpler analytical variant favoured under SMT – as per our opening quote.

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