Connectivity in left-dislocation and the composition of the left periphery*

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This paper proposes a crosslinguistically uniform analysis of Left-dislocation constructions, according to which left-dislocated XPs are elliptical sentence fragments surfacing in linear juxtaposition to their host clause. The analysis is shown to provide a principled solution to Cinque's Paradox: dislocated XPs are extra-sentential constituents akin to parentheticals while behaving in certain respects as having moved to their surface position from within the host clause, in apparent violation of the boundaries of “sentence grammar” as typically defined. The solution in terms of deletion and endorphoric linkage undermines templatic analyses of the ‘cartographic’ tradition, showing that in at least some cases the “sentential periphery” reflects not syntactic composition but juxtaposition in discourse.

Keywords: syntax; ellipsis; dislocation; connectivity

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1. Introduction

Left-dislocation (LD) constructions are widely attested across the languages of the world, and their syntax has been studied in some detail (see van Riemsdijk 1997; Alexiadou 2006 and López to appear, and papers collected in Anagnostopoulou et al. 1997 and Shaer et al. 2008). A dislocated XP, designated Σ below, surfaces to the left of a host clause $hc$ containing a pro-correlate κ:

(1) $\Sigma \left[_{hc} \ldots \kappa \ldots \right]$

The following is a small sample of crosslinguistic realizations of this pattern:

(2) a. Su questo lavoro, non riesco a concentrarmici.
   on this work not I can to concentrate on it
   ‘I can’t concentrate on this work.’ (Italian; Cinque 1983)

b. Dem Peter, dem hat Maria schon oft geholfen.
   the.DAT Peter him.DAT has Maria already often helped
   ‘Maria has often helped Peter.’ (German; Ott 2014)

c. Incwadi ngi-cabanga ukuthi umfana u-ya-yi-fund-a.
   book.9 I-think that boy.1 sm-FOC-OM.it-read-a
   ‘I think the boy is reading the book.’ (Zulu; Zeller 2006)

d. Toho kluka, toho neznám.
   that guy.ACC that.ACC not know
   ‘I don’t know that guy.’ (Czech; Sturgeon 2008a)

e. A garrafa de whisky vou compra-la de certeza.
   the bottle of whisky I will buy-it for sure
   ‘I will buy the bottle of whisky for sure.’ (European Portuguese; Barbosa 2000)

Σ typically links to the preceding discourse as a kind of topic, in some sense of the term; discourse-functionally oriented syntactic analyses consequently often refer to left-dislocated XPs simply as ‘Topics.’ In contradistinction to these analyses, I will adopt a purely structural working definition of Σs here, as occurring in

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1. I use the cover term ‘Left-dislocation’ here for those constructions in which the dislocated XP shows connectivity into the host clause (as detailed below), i.e. what is traditionally called Contrastive Left-dislocation – a misnomer, given that Σ need not be contrastive – and Clitic Left-dislocation (I set aside here English ‘topicalization,’ although the analysis can plausibly be extended to this case; cf. Chomsky 1977). Superficially similar constructions in which no connectivity obtains, including what has been labeled ‘Left-dislocation’ in English (Ross 1967, 1973a, Rodman 1997), I will refer to as constructions involving ‘Hanging Topics’ (I illustrate this difference below). While such revision of established terminology bears the risk of confusing the reader, I believe it to be justified for the sake of transparency.
the surface configuration (1) and showing connectivity into the following clause (see below).

LD differs visibly from simple A-fronting in that the displaced constituent is connected not to a gap but to an overt category. Contrasting with the examples in (2), simple fronting leaves behind a gap (obligatorily so for *wh*-movement (3a) and focus fronting (3b) in German/Italian; (3c) is in free variation with (2e)):

(3) a. Wen hast du (*den) gesehen?
   who have you him seen
   ‘Who did you see?’ (German)

b. GIANNI (*lo) ho visto.
   Gianni him I have seen
   ‘I saw Gianni.’ (Italian; Cinque 1990)

c. A garrafa de whisky vou comprar de certeza.
   the bottle of whisky I will buy for sure
   ‘I will buy the bottle of whisky for sure.’
   (European Portuguese; Barbosa 2000)

The foremost questions raised by LD constructions are thus: How does LD differ syntactically from simple fronting? What is the relation between Σ and *HC*, and between Σ and κ in particular? How is this dependency created – by syntactic or interpretive means? These questions are theoretically relevant beyond the construction in point, since LD has been argued to furnish evidence for specific views of clause structure (Rizzi 1997 et seq.).

Expanding on previous work focusing primarily on German (Ott 2012b, 2014), I argue in this paper that LD is a composite construction involving a sequence of two repetitive sentences, the first of which is reduced by ellipsis at the surface. This is illustrated below for (2a), where strikethrough represents deletion and matching indices coreference:

(4) \[
\begin{align*}
\text{CP}_1 \text{ non riesco a concentrarmi } ([\Sigma \text{ su questo lavoro}],) \\
\text{CP}_2 \text{ non riesco a concentrarmi}[^{\kappa-\text{ci}},]
\end{align*}
\]

The two clauses are parallel, differing only in that CP₁ contains Σ whereas CP₂ = *HC* contains κ in its place, thus enabling redundant material to delete; this yields the LD surface pattern. There is no *bona fide* syntactic connection between the two clauses, but they are doubly endophorically linked by cataphoric ellipsis and anaphoric κ. On this view, κ is not a syntactically bound resumptive pronoun, but a free pro-form that is cross-sententially connected to Σ. I will show that this analysis is better-suited to account for central properties of LD than monosentential analyses assuming either adjunction of Σ to *HC* in the base or movement from within *HC* to its peripheral surface position.
Section 2 provides some background on the theoretical relevance of LD, chiefly with regard to the development of the split-CP system. Against this backdrop, I then outline the biclausal analysis of dislocation in Section 3, highlighting its principal merits along the way. Section 4 suggests an extension of the analysis to embedded LD. Section 5 concludes.

2. Dislocation, (non-)movement, and the left periphery

2.1 Cinque’s Paradox

In his seminal discussion of the syntax of ‘topic constructions,’ Cinque (1983) shows that two types of ‘dislocated’ XPs must be distinguished: structurally unconnected ‘Hanging Topics’ (HTs) on the one hand, and structurally connected Σs on the other (for a summary of arguments, see Villalba 2000 and Alexiadou 2006, among others). Cinque offers a number of arguments showing that HTs as in (5) are structurally external to their host clauses. Most strikingly, the host clause is syntactically complete: there is no gap corresponding to the HT. Furthermore, HTs bear invariant default case (5a), do not reconstruct for binding (5b), and may be separated from their correlate by an island boundary (5c).2

(5) a. Upphæðin, þeir ákváðu hana strax.
    the sum.NOM they determined it.ACC immediately
    ‘They determined the sum immediately.’ (Icelandic; Thráinsson 2007)

b. *Knížka o sobě, tu má Honza, rád.
    book.NOM about self that.ACC has Honza happy
    ‘Honza likes the book about himself.’ (Czech; Sturgeon 2008a)

c. Giorgio, non conosco la ragazza che lui vuole sposare.
    Giorgio I.NEG know the girl that he wants to marry
    ‘I don’t know the girl Giorgio wants to marry.’ (Italian; Cinque 1990)

2. In languages without morphological case distinctions the difference between HT and LD can be detected by other means, e.g. by using categories other than NP. As the contrast in (i) (from Benincà and Poletto 2004) shows, once a non-NP is dislocated island-sensitivity emerges, a hallmark of LD (see Section 3.3.3).

(i) (*A) Gianni, ti parlerò solo delle persone che gli daranno
    il premio Nobel.
    ‘I will only talk about people to you who will give the Nobel Prize to Gianni.’
    (Italian)
Cinque draws the conclusion that HTs bear no grammatical relation to their host clause: HT and host clause are separate, discursively juxtaposed expressions with no syntactic connection (see Shaer and Frey 2004 and Krapova and Cinque 2008 for further evidence).^{3}

While HTs are restricted to the category NP, Σ in LD can be of almost any phrasal category:

(6) a. [\text{PP In Spanien}], da trinken sie Wein zum Frühstück.
   in Spain there drink they wine to the breakfast
   ‘In Spain they have wine with breakfast.’
   (German)

b. [\text{PP Na Ivan}] otdavna ne sa mu plaštali.
   to Ivan for a long time not be.3\text{PL} him.DAT paid.3\text{PL}
   ‘Ivan has not been paid for a long time.’
   (Bulgarian; Krapova and Cinque 2008)

c. [\text{PP S Honzovým i psem}], s tím pojede\text{\emph{ki}}
   with Honza’s dog.INSTR with that.INSTR will go
   na výlet.
   on trip
   ‘He will go on a trip with Honza’s dog.’
   (Czech; Sturgeon 2008a)

(7) a. [\text{CP Wen er kennt}], den belügt er nicht.
   who.ACC he knows him.ACC lies to he not
   ‘He doesn’t lie to who he knows.’ (German)

b. [\text{CP Če Rusia ni e osvobodila ot turec}] go
   that Russia us.ACC be.3\text{SG} liberated from the Turks it.ACC
   znajat i decata.
   know.3\text{PL} also the children
   ‘Even children know that Russia has liberated us from the Turks.’
   (Bulgarian; Krapova and Cinque 2008)

c. [\text{CP Abych Honzovi, uvařila vepřové maso}]
   to po
   that I Honza.DAT cooked pork meat that.NEUT from
   mé chce\text{\emph{ki}}
   me wants
   ‘He wants me to cook meat for Honza.’
   (Czech; Sturgeon 2008a)

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^{3} Agreement in ϕ-features between Σ and κ cannot be taken to indicate a movement dependency, since such agreement is also found with ordinary discourse anaphora (e.g., personal pronouns). Crucially, this is not the case for morphological case and other indicators of connectivity reviewed below. Furthermore, in certain contexts Σ and κ need not agree: see Section 3.2.2 below.
(8) a. \([\text{AP} \text{Onvergetelijk}], \text{dat ben je.}
\text{unforgettable that are you e.}
\text{‘You are unforgettable.’ (Dutch; Rullmann and Zwart 1996)}
\]

b. \([\text{AP Bella}], \text{non lo è mai stata.}
\text{beautiful not it is never she. been}
\text{‘She has never been beautiful.’ (Italian; Cinque 1990)}
\]

c. \([\text{AP D’ intel·ligent}], \text{no ho és pas.}
\text{of intelligent not it is neg}
\text{‘(S)He is not intelligent.’ (Catalan; Villalba 2000)}
\]

(9) a. \([\text{VP Bücher lesen}], \text{das tut er nur äußerst selten.}
\text{books read that does he only utterly rarely}
\text{‘He very rarely reads books.’ (German)}
\]

b. \([\text{VP Messo da parte}], \text{non lo è mai stato.}
\text{got from the way not it is ever been}
\text{‘He never got out of the way.’ (Italian; Cinque 1990)}
\]

c. \([\text{VP Jugar amb l’ordinador}], \text{ho fan tots els nens.}
\text{play with the computer it do all the children}
\text{‘All children play on the computer.’ (Catalan; Villalba 2000)}
\]

(10) a. \([\text{AdvP För två veckor sen}], \text{då köpte Johan sin första bil.}
\text{for two weeks ago then bought Johan his first car}
\text{‘Two weeks ago Johan bought his first car.’ (Swedish; Holmberg 2015)}
\]

b. \([\text{AdvP Potichu}], \text{tak zavřel dveře.}
\text{quietly thus closed doors}
\text{‘I closed the doors quietly.’ (Czech; Sturgeon 2008a)}
\]

Cinque observes that LD configurations, while superficially similar to HT constructions, cannot be relegated entirely to discourse grammar. This is so because, unlike HTs, Σs in LD do show syntactic connectivity into HC. As detailed further in Section 3.3, Σ and κ strictly co-vary in case (11a) and cannot be separated by an island boundary (11b).

(11) a. \(\text{Þessum hring, honum hefur Ólafur lofað Mariu.}
\text{this.dat ring it.dat has Olaf promised Mari}
\text{‘This ring, Olaf promised it to Mari.’ (Icelandic; Zaenen 1997)}
\]

b. \("A Carlo, ti parlerò solo del-
\text{to Carlo to you I will talk only about the people that}
gli piacciono].
\text{to.him appeal}
\text{‘To Carlo, I will only talk to you about people that appeal to him.’ (Italian; Cinque 1990)}
\]
Since case-marking and locality are hallmarks of sentential syntax that do not govern inter-sentential discourse, Cinque concludes that Σ and \( \text{hc} \) in LD are connected by a *bona fide* syntactic dependency, i.e. syntactic displacement. As noted by Cinque, however, this raises a problem: while we expect movement to leave a gap, \( \text{hc} \) is by itself syntactically complete. In addition, LD shows a number of further non-movement properties, to be reviewed in Section 3.2 below, which likewise militate against this conclusion. In short, LD shows movement and non-movement properties simultaneously. Following Iatridou (1995), I will refer to this state of affairs as Cinque’s *Paradox*.

Since the relation between Σ and \( \text{hc} \) cannot easily be assimilated to any familiar type of syntactic dependency, Cinque (1990) stipulates a novel type of dependency, termed *Binding Chain*, which relates Σ, base-generated in its left-peripheral surface position, to κ via coindexing.\(^4\) Frey (2004) provides the following semi-formal definition:

\[
(12) \quad \text{A} \{ \text{Binding Chain} \} \langle \alpha_1, \ldots, \alpha_n \rangle \text{ is a sequence of nodes sharing the same } \theta\text{-role such that for any } i, 1 \leq i < n, \alpha_i \text{ c-commands and is coindexed with } \alpha_{i+1}. \]

Case connectivity, island-sensitivity etc. are assumed to be properties of chains, regardless of whether they are derived by movement or binding. Binding Chains are thus introduced to mimic the effects of movement in the absence thereof.

An immediate problem of this approach is that (12) necessarily captures only a subset of LD constructions: as we saw in Section 2.1, various constituent types other than arguments can function as Σs, but none of these could enter into the composition of a Binding Chain, which as per (12) is contingent on identity in \( \theta \)-role. Even for \( \theta \)-marked categories, however, (12) amounts to little more than a technical restatement of Cinque’s Paradox. A prerequisite for coindexation according to (12) is identity in \( \theta \)-role; the crucial question of *how* \( \Sigma \), which is in no local relation with any \( \theta \)-assigning predicate, comes to share a \( \theta \)-role with κ, is left open; as a result, it remains unclear how the indexation mechanism is to be constrained.\(^5\) It is also not clear what notion of binding is at stake here, given that the \( \Sigma-\kappa \) dependency corresponds to no known type of syntactic binding (cf. Villalba 2000 and Section 3.2.5 below); furthermore, regular binding relations are not sensitive to islands (e.g., adjuncts can be bound into), but LD is (recall (11b)).

\(^4\) Related approaches are developed in Demirdache 1991, Wiltchko 1997b, Anagnostopoulou 1997 and Suñer 2006, among other works. The problems pointed out below apply equally to these variants.

\(^5\) Even if this problem could be overcome, a mechanism like (12) will require the introduction of indices in the course of the derivation, which is incompatible with Chomsky’s (1995) Inclusiveness Condition.
Given that proliferation of primitives and concomitant material enrichment of UG is to be avoided on grounds of parsimony, any theory that avoids recourse to Binding Chains is thus a priori preferable (cf. López 2009, 214).

The relation between Σ and κ is sometimes taken to be one of ‘resumption’ (see e.g. Demirdache 1991; Sturgeon 2008a), in an attempt to assimilate the Σ–κ relation to a familiar type of syntactic dependency. Such an equation of LD and genuine resumption is illegitimate, however. Merchant (2004b) shows that binders of resumptive pronouns crosslinguistically appear without overt case marking; this is illustrated below for English and Greek:

(13) Who(*se), did the police say that finding his, car took all morning?

(14) a. *O Giannis ine o andras ton opion psaxnun mia gineka pou na (ton) pandrefti.
   the Giannis is the man the which.acc seek.3pl a woman that she him.acc marry.3sg
   ‘Giannis is the man who they’re looking for a woman who will marry him.’

   b. O Giannis ine o andras pou psaxnun mia gineka pou na *(ton) pandrefti.
   the Giannis is the man that seek.3pl a woman that she him marry.3sg
   ‘Giannis is the man that they’re looking for a woman who will marry him.’ (Greek)

As we saw in (11a) above, LD differs crucially from resumption in that Σ and κ obligatorily match in case; more generally, Σ inherits all morphosyntactic properties of κ. This is not the case for resumptive pronouns and their binders. Furthermore, while genuine, ‘intrusive’ resumption (Sells 1984) freely straddles island boundaries (Boeckx 2003), LD is island-sensitive (11b). Moreover, resumption and LD are not congruent in their crosslinguistic distribution: many languages (e.g. Italian, German) that permit LD lack productive resumptive strategies of the kind shown in (13,14b). 6

6. Where languages fail to offer surface indications of the right type, it may nonetheless be difficult to tease apart LD, HT, and resumption. Lebanese Arabic as discussed in Aoun and Benmamoun 1998 is a case in point. Aoun and Benmamoun argue that this language has at least two different ‘resumptive’ strategies, one that appears to involve movement and a superficially similar one which does not. As Villalba (2000) points out, Aoun and Benmamoun fail to distinguish properly between LD and HT; see also Alexopoulou et al. 2004 for a different analysis of Aoun and Benmamoun’s facts. I leave a resolution of this issue to future research and set aside Lebanese Arabic for the purposes of this paper.
Just like LD cannot be reduced to resumption proper, it cannot be reduced to clitic doubling (CD). First, not all languages employ clitic κs in LD (e.g., Dutch uses d-pronouns, Icelandic uses personal pronouns). Second, even those languages that do use clitic κs do not generally permit CD; this is Cinque’s (1990) reason to reject an analysis of Italian LD in these terms. Any approach premised on the equation of LD and CD is thus forced to assume radically different derivations of LD configurations in doubling and non-doubling languages, or else requires additional stipulations to restrict CD to LD configurations. Furthermore, CD in doubling languages is typically more constrained than LD: while typically only NPs can be doubled, LD targets a wide range of categories, as shown above. CD is in fact even more restricted. For instance, in Greek numerically-quantified NPs cannot be doubled but can be dislocated (Iatridou 1995); in Spanish, only animate NPs can be doubled, while no such animacy constraint applies to LD (Alexiadou 2006). Furthermore, choice of the governing predicate conditions CD but never LD (Krapova and Cinque 2008).

Summing up, LD cannot be reduced to either resumption or doubling but must be recognized as an independent construction, which shows properties of movement while defying a straightforward movement analysis. Although recognized by Cinque (1983, 1990), this vexing situation has not been appropriately addressed since. Before developing my own proposal to resolve the paradox, I will now discuss some problems of the mainstream, ‘cartographic’ approach to LD.

2.2 The split-CP model

The discussion of ‘topic constructions’ in Cinque 1983 marked a point of departure for what has come to be known as the cartographic program (Cinque and Rizzi 2009). Cinque’s conclusion that the Σ–κ relation is established in narrow syntax fed directly into Rizzi’s (1997) highly influential study, which argues that Σs move to a dedicated left-peripheral position within the periphery of HPC. The central observation is that LD and fronting of operators (foci and wh-phrases) can co-occur:

(15) Il premio Nobel, a chi lo daranno?
    the prize Nobel to whom it they.will.give
    ‘The Nobel prize, who are they going to award it?’ (Italian)

7. This point has been made repeatedly in the literature; see, e.g., Anagnostopoulou 1994, Villalba 2000, Alexiadou 2006, Krapova and Cinque 2008 and Tsakali and Anagnostopoulou 2008, among others.
This motivates Rizzi’s core claim that the left periphery comprises (at least) the heads Top and Foc, each projecting a specifier hosting dislocated Topics (= Σs) and fronted Foci, respectively. Incorporating the refinements to Rizzi’s proposal proposed in Benincà 2001; Poletto 2002, Benincà and Poletto 2004 and related works,8 a sentence such as (15) is then analyzed as in (16), in accordance with the template shown in (17) (where op is shorthand for fronted foci/wh-phrases).9

(16) \[ \text{TopP} \left[ \Sigma \ \text{il premio Nobel}]_{i} \text{Top} \left[ \text{FocP} \left[ \text{OP a chi}]_{k} \text{Foc} \left[ \text{CP lo daranno } t_{i} t_{k}] \right] \right] \right] \]

(17) \[ \text{TopP} \Sigma \left[ \text{Top} \right] \text{TopP} \left[ \text{FocP op [FocP Foc [FinP Fin [IP \ldots \kappa \ldots ]]]]} \right] \]

This templatic approach is now widely accepted and has been applied to a number of languages.10 For instance, Grewendorf (2008) argues for an analogous analysis of LD in German, with Σ moving to a dedicated Topic position, whereas κ and operators move to Spec-Fin:

(18) a. Den Studenten, den hat Maria geküsst. the student.acc him.acc has Maria kissed ‘Maria kissed the student.’ (German)

b. \[ \text{TopP} \left[ \Sigma \left[ \text{den Studenten}]_{i} \text{FocP CP}\left[ \text{OP t_i den}]_{i} t_{k} \text{hat [IP Maria t_k geküsst]} \right] \right] \]

A core assumption of cartographic analyses of the left periphery is thus that movement types are individuated by their landing sites: op s raise to Spec-Foc (or Spec-Fin), whereas Σs move to the higher Spec-Top at the outer edge of the

8. Rizzi’s original template included two Topic positions, one above and one below Focus. Benincà and Poletto show that in fact only one Topic position exists, namely that which linearly precedes Focus. The elements analyzed by Rizzi as ‘low Topics’ syntactically behave like fronted, not like left-dislocated XPs, in that they cannot be connected to κ (modulo some instances of dialectally sanctioned clitic doubling) and trigger WCO effects (see below); see also Abels 2012, 237 fn. 5. Similarly, López (2003, 2009) argues that there is a unique position for LD, which he takes to be an outer specifier of FinP above fronted constituents. I take these revisions of Rizzi’s original proposal to be conclusively established.

9. The template in (17) is a simplification of Benincà and Poletto’s actual proposal, omitting some projections that are not crucial to the discussion below. For instance, Benincà and Poletto assume a dedicated position for HTs, deviating from Cinque’s (1983) conclusion that HTs are connected to their host clause in discourse grammar only. As far as I can see, Benincà and Poletto offer no conceptual or empirical arguments for treating HTs as sentence-internal constituents.

10. Abels (2012) argues that the facts described by Rizzi can in fact be derived on the basis of locality alone, rendering the template redundant. Like Rizzi, however, Abels ignores Cinque’s Paradox and operates on the assumption that LD is simply one type of intrasentential movement, contrary to what I will argue below.
This is taken to account for the fixed relative order of Σs and opś (viz., Σ < op, *op < Σ) in the left periphery:

(19) a. Il premio Nobel, a chi lo daranno?
the prize Nobel to whom it they will give
‘The Nobel prize, who are they going to award it?’

b. *A chi, il premio Nobel, lo daranno?

(20) a. Un libro di poesie, A GIANNI lo regalerete.
a book of poetry to Gianni it you will give
‘You will give a book of poems to Gianni.’

b. *A GIANNI, un libro di poesie, lo regalerete. (Italian; Rizzi 1997)

(21) a. Ton Gianni, pote ton idhes?
the Giannis when him you saw
‘When did you see Giannis?’

b. *Pote, ton Gianni, ton idhes? (Greek)

(22) a. Den Peter, woher kennst du den?
ACC Peter from where know you him
‘Where did you meet Peter?’

b. *Woher, den Peter, kennst du den? (German)

The relevant generalization, as stated most explicitly in Benincà and Poletto 2004, is that Σs connected to κ wind up leftmost, preceding the entire clause including

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11. Rizzi (1997) argues that TopP in Italian is recursive, permitting multiple Σs as in (i) (see also Krapova and Cinque 2008 on Bulgarian); other authors (e.g. Benincà and Poletto 2004) dispute this claim, arguing instead that TopP is unique.

(i) Giorgio, di romanzi inglesi, ne conosce pochi.
Giorgio of novels English of them knows little
‘Giorgio knows few English novels.’ (Italian; Cruschina 2010)

Frey (2004) shows that multiple dislocations are possible in German, although his examples are somewhat marginal. In terms of the approach developed below, nothing in principle rules out the juxtaposition of multiple sentence fragments to HC (in which case the free order of Σs noted by Villalba 2000 is expected); at the same time, it would not come as a surprise if this kind of configuration were found to incur an increased processing load (especially given that the directionality of deletion is backward, so that each fragment has to be stored in working memory before the ellipsis is resolved). Left-juxtaposing multiple sentence fragments to a hc would thus be a grammatical possibility, but one that is exploited only in a restricted way in order to facilitate comprehension. Such a view seems to receive support from Frascarelli’s (2000) corpus-based finding that multiple Σs are extremely rare in natural discourse, with a maximum of three Σs realized simultaneously, which is unlikely to directly reflect a grammatical restriction. I leave a resolution of this issue to future research.
fronted operators; the former configuration is what I here call LD, the latter I will simply refer to as ‘fronting.’ I return to the observed order of dislocated vs. fronted constituents in Section 3.4 below.

The cartographic approach to ordering generalizations of this kind has been criticized on various grounds, and it is not my intention to provide a comprehensive evaluation here. Quite generally, a template such as (17) is essentially an *ad hoc* distributional statement (cf. Emonds 2004): it restates in hierarchical terms the observed facts about linear order, without providing any reason for why, say, TopP dominates FocP, rather than the other way around. Construed as a syntactic primitive, then, the template implies an enrichment of UG, to be avoided if possible (cf. Chomsky 2007). The features assumed to serve as ‘triggers’ for the relevant movements (e.g., the [+Topic] feature of Σ) are similarly *ad hoc* (cf. Chomsky 2001, 6; Fanselow 2006); not being inherent properties of lexical items, these features must be assigned freely to XPs at some point in the derivation, a mechanism that to my knowledge has never been spelled out and, regardless of how it is implemented, necessarily violates the Inclusiveness Condition (Chomsky 1995 et seq.). It is doubtful, furthermore, that such information-structural trigger features could play an explanatory role, given that discourse functions such as ‘Focus’ and ‘Topic’ are typically not bijectively associated with syntactic positions, even in languages like Italian or German (see e.g. Pereltsvaig 2004, Samek-Lodovici 2006, Fanselow and Lenertová 2011; Büring 2013). Needless to say, none of these worries amount to rebuttals of cartographic approaches in toto, but taken together they suggest that it is worth pursuing alternatives that minimize the contribution of idiosyncratic templates.

Returning to LD, extant analyses of the phenomenon have largely failed to account for – or are altogether silent on – Cinque’s Paradox; in fact, most cartographic accounts of LD (such as Rizzi’s 1997 original discussion) simply treat LD as just another case of movement to the left periphery, neglecting its conflicting non-movement properties (e.g., the presence of κ rather than a gap, and more to be reviewed below). Others treat LD as a type of ‘doubling’ phenomenon – a questionable assumption, as pointed out above – by relating Σ and κ either in the base (Cecchetto 2000; Grewendorf 2008) or derivationally (Grohmann 2003; 2005).

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13. This point holds regardless of whether the features in question are assigned in the course of the derivation or ‘in the numeration,’ itself a dubious concept with no obvious justification in a model without trans-derivational comparisons (see Collins 1997).
Sturgeon 2008a), invoking construction-specific and otherwise problematic technical operations; see López 2009 and Ott 2014 for detailed refutations of these approaches. In what follows, I propose a principled solution to Cinque's Paradox, based on a novel analysis of LD that avoids recourse to a template and idiosyncratic mechanisms.

3. LD as parenthetical cataphora

3.1 The analysis

The analysis proposed in this paper has three core ingredients: endophoric linkage of sentences in discourse, clausal ellipsis (reduction at PF of a clause to a single constituent), and ellipsis parallelism. The interplay of these ingredients yields the surface construction labeled 'dislocation,' which consequently remains only as a taxonomic artifact. My assumption here is that constructions corresponding to the LD pattern in (1), with Σ–hc connectivity, constitute a uniform syntactic phenomenon, modulo surface variation (but see Section 4).

Concerning the latter, languages differ in the type of κ employed in LD. For instance, German and Dutch use weak d-pronouns, whereas Icelandic, which does not have d-pronouns as part of its lexical repertoire, resorts to personal pronouns (Thráinsson 2007); and languages such as Italian, Greek, and Zulu use clitic pro-forms. As noted by Alexopoulou et al. (2004, fn. 2), the relevant generalization is that languages generally use the weakest type of pronoun available as κs in LD, i.e. maximally deficient forms in the sense of Cardinaletti and Starke (1999), who classify pronouns according to their deficiency as clitic, weak, and strong (in descending order; strong = non-deficient). Choice of κ thus adheres to...

14. López (2003, 2009) argues that κ is the spell-out of a pragmatic feature, added at the vP-phase level. I side with Fanselow (2006) here in assuming that syntax should not be 'contaminated' with pragmatic features, for reasons mentioned in the main text. I do not discuss López’s approach further here.

15. In this respect I am squarely within the mainstream of LD research; see e.g. van Haaften et al. 1983; Demirdache 1991; Anagnostopoulou 1994, 1997, Wiltschko 1997a.

16. German resorts to the Icelandic option when non-third-person NPs are dislocated, since weak d-pronouns are uniformly third person. Dislocated second-person Σs are resumed by a personal-pronoun κ:

(i) [Dir und mir], uns, sollten die mal lieber helfen.
you.dat and me.dat us.dat should they prt better help
'They should rather be helping you and me.' (German; Ott 2014)
Cardinaletti and Starke’s Choice of a Pronoun Principle: *Choose the most deficient possible form.*\(^{17}\) Deficient pronouns are dependent on the presence of a prominent discourse antecedent; they are, in other words, ‘visibly’ discourse-anaphoric (Cardinaletti and Starke’s *Semantic asymmetry #1*; cf. Hoekstra 1999 on Germanic *d*-pronouns). By contrast, strong pronouns are typically used either contrastively or to introduce a new discourse referent (cf. Bresnan and Mchombo 1987). In the theory to be developed presently, \( \Sigma \) acts as the *discourse* antecedent of \( \kappa \), explaining straightforwardly the choice of deficient \( \kappa \)s in LD. Schematically (the dashed arrow indicates discourse-anaphoricit)

\[
(23) \quad \Sigma \left[ ^{HC} \ldots \kappa \ldots \right], \text{ where } \kappa \text{ is the weakest possible pro-form matching } \Sigma
\]

Choice of \( \kappa \) is thus uniform *modulo* lexical contingencies.\(^{18}\)

The reasoning above implies that \( \kappa \) is not bound by \( \Sigma \) but a free pro-form; this is incompatible with the assumption, inherent to cartographic approaches, that \( \Sigma \) occupies a *hc*-internal position. I propose that LD constructions are underlyingly not monolithic sentences with an extended periphery, but sequences of endophorically linked sentences. That is, in underlying form the surface \( \Sigma < HC \) pattern is not monolithic sentences with an extended periphery, but sequences of endophorically linked sentences. That is, in underlying form the surface \( \Sigma < HC \) pattern is

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17. “Whenever the two forms are in principle possible, a deficient form takes precedence over a strong form […] . This is true of both weak pronouns and clitics: descriptively, a strong form is impossible if a deficient form is available” (Cardinaletti and Starke 1999). See Note 18 for an important qualification.

18. Of course, “possible” in (23) is to be interpreted as “possible under a particular interpretation.” That is, the Choice of a Pronoun Principle does not block the choice of stronger forms if required for an interpretation that cannot otherwise be achieved. For example, in addition to LD with clitic \( \kappa \), Spanish (for at least a subset of speakers; Luis López p.c.) permits doubling constructions that exhibit all syntactic properties of LD (chiefly, connectivity and the impossibility of stranding in *hc* material originating within \( \Sigma \)) but employ a demonstrative \( \kappa \) instead of a clitic (see Lipták and Vicente 2009). Consider VP-dislocation:

(i) a. \([\text{Visitar a Ana} \, \text{Maria lo} \, \text{suele hacer porque son hermanas.} \]

   \[\text{Visit to Ana Maria it habit do because they are sisters}\]

b. \([\text{Visitar a Ana} \, \text{Maria suele hacer eso} \, \text{visit to Ana Maria habit do that} \]

   ‘Maria usually visits Ana (because they are sisters).’

(Spanish; Lipták and Vicente 2009)

The existence of both forms is compatible with (23): as the discussion in Lipták and Vicente 2009, sec. 3.4 makes clear, choice of \( \kappa \) affects interpretation insofar as demonstrative \( \kappa \)s induce contrastive interpretations (where the set of alternatives is in turn dependent on whether an agreeing or non-agreeing form is chosen). For this particular interpretation, then, a demonstrative \( \kappa \) is the weakest possible choice, in full compliance with (23).
in fact a linear sequence $CP_1 < CP_2$, the two clauses being identical up to the difference between $\Sigma$ (in $CP_1$) vs. corresponding $\kappa$ (in $CP_2 = hc$). (25) illustrates for (2a) = (24):

(24) Su questo lavoro, non riesco a concentrarmici.
    on this work not I can to concentrate on it
    'This work, I can't concentrate on it.' (Italian)

(25) $[CP_1 \text{ non riesco a concentrarmi su questo lavoro}]$
    $[CP_2 \text{ non riesco a concentrarmici}]$

The repetition in (25) is informationally heavily redundant, enabling (backward) deletion of material inside $CP_1$ that is equivalent to corresponding material inside $CP_2$.\(^{19}\)

(26) $[CP_1 \text{ non riesco a concentrarmi [su questo lavoro]}]$
    $[CP_2 \text{ non riesco a concentrarmici}]$

In Section 3.3.3, I suggest the possibility of $\Sigma$ moving to the edge of $CP_1$ prior to deletion, following Merchant 2004a. I abstract away from this possibility where it is not relevant.

Note that while $CP_1$ and $CP_2$ are juxtaposed as structurally separate root clauses, they wind up tightly connected: by $\kappa$’s anaphoric linkage to $\Sigma$ on the one hand, and by the cataphoric link between the ellipsis in $CP_1$ and its postcedent domain in $CP_2$ on the other. Schematically, with $\Delta$ as a shorthand for deleted material (linear order of $\Sigma$ and $\Delta$ irrelevant) and dashed arrows representing endophoric relations:

(27) $[CP_1 \Sigma \Delta] [CP_2 \kappa \ldots ]$

I take this double endophoric linkage to be the reason for why LD constructions are perceived as monolithic utterances, despite the structural dissociation of $\Sigma$ and $hc$ (on which see below).

It is important to note that clausal ellipsis as in (26) is not a construction-specific mechanism, but familiar from sluicing (see (28); Merchant 2001), fragment answers (see (29); Merchant 2004a) and other constructions (e.g., Arregi 2010, Ott and de Vries 2014). As in (28), directionality of deletion in LD is backward, making $CP_1$ cataphoric.

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\(^{19}\) I assume here without further argument that the kind of ellipsis postulated here is implemented as deletion at PF, in line with much work on clausal ellipsis (e.g. Ross 1969, Morgan 1973, Merchant 2001, 2004a, Arregi 2010, Ott and de Vries 2014, 2015).
(28) I don't know \([_{\text{CP}} \text{ what John will have}]\), but John will have something.

(29) a. A: Che cosa ha vinto Gianni?
    what has won Gianni
    B: La maglietta.
    the T-shirt

    b. A: Me pjon milise i Anna?
    with whom spoke the Anna
    B: Me ton Kosta.
    with the Kosta
    ‘Who did Anna speak with?’ – ‘With Kosta.’
    (Greek; Merchant 2004a)

Assimilating Σs to this family of fragments correctly predicts the range of categories that can undergo LD, including all types of arguments and adjuncts, but not auxiliaries and other functional elements, which do not occur as fragments in general. The same holds for weak pronouns, which can neither be dislocated (see, e.g., Cardinaletti 1997 on Italian) nor occur as fragments.

For deletion in \(\text{CP}_1\) to be felicitous, the deleted material must be recoverable (or given) in some sense. This condition is met provided that \(\text{CP}_1\) and \(\text{CP}_2\) are parallel, differing only in that the former contains Σ whereas the latter contains κ in its stead. Let us assume that parallelism holds if the propositions denoted by \(\text{CP}_1\) and \(\text{CP}_2\) are truth-conditionally equivalent, hence mutually entailing (see Merchant to appear and references there on the ongoing debate concerning identity conditions for ellipsis). To illustrate, consider the following two examples of LD:

(30) a. Den Peter, den kenne ich nicht.
    the Peter him know I not
    ‘I don’t know Peter.’ (German)

    b. Ton Jani, den ton ksero.
    acc Janis not him I know
    ‘I don’t know Janis.’
    (Greek)

I have argued that these cases have the following abstract underlying structure:

(31) \([_{\text{CP}_1} \text{ I don't know Peter/Janis}_\Sigma] [_{\text{CP}_2} \text{ I don't know him}_\kappa]\)

The simplified denotations of \(\text{CP}_1\) and \(\text{CP}_2\) are as follows, yielding mutual entailment \(\leftrightarrow\).

(32) a. \([_{\text{CP}_1}] = \text{ I don't know } \Sigma_i\)

    b. \([_{\text{CP}_2}] = \text{ I don't know } \kappa_i\)

    c. \(\text{ I don't know } \Sigma_i \leftrightarrow \text{ I don't know } \kappa_i\)
Provided that \( \Sigma \) and \( \kappa \) are interpreted as extensionally equivalent (as indicated above by means of indices), parallelism holds and deletion in \( \text{CP}_1 \) is recoverable; and indeed, co-construal of \( \Sigma \) and \( \kappa \) is of course the only possible interpretation. If \( \text{CP}_2 \) had a non-parallel interpretation (say, \( I \) don't like \( \Sigma_i \), or \( I \) don't know \( \Sigma_k \)), parallelism would not be satisfied, rendering deletion infelicitous. In short, semantic equivalence of \( \text{CP}_1 \) and \( \text{CP}_2 \) as a prerequisite for felicitous deletion ensures that the two sentences are faithfully reformulations of each other, with \( \kappa \) replacing \( \Sigma \) in \( \text{CP}_2 \).

I hasten to add that there exist various alternative, more sophisticated ways of implementing the identity condition on deletion (see Merchant to appear), but these assumptions will suffice for our purposes here.

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20. I avoid the notion coreference here, since non-referential categories can be dislocated; see further Section 3.2.5. Compare Bresnan and Mchombo's (1987) Extended Coherence Condition.

21. Merchant (2001) assumes a somewhat more sophisticated notion of identity than employed here. He argues that in sluicing a deleted IP and its antecedent must be mutually entailing under focus closure, which existentially binds the variables left behind by movement of the sluiced \( wh \)-phrase and introduced by its indefinite correlate. I do not directly adopt his approach here, since the trace left by movement of \( \Sigma \) (if this movement is indeed obligatory) is not evidently a variable, and no indefinite \( \kappa \)s are involved. Something like Merchant's theory is needed, however, when \( hc \) contains a \( wh \)-trace, as in examples like (15) above. Here I assume that a variable, equivalent to 'someone,' is deleted in \( \text{CP}_1 \) under identity with the corresponding \( wh \)-trace in \( \text{CP}_2 \). Deletion then applies under identity with postcedent \( \text{CP}_2 \) modulo \( wh \)-movement. (This is essentially the inverse of ordinary sluicing, where an indefinite antecedent licenses deletion of a corresponding \( wh \)-trace.)

22. There is reason to believe that \( \kappa \) can be covert when the language makes no relevant proform available and \( \Sigma \) is unselected (so that \( hc \) is not incomplete in the absence of an overt \( \kappa \)). For instance, López (to appear) gives the following minimal pair and suggests that both cases might be instances of LD:

(i) a. A Barcelona, jo no hi he anat.
   to Barcelona I not there have gone
   'I haven’t been to Barcelona.' (Catalan)

   b. A Barcelona, yo no he ido.
   to Barcelona I not have gone
   'I haven’t been to Barcelona.' (Spanish)

The relevant coincidental difference between Catalan and Spanish is that the latter lacks locative clitics. If we nevertheless choose to analyze (ib) as LD (as suggested by prosodic separation, see below), this requires an implicit locative variable (\( x_{loc} \)) in \( \text{CP}_1 \) for the calculation of identity (\( \text{CP}_1 \) and \( \text{CP}_2 \) will be truth-conditionally equivalent provided that \( \kappa = x_{loc} \) is co-construed with \( \Sigma = a \text{ Barcelona} \)). Such implicit \( \kappa \)s are thus unproblematic on the present approach. An analogous analysis is developed in Merchant 2001 for so-called sprouting, i.e. sluicing with an implicit correlate (\( John \) kissed \( Mary \), but \( I \) don’t know when).
Where does this leave us with respect to Cinque’s Paradox? As I show in what follows, this novel analysis of LD allows us to have our cake and eat it, too: Σ is properly external to hc but acts as though it were syntactically connected to its interior, by virtue of being embedded in a parallel PF-reduced clause. The solution is thus fully in line with analogous explanations for connectivity effects with fragment answers and the like. I now turn to the empirical and conceptual merits of this analysis vis-à-vis traditional monosentential approaches.

3.2 Non-movement properties of LD

3.2.1 Syntactic and prosodic separation

A variety of facts suggest that Σ is not a proper constituent of hc. Being connected to κ rather than to a gap, it precedes a syntactically complete sentence (i.e. Σ is always syntactically optional); this is particularly obvious in V2 languages, where Σs linearly precede a V2 main clause, yielding V3 surface order (see (30a) above). Similarly, where non-V2 languages such as Spanish require inversion in fronting contexts (Torrego 1984), such inversion is suspended in LD:

(33) A María, yo la he invitado.

ACC Maria I her have invited

‘I invited Maria.’ (Spanish; Escobar 1997)

As pointed out by Sturgeon (2008a), languages like Czech consistently disregard Σs for the placement of second-position clitics (see also Halpern 1998, 113f. and sources cited there):

(34) Tu kočku, dala jsem ji sousedovi.

that cat.ACC gave AUX.1SG.CL her.ACC.CL neighbor.DAT

‘I gave that cat to my neighbor.’ (Czech)

It is not clear how to capture such deviations from second-position effects in a principled manner on the assumption that Σ is a proper constituent of hc. By contrast, as partially observed in Ott 2014, the third-position problem vanishes once the bisentential analysis is adopted, in which case the verb/clitic-third pattern arises only on the surface, as a result of juxtaposition and deletion; no actual violation of verb/clitic-second (V/C2) is implied.

(35) [CP1 dala jsem [DP tu kočku], sousedovi] [CP2 dala jsem ji, sousedovi]

(36) [CP1 … Σ … ] [CP2 … κ … ]

V/C2 V/C2

This is a significant advantage over virtually all previous analyses of LD, which invariably locate Σ in the periphery of hc and are thus forced to countenance
exceptional third-position placement of verbs and clitics in LD configurations by means of ancillary stipulations.

By the same token, the syntactic separation of Σ and hc explains straightforwardly why the latter contains κ rather than a gap: CP₁ and CP₂ are independently generated expressions.²³ Equivalently, we explain why the presence of κ forces dislocation,²⁴ as has been observed even for languages where the argument status of κ is not immediately obvious (see, e.g. van der Spuy 1993 on object markers in Zulu).²⁵ While this is an obvious point, it is important in that it obviates the need for construction-specific stipulations such as the ‘big-XP’ constituents of monoclausal analyses (e.g. Cecchetto 2000; Grewendorf 2008; Lipták 2011), which lack independent motivation (recall the arguments given in Section 2.1 above against assimilating LD to doubling) and are not permissible as surface constituents.²⁶

Big-XP analyses claim that Σ is a constituent of hc, while κ is appositively related to Σ. As pointed out by Lipták and Vicente (2009), such a base structure runs afoul of the fact that it is demonstrably κ, not Σ, that satisfies selectional

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23. Note, however, that an overt κ is not necessarily obligatory, but only required when hc would be incomplete without it. Catalan is representative in this regard, as noted by Vallduví (2002) (cited in Feldhausen 2008): dislocated arguments (including locatives) generally require an overt κ, whereas for dislocated adjuncts overt κ is optional. Subjects cannot be connected to an overt κ (but only to covert pro), since Catalan lacks nominative clitics (cf. note 22 on Spanish). Crosslinguistically there appears to be some intricate variation with regard to optionality/obligatoriness of κ (perhaps in part due to the availability of covert κs in some languages) that cannot be conclusively investigated here, but the general picture is in line with the present account. Cruschina (2010) argues at length that genuine argument dislocation always involves an overt κ; clitic-less cases are instances of different types of preposing.

24. Recall from Section 2.1 that clitic doubling, where available, does not contradict this generalization.

25. I am here assuming without further discussion that all types of κs, including Romance clitics and Bantu subject/object markers, are argumental pro-forms (as in Kayne 1975 and most subsequent literature; see Bresnan and Mchombo 1987 on Bantu), not agreement affixes (as in Boré 1984 and, more recently, López 2009). In principle, the analysis is equally compatible with the assumption that such markers are affixal, while the actual argument slots are saturated by coreferent pro (cf. Baker 1996), as hc is syntactically complete without Σ on either approach.

26. As observed in Ott 2014, analyses of this kind must furthermore tolerate exceptional extraction when the hypothetical big XP is an adjunct (as in (10)), as well as exceptional obviation of binding principles: depending on the internal structure of the ‘big XP’, Σ and κ either c-command each other or one asymmetrically c-commands the other. In all cases in which Σ is an R-expression and κ a coreferent pro-form, this implies a violation of Conditions B or C, or both. It is clear, then, that the big-XP approach to LD is not viable.
restrictions internal to HC when a selected category is dislocated. This is shown by Lipták and Vicente (2009) for the doubling construction exemplified in (37), which I assume to be a form of LD (see note 18):

(37) Leer un libro, Juan quiere hacer eso.
read a book Juan wants do that
‘Juan wants to read a book.’ (Spanish; Lipták and Vicente 2009)

The relevant fact is that Spanish hacer selects NP complements but is incompatible with VP complements:

(38) Juan quiere hacer {eso / *leer un libro}.
Juan wants do that read a book
‘Juan wants to do {that/read a book}.’ (Spanish; Lipták and Vicente 2009)

This shows that Σ does not originate derivationally as a complement of Σ; rather, it originates in a separate semantically equivalent clause without do-support:

(39) \[
\begin{array}{l}
\text{[CP}_1 \text{Juan quiere [...] [VP leer un libro]_i]} \quad \text{[CP}_2 \text{Juan quiere hacer eso]_i} \quad (= \text{(37)})
\end{array}
\]

See Ott 2014 for related facts from German, and further Section 3.2.3 below.

Furthermore, by treating Σs as structurally external to their hosts, we immediately explain the characteristic prosody of dislocation. As amply documented for a wide variety of languages, Σs are prosodically severed from HC in a way fronted XPs are not: Σ and HC are separated by an intonation break, often realized as a pause, akin to the “comma intonation” typical of parenthetical expressions (with potential further effects, e.g. on clitic placement; cf. Barbosa 2000) – see Zaenen 1997 on Germanic, Rizzi 1997 on Italian, Mollica 2010 on Spanish, Barbosa 2000 (citing Raposo 1996) on European Portuguese, Feldhausen 2008 on Catalan, Sturgeon 2008a,b on Czech, Janse 2008 on Greek, Guentchéva 2008 on Bulgarian, Dobashi 2003 on KiYaka, Hamlaoui and Makasso 2013 on Bàsàá (Bantu), and Cheng and Downing 2009 on Zulu, among others.27 These authors mostly assume that Σs are

\[\quad\]

27. It is uncontroversial that syntactic structure does not fully determine prosodic structure, and as such this approach leaves room for prosodic restructuring across CP\(_1\) and CP\(_2\), influenced by other factors such as speech rate (Nespor and Vogel 1986; Truckenbrodt 1999; Selkirk 2011). For instance, the break between Σ and HC need not be realized as a salient pause. Frascarelli (1997, 2000) shows that short Σs consisting of a single prosodic word can be phrased together with HC in Italian, although there is no evidence for a differential syntax. Downing (2011) observes a number of different phrasing patterns for LD constructions in Bantu, including some in which the Σ is phrased together with HC. Frey (2004) and Dewald (2012) observe that German permits progredient intonation between Σ and HC, typically with a ‘hat contour’ marking a Σ as contrastive and a HC-internal element as focal. Progredient intonation is not obligatory, however: unlike a fronted XP, a Σ can always be separated from
mapped onto separate prosodic domains such as intonation phrases (IPs), i.e. prosodic domains containing a nuclear pitch accent and permitting prosodic pauses at their boundaries, among other properties (Nespor and Vogel 1986); see, e.g. Frascarelli 1997, 2000 for an explicit treatment of Italian LD in these terms, and Feldhausen 2008 for a more refined approach. The following illustrate:

(40) a. Ton Jani, den ton ksero.
    ACC Janis not him I know
    ‘Janis, I don’t know him.’ (Greek)

     b. PF: (ton Jani)_IP (den ton ksero)_IP

    6-paper 1-lawyer sm1-om6-sign-tam
    ‘The lawyer signed the papers.’ (Zulu; Cheng and Downing 2009)

     b. PF: (ámá-phe:ph’)_IP (úm-mél’ ú-wá-sayín-í:le)_IP

The separate phrasing of Σs echoes the prosodic isolation of parenthetical expressions, appositive relatives, vocatives, question tags and the like (Selkirk 2005; Downing 2011).

Fronted XPs (as well as NPs doubled in clitic doubling, see Guentchéva 2008) connected to a gap are not prosodically severed in this way. Assuming that Σ occupies some position in the periphery of hc, there is no principled reason for why it should be phrased separately from the rest of its clause, in stark contrast to fronted elements, and most works (e.g. Frascarelli 1997, 2000) merely stipulate the separate phrasing of Σs. By contrast, the present account provides a natural

hc by a pause (in which case the rise of the hat contour falls on κ). Also, Frey’s and Dewald’s examples involve short Σs, which might be more prone to prosodic restructuring than longer Σs; the issue remains to be investigated. Be that as it may, I assume that effects of this kind are the result of superficial prosodic restructuring of Σ and hc, perhaps at Selkirk’s (2001, 2003) level of Utterance, which dominates the IP level in the prosodic hierarchy. With regard to the German hat contour, there is independent evidence for its capacity to ‘regroup’ structurally independent elements in this way, such as as for-type topics, which show no signs of structural integration but can contain the rise of a hat contour terminating in a focal accent within the subsequent sentence. I leave further investigation of these matters to future research. (I thank Kriszta Szendrői for valuable discussion.)

28. Frascarelli attributes similar analyses to Kanerva 1990 for Chichewa and Kenesei and Vogel 1990 for Hungarian.

29. E.g., Frascarelli (1997, 2000) assumes that Σs are base-generated in some sentence-external adjunct-like position, outside of the core clause’s “checking domain.” The link between such positioning and parenthetical prosody remains a stipulation, however; moreover, Section 3.3 presents a wealth of evidence against a base-generation analysis.
explanation. As discussed in Selkirk 2005, 2011 (who credits Downing 1970; see also Truckenbrodt 2014), IPs are the prosodic correlates of root clauses, as per the principle MatchClause (cf. Nespor and Vogel’s 1986 I-domain formation based on structural detachment from the sentence tree). Nothing else needs to be said on the present approach, where Σ and κ are separate root clauses; the syntax–prosody mapping is thus perfectly straightforward, as shown in (42) for (40a) and schematically in (43):

\[
\begin{align*}
(\text{42}) & \quad \left[ \text{CP}_1 \text{ton Jani, ton ksero } \right] \left( \right)_{\text{IP}} \left( \right)_{\text{IP}} \\
(\text{43}) & \quad \left[ \text{CP}_1 \Sigma \cdots \right] \left( \right)_{\text{IP}} \left( \right)_{\text{IP}} \\
\end{align*}
\]

In short, the prosodic realization of Σs corresponds to that of parentheticals because they are parentheticals.

3.2.2 Σ–κ mismatches

Recall that my analysis requires CP₁ and CP₂ to be truth-functionally identical for deletion in CP₁ to be felicitous, following a large body of literature suggesting that the identity condition is semantic rather than morphosyntactic (Merchant to appear). A prediction of this analysis is thus that certain semantically vacuous alternations between the two clauses are expected to be felicitous. One case in point (do-support) was already shown in the preceding section.

A further illustration is provided by cases of LD in which Σ and κ mismatch in ϕ-features, showing that the latter is not a mere subset of the former’s features but rather an independent, discourse-anaphoric pro-form. The following examples illustrate mismatch in gender and number, respectively:30

\[
\begin{align*}
(\text{44}) & \quad \text{a. Tomu děvčeti, co sedí v první řadě, } \left( \right)_{\text{IP}} \left( \right)_{\text{IP}} \\
& \quad \text{that sits in first row } \left( \right)_{\text{IP}} \left( \right)_{\text{IP}} \\
& \quad \text{that. fem } \left( \right)_{\text{IP}} \left( \right)_{\text{IP}} \\
& \quad \text{I gave one to the girl that’s sitting in the front row. } \quad \text{(Czech)}
\end{align*}
\]

30. Sturgeon (2008a) claims that gender mismatch is not permitted in Czech LD, but only with HTs. My informant disagrees with her assessment, noting that gender mismatch, while never quite perfect, is more natural with lexical material in Σ linearly intervening between Σ’s head noun and the resuming κ, as in (44a). This suggests that the preference for matching gender in Sturgeon’s example might be confounded by a recency effect (pace her own assessment). Further investigation of these data (and inter-speaker variation) is clearly necessary.
b. Dem Mädchen da vorne, {dem / der} haben the.dat girl.neut over there that.neut.dat fem.dat have sie neulich die Handtasche geklaut. they recently the purse stolen ‘That girl over there recently had her purse stolen.’ (German)

(45) a. Té třídě, {?*té / ?těm} jsem the.class.fem.sg.dat that.sg.dat pl.dat aux.pst.1sg rozdala knížky. handed out books ‘I handed out books to that class.’ (Czech)

b. Mit seiner Mannschaft, {mit der / mit denen} redet with his team.dat.sg with that.dat.sg with them.dat.pl talks er mittlerweile gar nicht mehr he by now not at all anymore ‘He doesn’t talk to his team at all anymore.’ (German)

c. ?A mi clase de quinto, hoy les dí unos libros. to my.class.sg of fifth today them.pl I.gave some books ‘I gave some books to my fifth-grade class today.’ (Spanish)

In the above examples, κ behaves exactly like a discourse-anaphoric pro-form. In (44), a grammatically neuter noun can be resumed by a feminine κ, matching its antecedent’s natural gender. In (45), κ’s antecedent is a grammatically singular collective nominal, which can be resumed by a plural κ. This is expected on the current approach, where Σ is the surface remnant of a separate clause, and the Σ–κ relation is a discourse-anaphoric one (a point to which we return in Section 3.2.5). By contrast, facts of this kind are highly problematic for approaches requiring Σ and κ to match in ϕ-features (e.g. Cecchetto 2000; Grohmann 2003).

Related facts from Catalan are discussed by Suñer (2003), who notes that dislocated subjects that are semantically plural but morphologically singular readily permit plural agreement inside HC (a phenomenon she dubs ‘ad sensum agreement’). Importantly, such mismatching agreement is possible with dislocated subjects only:

(46) a. El jurado, María nos aseguró que (pro) the.jury.3sg María us assured.3sg that estaban presionados. were.3pl pressured.3pl ‘María assured us that the jury felt pressured.’

b. El jurado estaba presionado / *estaban presionados. the.jury.3sg was.3sg pressured were.3pl pressured ‘The jury was pressured.’ (Catalan; Suñer 2003)
If, as I claim here, *el jurado* in (46a) is the remnant of CP₁ juxtaposed to the parallel hc, it is natural for it to be resumed by a plural pro-κ within the latter. Since (46b) involves no such discourse-anaphoric dependency, no agreement mismatch is tolerated. As pointed out by a reviewer, however, a qualification applies to cases like (46a): since they involve dislocated bare DPs, the possibility of a HT parse cannot be fully excluded. HT is traditionally assumed to require a tonic κ rather than a null or clitic form (see, e.g. van Riemsdijk 1997), but it is somewhat unclear how definitive this criterion is. Given that the relevant effect can only be probed using dislocated DP subjects, these complications are hard to avoid. The issue, and the scope of the phenomenon of Σ–κ mismatches in LD generally, merits further study in future work.

### 3.2.3 Stranding

The analysis of Σ and hc as independent, juxtaposed expressions predicts that dislocation of Σ cannot strand material inside hc. Thus, we expect stranding phenomena that occur under simple fronting of the associate to be precluded by dislocation of the latter. Schematically:

(47)  
\[ \text{a. } \left[ \text{CP} \left[ \text{XP} \ldots t_{\alpha} \ldots \right] \ldots \alpha \ldots \right] \]  
\[ \text{b. } \left[ \text{CP}_1 \left[ \Sigma \ldots t_{\alpha} \ldots \right] \Delta \right] \left[ \text{CP}_2 \ldots \alpha \ldots \right] \]

In checking the validity of this prediction, it is important to ensure that stranding is not merely apparent, i.e. that the stranded material could not have been independently generated as part of hc. Thus, LD can seemingly strand a floated quantifier (FQ) in hc, however upon closer scrutiny it turns out that the FQ is stranded by κ, not by Σ, as the present approach leads us to expect. In Catalan (like in English), A-movement but not Ā-movement can strand quantifiers:

(48)  
*Quins vam poder vendre sont l’ altre dia.
Which pst.1pl be able sell all the other day
*‘Which could we sell all the other day?’ (Catalan; López 2009)

LD does permit FQs, showing again that Σ does not undergo ordinary Ā-movement from within hc:

(49)  
Les meves germanes, les vaig veure totes a la botiga.
the my sisters them pst.1sg see all in the shop
‘I saw all my sisters in the shop.’ (Catalan)

---

31. See López 2009 for an argument that dislocated subjects in Catalan are uniformly HTs. The reviewer further points out that embedded LD in Italian, which presumably precludes a HT parse (see Section 4), permits no mismatching agreement. I currently lack the data to properly evaluate this claim.
That the floated quantifier is indeed exclusively structurally related to \( \kappa \), not to \( \Sigma \), is shown by the fact that it can still occur with the clitic when we drop \( \Sigma \) from (49):

(50) Les\(_i\) vaig veure \( t_i \) totes a \( la \) botiga.

them \( \text{pst.1sg} \) see \( \text{all in the shop} \)

'I saw them all in the shop.' (Catalan)

The FQ is thus stranded by \( \kappa \), not by \( \Sigma \).\(^{32}\)

German has two types of FQ, adverbial and morphologically invariant \( \text{alles/beides} \) ‘all/both’ and a second type that agrees in case with its associate; either type can be stranded under \( \tilde{\alpha} \)-movement (Ott 2012a). While the coordinate subject in (51a) prefers an agreeing FQ, the neuter \( d \)-pronoun \( das \) only permits stranding of the invariant FQ (51b).

(51) a. Hans und Maria sind beide\( (*)\)-s nette Leute.

Hans and Maria \( \text{are both(-AGR)} \) nice people

‘Both Hans and Maria are nice people.’

b. Das sind beide\(*\)-s nette Leute.

that \( \text{are both(-AGR)} \) nice people

‘They are both nice people.’ (German)

When the coordinated subject of (51a) is dislocated using \( das \) as \( \kappa \), only the invariant FQ is permissible, replicating the effect witnessed in (51b).\(^{33}\)

(52) Hans und Maria, das sind beide\(*\)-s nette Leute.

Hans and Maria \( \text{that are both(-AGR)} \) nice people

‘Both Hans and Maria are nice people.’

This shows, again, that the FQ is structurally associated with \( \kappa \), not with \( \Sigma \), owing to the fact that only the former, but not the latter, is structurally internal to \( hc \).\(^{34}\)

---

\(^{32}\) In Section 3.3.3 it is suggested that \( \Sigma \) undergoes \( \tilde{\alpha} \)-movement prior to deletion, which implies that the FQ cannot be part of \( CP_1 \) (given that FQ is impossible under \( \tilde{\alpha} \)-movement in Catalan):

(i)  \[\begin{array}{c}
[CP_1 \text{[les meves germanes]}] \\
[\text{vaig veure t a la botiga}] \\
[CP_2 \text{[les, vaig veure totes a la botiga]}]
\end{array}\]

This is unproblematic, given that exclusion of the quantifier from \( CP_1 \) preserves truth-functional equivalence.

\(^{33}\) Note that subject dislocation in (52) is compatible with a HT parse. However, for the point at hand it suffices for the example to be ambiguous between HT and LD; the latter parse, while available, still does not permit the agreement pattern corresponding to (51a).

\(^{34}\) I assume that \( CP_1 \) in (52) underlyingly involves the agreeing counterpart, an unproblematic assumption given that semantic equivalence of the two clauses obtains.
Related evidence is provided by *ne*-cliticization in Italian, as discussed in Cinque 1990. The partitive clitic *ne* obligatorily appears in (53a), where it is associated with a fronted quantificational focus. But its occurrence is blocked when its associate is dislocated (53b). 35

(53) a. QUATTRO pare che *(ne) siano arrivate.  
    four it.appears that of.them have arrived  
    ‘It appears that four of them have arrived.’  

b. Quattro, credo che *(ne) siano andate smarrite.  
    four I.think that of.them have gone lost  
    ‘I think that four of them have gone missing.’  (Italian; Cinque 1990)

(The predicates are unaccusative here given that *ne*-cliticization is permitted with this class of predicates but not with unergatives.) If quattro were fronted to the periphery of its clause in both cases, there would be no obvious source of the observed asymmetry. But it follows immediately from the bisentential ellipsis approach: since $\Sigma$ is structurally separated from $hc$, this leaves *ne* without a syntactic associate. The deviance of (53b) thus reduces to the incompleteness of $hc$:

(54) a. *Credo che *ne siano andate smarrite.  
    I.think that of.them have gone lost  
    *‘I think that of them have gone missing.’  (Italian)

b. [CP$_1$ quattro … ] *[CP$_2$ credo che *ne siano andate smarrite ]

The absence of *ne*-cliticization in LD thus reduces to the ban on stranding, itself a consequence of the fact that $\Sigma$ is not structurally connected to $hc$.

The ban on stranding can be further illustrated with VP dislocation. In German, remnant VPs can famously be fronted (55a), but they cannot be dislocated (55b); only complete VPs can be (55c). (56) illustrates the same for Czech.

(55) a. Dem Kollegen gegeben hat Max das Buch.  
    the.dat colleague given has Max the book.acc
    (56) illustrates the same for Czech.

35. López (2009) offers (ia) to show that cliticization of this kind is possible in Catalan, however his example crucially differs in that here, unlike in (53a), the HC is a well-formed sentence by itself (ib).

(i) a. De cadires, en tinc quatre.  
    of chairs part I have four  
    ‘I have four chairs.’

b. En tinc quatre.  (Catalan)

In a context like What about chairs? (ib) is felicitous (Txuss Martin, p.c.). Contrary to what López suggests, cases like (ia) are thus no counterexamples to Cinque’s claim.
b. *Dem Kollegen gegeben, das hat Max das Buch.
   the.dat colleague given that has Max the book.acc

c. Dem Kollegen das Buch gegeben, das hat nur Max.
   the.dat colleague the book.acc given that has only Max
   ‘Max gave the book to the colleague.’ (German; Frey 2009)

(56) a. Říkat, že jsem to udělal já, to on nebude.
   say that aux that did I that he not.will

b. *Říkat, to on nebude, že jsem to udělal já.
   say that he not.will that aux that did I
   ‘He won’t be saying that it was me who did it.’ (Czech)

For Spanish, Lipták and Vicente (2009) observe that (57a) has no reading on which the ‘stranded’ adverb en el horno modifies the dislocated VP, as one would expect if (57a) were derived from (57c); in order for such a reading to obtain, the adverbial PP must be pied-piped as in (57b).

(57) a. #Cocinar salmón, Juan suele hacer eso en el horno.
   cook salmon Juan habit do that in the oven
   ‘Juan usually cooks salmon in the oven.’ (Juan is in the oven)

b. Cocinar salmón en el horno, Juan suele hacer eso.
   cook salmon in the oven Juan habit do that
   ‘Juan usually cooks salmon in the oven.’ (salmon is in the oven)

c. Juan suele cocinar salmón en el horno.
   Juan habit cook salmon in the oven
   ‘Juan usually cooks salmon in the oven.’
   (Spanish; Lipták and Vicente 2009)

As Lipták and Vicente (2009) point out on the basis of these and further data, the generalization is that dislocated VPs are islands for movement feeding remnant VP-dislocation. The generalization follows immediately from the analysis proposed here, given that Σ is not a constituent of hc. More generally, the impossibility of stranding Σ-internal material in hc follows straightforwardly if there is no movement dependence between Σ and a hc-internal position.

3.2.4 Weak Crossover and parasitic gaps

In this section, I review two further properties of LD indicating at first sight that no movement is involved: the failure to induce Weak Crossover effects and to license parasitic gaps. These non-movement properties follow automatically on the assumption that Σ is structurally external to hc.

It has been observed for a number of languages that LD fails to trigger Weak Crossover (WCO) violations, and in this property differs markedly from regular
Ā-fronting (Cinque 1990; Iatridou 1995; Cecchetto 2000; Villalba 2000; Grewendorf 2008). Consider the following contrasts:

(58) a. *Gianni, sua, madre ha sempre apprezzato.
    Gianni his mother has always appreciated
b. Gianni, sua, madre lo ha sempre apprezzato.
    Gianni his mother him has always appreciated
    ‘His mother always appreciated Gianni.’
    (Italian; Cinque 1990)

(59) a. *Ton Kosta, i mitera tu, t agapa.
    ACC Kosta NOM mother his loves
b. Ton Kosta, i mitera tu, ton agapa.
    ACC Kosta NOM mother his him loves
    ‘His mother loves Kosta.’
    (Greek; Iatridou 1995)

Zeller (2006) notes analogous WCO obviation in Zulu LD:

(60) UCharlise Theron, umama wakhe, u-ya-m-siz-a.
    Charlise Theron.1A mother.1A her.1A s-FOC-O-help-FV
    ‘Her mother helps Charlise Theron.’
    (Zulu; Zeller 2006)

For cartographic analyses assuming movement of Σ, this asymmetry is puzzling and typically captured by stipulation (cf., e.g. Rizzi 1997, Benincà and Poletto 2004).

By contrast, it follows immediately on the present analysis, where Σ is a structurally separate sentence fragment that is never moved across κ (but is merely juxtaposed to hc). No additional stipulations are required to derive the observed asymmetry between LD and Ā-fronting.

A caveat is in order, however. In Section 3.3.3 below, I suggest – tentatively, in lieu of an alternative explanation of locality effects – that Σ moves to the left edge of CP1 prior to deletion (following Merchant 2004a):

(61) *[CP1 Gianni, sua, madre ha sempre apprezzato t] [CP2 … ] (= (58b))

If this derivational pattern is adopted for Σs generally, it appears to falsely predict WCO effects to occur in LD, given that CP1 in (61) corresponds exactly to (58a).

It turns out that the problem is only apparent, however. To see this, consider the well-known fact that overt R-expressions license deletion of coreferent pronouns (a phenomenon dubbed vehicle change in Fiengo and May 1994), illustrated below for sluicing.

(62) They arrested Alex, though he, didn’t know why.
    (Merchant 2001)
a. *though he, didn’t know [why they arrested Alex,]
b. though he, didn’t know [why they arrested him,]
(63) A: Quién leyó el libro de Juan? – B: Él,
who read the book of Juan him
a. *él [leyó el libro de Juan]
b. él [leyó su libro]

The deleted structure here cannot correspond to (62a)/(63a), which violates Condition C, but instead must correspond to (62b)/(63b), where the offending R-expression is replaced with a coreferent pronoun, preserving semantic equivalence.

Given the possibility of vehicle change under ellipsis, then, we can explain the absence of WCO effects in LD in an analogous fashion: the R-expression in CP₂ licenses a coreferent pronoun in the deleted portion of CP₁, voiding the WCO effect that would otherwise be induced by movement of Σ. This is shown in the following pre-deletion representation of example (58b):

(64) [CP₁ Gianni [lei /proₖ] ha sempre apprezato tᵢ ]
[CP₂ sua madre lo ha sempre apprezato ]

Since κ lo in CP₂ does not undergo Ā-movement across the ‘original’ R-expression, no WCO violation arises.³⁶ WCO obviation is thus directly predicted by the

³⁶ Note that this contrasts with LD in German (among other languages), where κ standardly undergoes Ā-movement. However, in German only long-distance movement induces WCO violations (Frey 1993; also Fanselow et al. 2005). Expectedly, with long-distance LD and concomitant long-distance fronting of κ we find a WCO effect (ia), which however is voided when fronting of κ is precluded (ib).

(i) a. ??Dem Peter, dem hat sein Bruder behauptet dass die
the.DAT Peter him.DAT has his brother claimed that the
Tante tᵢ eine Reise spendiert.
aunt a trip pays
‘His brother claimed that the aunt will treat Peter to a vacation trip.’ (German)
b. Und dem Peter gestern hat sein Bruder behauptet dass die
and the Peter yesterday has his brother claimed that the
Tante dem eine Reise spendiert.
aunt him a trip pays
‘And yesterday his brother claimed that the aunt is treating Peter to a
vacation trip.’ (German)

The contrast shows that the WCO effect in (ia) is induced by κ, not by Σ, as predicted by the present account.
current approach (whether or not movement of the fragment is assumed), which crucially denies that Σ enters into any hc-internal dependencies.\textsuperscript{37}

Related evidence is provided by parasitic gaps (PGs). From the perspective of a monosentential movement analysis, it comes as a surprise that LD contrasts markedly with operator fronting in failing to license PGs, as shown by Cinque (1990) for Italian (see also Cecchetto 2000), by Raposo (1996) for European Portuguese, and by Alexiadou (2006) for Greek;\textsuperscript{38} the same claim is made for Romanian in Dobrovie-Sorin 1990.

\begin{equation}
\begin{aligned}
\text{(65) a. } & \text{Gianni ho cercato per mesi [senza trovare } pg\text{].} \\
& \text{Gianni I have looked for for months without finding} \\
\text{b. } & \text{*Gianni, l’} \text{ ho cercato per mesi [senza trovare } pg\text{].} \\
& \text{Gianni him I have looked for for months without finding} \\
& \text{‘I looked for Gianni for months without finding (him).’} \quad \text{(Italian)}
\end{aligned}
\end{equation}

\begin{equation}
\begin{aligned}
\text{(66) a. } & \text{Esses documentos eu queimei [depois de ler } pg\text{].} \\
& \text{these documents I burned after of to.read} \\
\text{b. } & \text{*Esses documentos, eu queimei-os [depois de ler } pg\text{].} \\
& \text{those documents I burned-them after of to.read} \\
& \text{‘I burned those documents after reading (them).’} \quad \text{(European Portuguese)}
\end{aligned}
\end{equation}

\begin{equation}
\begin{aligned}
\text{(67) a. } & \text{Afti ti lista arhiothetise i Maria [horis} \\
& \text{this the list.} \text{acc filed the Maria without} \\
& \text{na diavasi } pg\text{].} \\
& \text{subj read.3sg} \\
\text{b. } & \text{*Afti ti lista, i Maria tin arhiothetise [horis} \\
& \text{this the list.} \text{acc the Maria it filed without} \\
& \text{na diavasi } pg\text{]} \\
& \text{subj read.3sg} \\
& \text{‘Maria filed this list without reading (it).’} \quad \text{(Greek)}
\end{aligned}
\end{equation}

Proponents of monosentential analyses can introduce ancillary stipulations to distinguish the two movement types, but the result will amount to little more than a

\textsuperscript{37} Note that we could have obtained the same result by assuming that Σ simply remains \textit{in situ} within CP\textsubscript{1}, however see Section 3.3.3 below for relevant discussion.

\textsuperscript{38} Iatridou (1995) claims for Greek that long-distance LD (but not short-distance LD) in fact does license PGs, however I have not been able to replicate her facts with informants. Italian shows no long-/short-distance asymmetry with regard to parasitic gaps in LD (Carlo Cecchetto, p.c.). This empirical domain needs to be further explored in future work.
restatement of the observed asymmetry. The biclausal approach eschews technical tricks, as we do not expect LD (in languages like Romance and Greek with clitic κs, see below) to license PGs in the first place: Σ being structurally external to CP₂, it does not give rise to any Ā-dependency that could license a PG within the latter.

Anticipating the discussion in Section 3.3.3, this holds even if Σ is taken to Ā-move within CP₁. Assuming with Kayne (1975) and others that clitics undergo A-movement (or perhaps move in the PF-mapping), no Ā-dependency obtains within CP₂ that would license the PG. Ā-movement of Σ is within CP₁ and has no effect on CP₂, as shown below for (65b).

(68) 
\[
\begin{align*}
\text{[CP₁ Gianni ho cercato t per mesi [senza trovare pg]]} \\
\text{*[CP₂ ṭ ho cercato t₁ per mesi [senza trovare pg]]}
\end{align*}
\]

Thus, regardless of whether or not Σ moves prior to deletion, another apparent non-movement property of LD turns out to follow naturally from the analysis.

Expectedly, German(ic)-type LD differs from the above case: since either κ or else some other constituent Ā-moves to the prefield, we find that PGs are licensed in LD:

(69) Diesen Krimi, den ṭ hat Peter [ohne pg zu lesen] zurückgegeben.
\quad \text{this thriller it has Peter without to read returned}
\quad \text{‘Peter returned this crime novel without reading (it).’ (German)}

As before, however, Ā-movement of Σ in CP₁ is immaterial to PG licensing; this is transparently shown by the fact that the PG is equally licensed in B’s response below, equivalent to CP₂ of (69):

(70) A: Was ist mit dem Krimi?
\quad \text{‘What about the crime novel?’}
\quad \text{B: Den hat Peter [ohne pg zu lesen] zurückgegeben.}
\quad \text{‘Peter returned it without reading (it).’ (German)}

The contrast between Italian-type and German-type LD thus arises naturally, dependent solely on the presence or absence of the licensing Ā-dependency within CP₂.

---

39. As is well known, the details of PG licensing are rather variable crosslinguistically. For instance, Villalba (2000) notes that focus fronting in Catalan does not license PGs, and concludes that LD is not exceptional in this regard. Whatever the reason for this variation, the contrasts described in the text remain and call for an explanation.
3.2.5 Constraints on discourse anaphora

The analysis of LD proposed here claims that the anaphoric dependency between Σ and κ is one of cross-sentential anaphora: κ is a free (referential or E-type) pro-form, and it ‘resumes’ Σ as an element of the immediately preceding discourse. It turns out that this rather unorthodox view of the Σ–κ relation makes welcome predictions.

Consider the well-known generalization – to be qualified slightly below – that nonspecific QPs cannot be dislocated (e.g. Cinque 1990, Dobrovie-Sorin 1990; Rizzi 1997; Arregi 2003).  

(71) a. *Algo, Juan lo leyó ayer.  
'something Juan it read yesterday'  
'Juan read something yesterday.'  
(Spanish; Arregi 2003)
'all it.I.have done'  
'I did everything.'  
(Italian; Rizzi 1997)
c. *Bileti gi kupi Marija.  
tickets them bought Maria  
'Mary bought tickets.'  
(Bulgarian; Arnaudova 2002)
d. *Kathena ton ksero.  
everybody him I.know  
'I know everybody.'  
(Greek; Alexiadou 2006)
e. *Niemanden, den habe ich gesehen.  
none one him have I seen  
'I saw no one.'  
(German; Ott 2014)

A reviewer contends that LD of Italian qualcuno preserves its non-specific reading ‘someone (or other)’; contradicting the classical data given in the main text. It is not clear to me to what extent the reviewer’s claim generalizes. In line with the traditional view, Barbosa (2000) states that a QP that can receive either a specific or non-specific interpretation is necessarily interpreted as specific when dislocated. Commenting on (i), Barbosa notes that algumas cartas can only be interpreted as partitioning a contextually salient set of letters, establishing a discourse antecedent for κ.

(i) Algumas cartas, ainda não as pude ler.  
some letters yet not them I.could read  
'Some letters I haven’t been able to read yet.'  
(European Portuguese; Barbosa 2000)

All in all, it may well be the case that the actual empirical generalization concerning the dislocatability of QPs is somewhat more involved than traditionally assumed (see also note 43). Further empirical research is necessary to determine the precise conditions under which LD is possible.
Connectivity in left-dislocation and the composition of the left periphery

f. *Iedereen, die ken ik.
   everybody that know I
   ‘I know everybody.’ (Dutch; Alexiadou 2006)

   I know everybody.

   g. *Ceva ai să-l descoperi şi tu.
      something you.will-it discover you too
      ‘You, too, will discover something.’ (Romanian; Dobrovie-Sorin 1990)

   h. *A cap alumne no l’ he vist avui.
      any student not him I have seen today
      ‘I haven’t seen any student today.’ (Catalan; Villalba 2000)

   i. *Nenhuns alunos, vi-os / os vi ontem.
      no students I saw them them saw yesterday
      ‘I saw no students yesterday.’ (European Portuguese; Barbosa 2000)

   j. *Něco, to jednou objevíš.
      something that once you.discover
      ‘One day you will discover something.’ (Czech)

Once a lexical restriction is added to Σ, dislocation becomes felicitous:

(72) a. Tutti i tuoi libri, li ho rimessi a posto.
   all the your books them I.have put back
   ‘All of your books, I’ve put them back.’ (Italian; Rizzi 1997)

b. Iedereen in de tuin, die kende ik.
   everyone in the garden that knew I
   ‘I knew everyone in the garden.’ (Dutch; Alexiadou 2006)

c. Kathena ston kipo ton iksera.
   everybody in.the garden him I.knew
   ‘I knew everybody in the garden.’ (Greek; Alexiadou 2006)

d. A cap d’aquests alumnes de què em parles, no l’ he
   any of those students of whom to.me talked not him I
   vist avui.
   have.seen today
   ‘I haven’t seen any of the students you talked to me about today.’
   (Catalan; Villalba 2000)

Note that Ā-fronting of the categories represented in (71) is generally permissible, showing that whatever accounts for the oddness of the examples is specific to LD.

(73) a. Niemanden habe ich gesehen. ‘I saw no one.’
    (German)

b. Biletı kupi Marija. ‘Mary bought tickets.’
    (Bulgarian)

c. Tutto ho fatto. ‘I did everything.’
    (Italian)

d. Ceva ai să descoperi şi tu. ‘You, too, will discover something.’
    (Romanian)
This discrepancy between fronting and LD is puzzling on the assumption that Σs and κs are related by syntactic binding, as implied by any approach that locates both in the same sentential domain. By contrast, as observed independently in Wagner 2012, the facts follow straightforwardly on the assumption that κ is a free pro-form. On this view, a direct corollary of the bisentential analysis, the deviance of the cases in (71) reduces to the fact that non-specific QPs make bad discourse antecedents in general, given that they do not establish an identifiable referent:

have you done all  yes it.I.have done
A: ‘Did you do everything?’ – B: ‘Yes, I did it.’ (Italian; Wagner 2012)

b. Niemand kam zur Party. #Der war woanders.
no-one came to the party  he was elsewhere
‘No one came to the party.  He was someplace else.’ (German)

c. No vaig-veure cap estudiant. #No els vaig-veure ahir.
not I.saw any students not them I.saw yesterday
‘I didn’t see any students.  I didn’t see them yesterday.’ (Catalan)

Expectedly, specific QPs such as those in (72) readily enter into discourse-anaphoric dependencies, hence are permissible Σs:

(75) A: Dove sono tutti i tuoi libri?
where are all the your books
‘Where are all your books?’

B: Li ho rimessi a posto.
them I.have put back
‘I put them back.’ (Italian)

The bisentential analysis entails that for some XP to undergo dislocation, it must be capable of anteceding a subsequent free (referential/E-type) pro-form, automatically ruling out the Σs in (71). Dislocation of wh-phrases is banned for the same reason: these, too, cannot be resumed by a free pronoun in a subsequent sentence, hence fail to dislocate.

41. Analogous patterns are found in appositive relatives, suggesting that here, too, the relation between antecedent and pronoun is one of discourse anaphora (cf. Demirdache 1991, Del Gobbo 2003, de Cat 2007):

(i) *Any/*No/*Every/This student, who wears socks, is a swinger. (Ross 1986)

42. Dobrovie-Sorin (1990) and Iatridou (1995) show that D-linked wh-phrases in Romanian and Greek (respectively) can be connected to a clitic, but both languages permit clitic doubling.
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(76) a. Chi (*lo) hai visto.
whom him you have seen
intended: 'Who did you see?' (Italian; Alexiadou 2006)
b. Wen (*den) kennst du?
who him you know
intended: 'Who do you know?' (German)

To my knowledge, no principled explanation exists in terms of a monosentential movement or base-generation analysis for either the facts in (71) or those in (76): if Σ is in a Binding Chain with κ (as in Cinque 1990; Rizzi 1997 and Frey 2004), or if κ is bound by Σ in some other way (e.g. by virtue of being a pronounced trace of Σ, as in Grohmann 2003), nothing should preclude binding of the pronoun by a non-specific QP or a wh-phrase; as pointed out by Demirdache (1991), the Σ–κ connection would simply be one of ordinary variable binding (as in No man, loves his wife or Who, saw his wife?). By contrast, a discourse-anaphoric link between Σ and κ as required by the bisentential approach automatically derives the observed pattern.43

Note, however, that specificity/referentiality is not generally required of Σ (cf. Demirdache 1991, 168f.). As López (2009) observes, the relevant empirical generalization is that Σ must be specific (or generic) if κ bears φ-features, as in the examples above. Non-specific Σs can be dislocated provided some non-φ-bearing pro-form is available, as in the following:

43. A reviewer points out that Greek permits dislocation of what Giannakidou (2000) dubs 'emphatics,' i.e. negative expressions (glossed n- below) licensed under negative concord, provided a restriction is present (parallel to (72c)):

(i) a. Kanenā dhen idha.
n-person not I.saw
'I saw nobody.'
b. *Kanenā', dhen thon, idha.
n-person not him I.saw
'I saw nobody.'
c. [Kanena apo ta vivlia], dhen to, agorasa telika.
n-from the books not it I.bought finally
'I bought none of the books after all.' (Greek)

(Giannakidou presents analogous facts from Italian.) While Giannakidou argues for the topicality and thus 'pragmatic referentiality' of emphatics, the reviewer points out that they nevertheless fail to license cross-sentential discourse anaphora, rendering their dislocatability unexpected from the perspective taken here. I leave open the question whether or not Σs as in (ic) constitute genuine counterexamples to the generalization established in the main text.
En = κ in (77a) is a partitive clitic lacking ϕ-features; as a result, it can ‘resume’ the non-specific Σ. As shown in Rullmann and Zwart 1996, Dutch in certain contexts permits either agreeing (non-neuter singular/plural) die or non-agreeing (neuter singular) dat as κ. 44 As they note, choice of agreeing die yields a de re interpretation, i.e. Σ is interpreted as specific/generic. By contrast, choice of non-agreeing dat gives rise to a de dicto reading, showing that in this case neither Σ nor κ receives a specific interpretation. This is analogous to dislocation of predicative categories, which can only be resumed by non-agreeing dat (78a), exactly as in a sequence of sentences (78b).

44. Rullmann and Zwart (1996) illustrate use of dat and die in LD as follows (analogous facts obtain in German):

(i) a. Die man, die / *dat doet taalkunde.
   That man he that does linguistics
   ‘That man does linguistics.’

b. Die man, die /dat is een soldaat.
   that man he that is a soldier
   ‘That man is a soldier.’

(ii) Die man, is een soldaat.
    Die/Dat, is een soldaat.
    ‘That man is a soldier. He’s/That’s a soldier.’

(iii) Die man doet taalkunde. Die/*Dat, doet taalkunde.
     ‘That man does linguistics. He/*That does linguistics.’

While Σ in (ia) is a transitive subject, in (ib) it is the subject of an underlying predicational copula clause. κ can then either agree in ϕ-features (yielding die, which is coreferent with Σ) or non-agreeing dat can be chosen, in which case co-construal (not coreference) of Σ and κ obtains (Rullmann and Zwart suggest that dat is of type ⟨e,t⟩). Two consecutive sentences (i.e. when CP₁ is unreduced) yield the same choice:

No such use of dat is possible in the unreduced version of (ia), since dat, lacking ϕ-features, cannot establish coreference:

The theory of LD developed here correctly predicts the distribution of dat as κ in LD, given that it directly derives (ia) from (iii) and (ib) from (ii).
Connectivity in left-dislocation and the composition of the left periphery

(78) a. Onvergetelijk, dat / *die ben je.
    unforgettable that it are you
    ‘You are unforgettable.’

b. Overgetelijk, ben je. Dat / *Die ben je.
    ‘You’re unforgettable. That you are.’ (Dutch; Rullmann and Zwart 1996)

Unlike analyses requiring strict featural matching between Σ and κ, the theory developed here thus readily countenances mismatches in φ-features as in (77), which preserve semantic equivalence of CP₁ and CP₂.

Finally, consider LD of non-referential measure phrases:

(79) a. 70 chili, non li pesa.
    70 kilos not them he weighs
    ‘He doesn’t weigh 70 kilos.’ 
    (Italian; Demirdache 1991)

b. 70 Kilos, die wiegt er doch niemals!
    70 kilos them weighs he prt never
    ‘No way he weighs 70 kilos.’
    (German)

The agreeing κs here are E-type pronouns, exactly as in the following sequences of sentences:

(80) a. Maria dice di pesare ormai 70 chili, Secondo me, non li pesa neanche per sogno.
    Maria says to weigh by_now 70 kilos following me not them weighs not.even in dream
    ‘Maria says she weighs 70 kilos by now. I think there’s no way for her to be that heavy.’
    (Italian)

b. Maria wiegt mittlerweile 70 Kilos. Die wiegt Susanne schon lange.
    Maria weighs by_now 70 kilos them weighs Susanne already long
    ‘Maria weighs 70 kilos by now. Susanne has been that heavy for a while.’
    (German)

Clearly, then, what matters is that Σ can be discourse-anaphorically resumed by κ, where the latter is either referential, predicative, or E-type; where this condition is not met (as in (71) and (76)), dislocation is infelicitous. Since fronting as in (73) is intra-sentential displacement, constraints on discourse-anaphoric dependencies are irrelevant in this case.

This completes our review of non-movement properties of LD. The facts reviewed in this section follow most naturally on the assumption that Σ and κ are constituents of separate root clauses (so that Σ is not a constituent of Σc at any level of representation and CP₁ and CP₂ are connected by cross-sentential
cataphora/anaphora), while necessitating rather cumbersome stipulations on the traditional view that takes Σ and κ to be in some sort of non-standard binding relation within HC.

3.3 Connectivity

We have now addressed one half of Cinque’s Paradox, *viz.* the non-movement properties of LD: the preceding section presented strong evidence for the syntactic independence of Σ and HC. Recall, however, that Cinque (1983) rejected a purely discursive, non-syntactic relation between Σ and HC in the light of distinctive movement properties of LD. We now turn to these facts and how they are accommodated by the present account, completing our resolution of Cinque’s Paradox.

3.3.1 θ-role and case

In LD, Σ and κ match systematically in θ-role and morphological case (where realized). This is a robust generalization that has been observed for a wide variety of languages (Alexiadou 2006), and one of the most salient asymmetries between LD and HT. The following examples illustrate case matching of Σ and κ; matching in θ-role is implicit in the meaning.

(81) a. Peysuna sína, hana finnur Ólafur hvergi.
   sweater.acc refl it.acc finds Olaf nowhere
   ‘Olaf can’t find his sweater anywhere.’

   b. Þessum hring, honum hefur Ólafur lofað Mariu.
   this.dat ring it.dat has Olaf promised Mari
   ‘Olaf promised this ring to Mari.’ (Icelandic; Zaenen 1997)

(82) a. {Io / *Me}, sai che non l’ ho più vista.
   I.nom me you know that not her I.nom have anymore seen
   ‘You know that I haven’t seen her anymore.’

   b. {Me /*Io}, ha detto che mi vede domani.
   me.acc I she has said that me(cl).acc she will see tomorrow
   ‘She said that she will see me tomorrow.’ (Italian; Cinque 1990)

(83) a. A Juan, me lo encontré ayer por la tarde.
   Juan.acc I him.acc met yesterday evening
   ‘I met Juan last night.’

   b. A María, le envié el paquete que me pediste.
   Maria.dat her.dat I sent the package that me you asked for
   ‘I sent Maria the package you asked me for.’ (Spanish; Rubio 2012)
Connectivity in left-dislocation and the composition of the left periphery

(84) a. Pe bărbatul acesta, l-am văzut.
the man. acc this him. acc-I have seen
‘I’ve seen this man.’

b. Bărbatului, i-am scris o scrisoare.
the man. dat him. dat-I have written a letter
‘I’ve written a letter to that man.’

(85) A María, no le enviaré ningún paquete.
dat Maria neg het. dat I will send no package
‘I won’t send a package to Maria.’

(86) Toho draka, toho by si mohl tak
that. acc dragon that. acc would refl be able to so
jedině namalovat
only draw
‘He would only be able to draw that dragon … ’

(87) Tebe, te uvažavat studentite.
you. acc you. acc respect.3pl the students
‘You are respected by the students.’

Monosentential analyses would be hard put to explain these simple facts: if θ-roles and case are locally assigned by governing predicates, Σ must have moved from an eligible case/θ position. But in this case it is unclear why κ appears, and how it comes to share these properties with Σ; furthermore, all facts reviewed in Section 3.2 become mysterious on this assumption. If, on the other hand, κ is the recipient of case and θ-role in hc, it is unclear how these properties could be ‘transmitted’ to Σ.

By contrast, the ellipsis approach captures such facts straightforwardly. Recall that parallelism (truth-functional equivalence) of CP₁ and CP₂ is a prerequisite for deriving the elliptical LD surface pattern. Consequently, Σ and κ enter into identical case and θ-relations in their respective clauses, which necessarily contain matching case-assigners.⁴⁵ To illustrate, consider the VP configurations underlying (83a), giving rise to the surface pattern in (88b):

(88) a. \[CP₁ \ldots encontré a Juan_{[\theta, \text{acc}]} \ldots ] [CP₂ \ldots encontré lo_{[\theta, \text{acc}]} \ldots ]

b. \[CP₁ me encontré [a Juan], \ldots ] [CP₂ me lo, encontré t Cl, \ldots ]

⁴⁵ See van Craenenbroeck 2012 and Chung 2013 for independent evidence that correlates and remnants in clausal ellipsis must bear non-distinct case morphology, even where semantic equivalence would tolerate a mismatch.
Analogous explanations for thematic and case properties of remnants of clausal ellipsis have been advanced for sluicing and fragment answers (see, e.g. Ross 1969; Lasnik 2001; Merchant 2001, 2004a, Brunetti 2003), among other constructions; see below.

### 3.3.2 Binding connectivity

Like its thematic and case properties, Σ’s capacity to enter into binding relations with HC-internal elements seemingly betray a clause-internal base position. Consider first the behavior of pronouns subject to Binding Principles A or B contained in Σ:

**(89)**

(a) A *lei/ se stessa, Maria non ci pensa.*
   of her herself Maria not of it thinks
   ‘Maria doesn’t think about herself.’

(b) A lei/*se stessa, Maria dice che non ci pensiamo mai.
   of her herself Maria says that not of it we think ever
   ‘Maria says that we don’t ever think of her.’ (Italian; Cinque 1990)

(c) [A sí misma], yo creo que pro non se, aprecia mucho.
   herself I believe that not refl appreciates much
   ‘I don’t believe she appreciates herself very much.’ (Spanish; Rubio 2012)

(d) Svého, nejlepšího přitele, toho má Honza a rád.
   his refl best friend that has Honza joy
   ‘Honza likes his best friend.’ (Czech; Sturgeon 2008a)

(e) Stoltan afhor öðrum, það tel ég þa ekki vera.
   proud of each other that believe I them not to be
   ‘I don’t think they’re proud of each other.’ (Icelandic; Zaenen 1997)

(f) Uku-cul-el-ani -a, abafazi ba-ya-ku-thembis-ile.
   inf-sing-apl-rec-fv women sm-fo-c-om-promise-tns
   ‘The women promised to sing to each other.’ (Zulu; Zeller 2006)

Where Σ contains an R-expression, the interpretation of some HC-internal pronoun as coreferent with this R-expression is systematically unavailable, as per Condition C:

**(90)**

(a) *Anneke d'r broer, die geloof ik dat ze wel aardig vindt.*
   Anneke’s brother him believe I that she sort of nice finds
   ‘I think that she’s fond of Anneke’s brother.’
   (Dutch; van Riemsdijk 1997)

(b) *A la hermana de María, ella aún no la ha visto.*
   the sister of Maria she still not her refl has seen
   ‘Maria’s sister, she hasn’t seen her yet.’ (Spanish; Rubio 2012)
c. *Les mentides de la Maria, pro les va dir convençuda.  
the lies of the Maria she they her said convinced  
‘She said Maria’s lies convinced her.’ (Catalan; Rubio 2012)

d. *Faktu že Jan je chudý, tomu nepřikládá velký význam.  
fact.that Jan is poor that.neg-attach big meaning  
‘The fact that Jan is poor, he doesn’t care about it.’ (Czech; Sturgeon 2008a)

e. *Abantwana bakaThandi, (yenai/proi) u-ba-bon-ile.  
children of:Thandi she sm-om-see-tns  
‘Tandi's children, she saw them.’ (Zulu; Zeller 2006)

f. Viktor egyik könyvét azt pro nem vette meg.  
Victor.NOM one book.POSS.ACC that.ACC not bought  
‘He didn’t buy a book of Viktor’s.’ (Hungarian; Lipták 2011)

Where Σ contains a pronoun, it can be bound by a HC-internal QP that is structurally superior to Σ’s putative base position:

(91) a. Tin mitera tu, kathenas, tin agapai.  
ACC mother his everyone her.ACC loves  
‘Everyone loves their mother.’ (Greek; Anagnostopoulou 1997)

b. Al suo studente, ogni professore sarà autorizzato  
to his students every professor will be authorized  
a parlargli to talk to them  
‘Every professor will be authorized to talk to his students.’ (Italian; Belletti 2006)

c. Uthisha wa-khe, wonke umfundzi, u-ya-m-ncom-a.  
teacher poss every student sm-foc-om-commend-fv  
‘His teacher, every student commends him.’ (Zulu; Zeller 2006)

d. Svého psa, toho nikdo nemá rád.  
his dog.ACC that. ACC no one neg-has joy  
‘No one likes his dog.’ (Czech; Sturgeon 2008a)

e. A su hijo, ninguna madre lo quiere castigar.  
ACC her son no mother him.ACC wants to punish  
‘No mother wants to punish her son.’ (Spanish; López 2009)

In all of the above examples, then, Σ is interpreted for purposes of binding as though it were a constituent of HC, placing it within the scope of HC-internal binders. Note that case and binding connectivity are strictly correlated: where no case connectivity obtains, the peripheral XP can only be a HT, and consequently fails to reconstruct for binding. Compare the following to (91a) and (90b), respectively:
Such asymmetries support Cinque’s (1983) original conclusion that HTs and Σs require differential theoretical treatments.

Monosentential analyses, regardless of whether they assume movement or high base-generation of Σ, are generally ill-equipped to reconcile connectivity effects in LD with the facts presented in Section 3.2, which indicate Σ’s extraposition status. By contrast, no paradox arises on the present approach, which assigns Σ a full clausal structure replicating \( hc \). As a representative illustration, consider the structure underlying (89ai):

(93) a. \( [\text{CP}_1 \text{Maria non pensa a se stessa}/*lei} [\text{CP}_2 \text{Maria non ci pensa}] \rightarrow \text{PF} \)

(For ease of illustration I abstract away from leftward movement of Σ prior to deletion, on which see subsection 3.3.3.) Binding connectivity thus reduces to parallelism between \( \text{CP}_1 \) and \( \text{CP}_2 \), requisite for felicitous (recoverable) deletion.\(^{46}\) Other sentence fragments show analogous effects. Merchant (2004a) and Brunetti (2003) explain binding connectivity in B’s fragment response in (94a) by deriving the fragment from the parallel full response in (94b):

(94) a. A: Chi vedi allo specchio?
   who you see at the mirror
   B: Me stessa. /*Io stessa.
      me.acc self /*I.nom self
   A: ‘Who do you see in the mirror?’ – B: ‘Myself.’

\(^{46}\) Phrases containing NPIs constitute an apparent exception to the otherwise consistent reconstruction effects in LD. These cannot be dislocated, as exemplified in the following:

(i) *En els consells de gaire gent, la Maria no hi confia.
   in the advice of any people the Maria not in trusts
   ‘Maria does not trust in anybody’s advice.’
   (Spanish; Villalba 2000)

In subsection 3.3.3 below it is suggested that Σ moves to the left edge of \( \text{CP}_1 \) prior to deletion. On this assumption the indislocatability of NPI-containing Σs is expected, given that NPIs must be licensed ‘at S-structure,’ i.e. cannot be licensed under reconstruction (den Dikken et al. 2000).
If my proposal is correct, Σs in LD are derivationally equivalent to fragment answers, and connectivity is a direct consequence of inaudible parallel structure. Note, crucially, that we are maintaining the extra-sentential status of Σ relative to HC without qualification, resolving Cinque’s Paradox.

3.3.3 Island-sensitivity and P-stranding

As amply documented in the literature, LD is generally sensitive to strong islands. That is, LD is infelicitous if Σ is connected to a κ inside an island domain (marked […] below):

(95) a. *A Carlo, ti parlerò solo delle persone [che to Carlo to.you I.will.talk only of.the people that gli appeal]
   ‘I will only talk to you about the people that appeal to Carlo.’
   (Italian; Cinque 1990)

b. *Pe Ion, am plecat [înainte să-l examineze Popescu].
   ACC John I .left before that-him examined Popescu
   ‘I left before Popescu examined John.’
   (Romanian; Dobrovie-Sorin 1990)

c. *Ton Kosta, sinantisa tin kopela [pu ton idhe].
   ACC Kostas I .met the girl who him saw
   ‘I met the girl who saw Kostas.’
   (Greek; Anagnostopoulou 1997)

d. *Den Peter, welche Frau ist gegangen [als sie den ACC Peter which woman is left when she him
   gesehen hat]? seen has
   ‘Which woman left when she saw Peter?’
   (German; Ott 2014)

e. *Na Ivan Marija izbjaga, [kato mu dade rozata].
   to Ivan Maria ran.away.3SG when him.DAT gave.3SG the rose
   ‘Maria ran away after giving Ivan the rose.’
   (Bulgarian; Krapova and Cinque 2008)

f. *Zdeňka, toho Hana viděla [chlapa, který zná].
   Zdeňek.ACC him.ACC Hana saw guy that knows
   ‘Hana saw a guy who knows Zdeňek.’
   (Czech; Sturgeon 2008a)

g. *Ric, aniré al dentista [quan ho sigui].
   rich I.will.go to.the dentist when it I.am
   ‘I’ll go to the dentist when I’m rich.’
   (Catalan; Villalba 2000)
Once again, a movement property of LD calls for reconciliation with the facts of Section 3.2.\textsuperscript{47}

I suggest a possible explanation of these facts in terms of Merchant's (2004a) analysis of fragment answers. According to Merchant's analysis, remnants of clausal ellipsis generally undergo leftward movement, permitting deletion of the vacated constituent. Assuming this to be correct, the facts in (95) follow, given that Σ must cross an island boundary to reach its surface position (\textit{viz.}, the left edge of the parallel, hence island-containing CP\textsubscript{1}). To illustrate, prior to deletion CP\textsubscript{1} in (95a) has the following illicit structure:

\begin{equation}
\text{\textsuperscript{96}} \quad \ast[\text{CP}\textsubscript{1} [\text{a Carlo}\_ti \text{parlerò solo delle persone \[\text{che } t\_i \text{piacciono}] ]}
\end{equation}

On this view, LD's sensitivity to islands is analogous to that of fragment answers, documented by Brunetti (2003) and Merchant (2004a):

\begin{enumerate}
  \item Gianni ha lasciato la festa perché \textsubscript{is}a non voleva ballare con lui?
  \item No, ha lasciato la festa perché \textsubscript{eva} non voleva ballare con lui.
  \item *No, \textsubscript{eva}. \textsuperscript{(Italian; Brunetti 2003)}
\end{enumerate}

Adopting Merchant's 'move-and-delete' approach thus provides an explanation for locality effects in LD without reference to any syntactic dependency between Σ and κ.\textsuperscript{48}

\textsuperscript{47} Cinque (1990) argues that LD is insensitive to weak islands, but López (2009, 222ff.) shows that his examples are confounded, and that LD in fact behaves no different from fronting; in particular, once the relevant confounds are controlled for, it turns out that LD is sensitive to weak islands as well. I set this issue aside here.

\textsuperscript{48} I presuppose here that clausal ellipsis is island-sensitive, i.e. the resulting fragment cannot be contained within an island. Some cases of clausal ellipsis have been shown to 'repair' islands (Merchant 2001; Lasnik 2001; Barros et al. 2014), but scope and etiology of the phenomenon remain a matter of controversy. The position I take in this paper, which I take to be the default position, is that where there is movement, there are locality effects. Why locality constraints sometimes appear to be suspended under ellipsis, and whether this is indicates genuine 'repair' or some form of evasion (as argued by Barros et al. 2014), are questions that I cannot properly address (much less solve) in this paper.
Assuming movement of $\Sigma$ feeding deletion generates the expectation that the possibility or impossibility of $P$-stranding in a given language should be reflected by $\Sigma$s in LD. Merchant (2001, 2004a) investigates $P$-stranding in sluicing and fragment answers and finds that a language permits $P$-stranding in these contexts if and only if it permits $P$-stranding under $\bar{A}$-movement in general. The following data suggest that the same holds true for LD (Ott 2012b):

(98) a. $\{*(\text{Mit})\}$ meiner Schwester, mit der streite ich mich oft. 
    'I often quarrel with my sister.' 
    (German; Ott 2014)

b. $\{*(\text{Se})\}$ svou sestrou, s tou se 
    with my.instr sister.instr with that.fem refl 
    hâdám Často. 
    have.argument often 
    'I often get into arguments with my sister.' 
    (Czech)

c. $\{*(\text{A})\}$ Gianni, ti parlerò solo delle persone [che 
    to Gianni to.you I.will.talk only about people who 
    senz’altro gli daranno il premio Nobel]. 
    undoubtedly to.him will.give the prize Nobel 
    'I will talk to yo only about people who will undoubtedly give the Nobel Prize to Gianni.' 
    (Italian; Abels 2012)

German, Czech and Italian do not permit $P$-stranding. Consequently, leftward movement of $\Sigma$ prior to deletion derives the above pattern, as $\Sigma$ cannot strand a governing $P$.

(99) $\{\text{CP}_1 \Sigma_i [\ldots P_t \ldots ] \} \{\text{CP}_2 \ldots \} \rightarrow \{\text{CP}_1 \Sigma_i [\ldots P_t \ldots ] \} \{\text{CP}_2 \ldots \}$

The opposite pattern obtains in Scandinavian languages, as observed in Ott 2012b:

(100) a. $\{??\text{Med}\}$ søstera mi, ho krangla jeg ofte med. 
    with sister my her quarreled I often with 
    'I often quarreled with my sister.' 
    (Norwegian)

b. $\{??\text{Med}\}$ min syster, henne blev jag ofta osams med. 
    with my sister her became I often upset with 
    'I often got upset with my sister.' 
    (Swedish)

49. Note that omission of the initial $P$ renders (98c) acceptable, however the fact that $\kappa$ is placed within an island shows that this results in a HT parse.
Norwegian, Swedish, and Icelandic permit P-stranding under Ā-movement; in these languages, a Σ connected to a PP κ preferably surfaces preposition-less. A straightforward explanation is that Σ moves prior to deletion in CP₁, resulting in the associated preposition being stranded within the deleted domain (i.e. these languages permit (99)). Conversely, the languages in (98) do not permit such stranding; consequently, Σ connected to a PP κ must surface with a preposition.

We thus have some reason to assume that Σ generally undergoes leftward Ā-movement within CP₁ prior to deletion, as proposed by Merchant 2004a and others. This is not an entirely innocent assumption, given that, in many cases, this movement introduces an asymmetry between elliptical expressions and their overt counterparts, and, in some cases, renders the pre-deletion structure unnatural or even unacceptable. Given that proper explanations of both island constraints and P-stranding phenomena are outstanding, it is conceivable that both types of fact will eventually turn out to be compatible with a purely prosodic theory of deletion, as adumbrated in Chomsky and Lasnik 1993 (see Bruening 2015 and Ott and Struckmeier in press for recent discussion). At present, however, the move-and-delete model provides the most straightforward way of accounting for island sensitivity and P-stranding asymmetries in LD (see also fn. 46), which is why I adopt it here for the sake of concreteness.

3.4 Ordering constraints

The preceding sections illustrated how the ellipsis approach reconciles movement and non-movement properties of LD. Analyzing Σs as parenthetical (extra-sentential) cataphora has a further immediate advantage: it provides an explanation for the peripheral linear positioning of Σs.

As prominently discussed in Rizzi 1997 and noted in Section 2.2 above, while multiple fronted operators (ops) are impossible in many languages, fronting and LD can co-occur even in these languages, but only in the order Σ ≺ op.

50. It furthermore entails that fronting to the clausal edge cannot be directly associated with information-structural effects such as focalization in Italian; see Section 5 for some relevant remarks.
Connectivity in left-dislocation and the composition of the left periphery

(101) a. Il premio Nobel, a chi lo daranno?
the prize Nobel to whom it they will give
‘Who are they going to award the Nobel prize?’ (Italian)
b. Den Peter, woher kennst du den?
ACC Peter from where know you him
‘Where did you meet Peter?’ (German)
c. Tu knížku, komu jsi dala tu?
that book.ACC who.DAT AUX.2SG gave that.ACC
‘Who did you give that book to?’ (Czech; Sturgeon 2008a)
d. L liber, chi l tol pa?
the book who it takes Q
‘Who is going to take the book?’ (Rhaetoromance; Poletto 2002)

The reverse order is always strictly unacceptable (*op ≺ Σ):

(102) a. *A chi, il premio Nobel, lo daranno?
(Italian)
b. *Woher, den Peter, kennst du den?
(German)
c. *Komu, tu knížku, jsi dala tu?
(Czech)
d. *Chi, l liber, l tol pa?
(Rhaetoromance)

The above facts illustrate a robust crosslinguistic generalization (cf. Villalba 2000 on Romance and Krapova 2004 on the Balkan languages). In Benincà and Poletto’s (2004) cartographic terms, the left clausal periphery comprises two main areas, “a higher Topic field … and a lower Focus field,” where the former hosts Σs connected to κ, the latter fronted ops; see also López 2009. Benincà and Poletto follow Rizzi in attributing the linear ordering of these fields to the hierarchical order of corresponding functional projections in the left periphery, where by stipulation TopP dominates FocP (recall (17)):

(103) \[ \text{TopP} \text{ il premio Nobel } \text{FocP a chi } \ldots \] \[ (= (101a)) \]

Like Rizzi, however, Benincà and Poletto offer no principled explanation for why the hierarchical order in the template should be this way, rather than the reverse.

By contrast, the ellipsis approach provides an explanation of the observed facts. As juxtaposed sentential fragments, Σs necessarily precede HC, including its left periphery hosting OP:

(104) \[ \text{CP}_1 \text{ il premio Nobel } \ldots \] \[ \text{CP}_2 a \chi \ldots \] \[ (= (101a)) \]

By treating Σs as extra-sentential parenthetical cataphora, the present approach thus correctly predicts this ordering as the only possible linear arrangement.\(^{51}\) In

\(^{51}\) This is a slight simplification for ease of exposition. Ott and de Vries (2014, 2015) show that elliptical fragments can linearly follow an endophorically linked HC as well, this yielding
short, the analysis of $\Sigma$s as satellite constituents not only avoids Cinque's Paradox, but furthermore automatically derives a central fact about their linear ordering relative to constituents of HC.\(^{52}\)

3.5 Interim summary

So far, I have argued that the LD surface pattern in (1) is derived from the syntactic representation in (105) (where $\Delta$ marks the domain undergoing PF-deletion).

\[(105) \quad [\text{CP}_1 \Sigma_i [\Delta \ldots t_i \ldots ]] [\text{CP}_2 =_{HC} \ldots \kappa_i \ldots ]\]

Departing from traditional analyses of LD, the analysis assumes that $\Sigma$ and $hc$ are related discursively (via endophoric links) rather than syntactically. Syntactic connectivity is the result of parallel underlying structure, exactly as has been argued for other types of sentential fragments. I have shown that this analysis accounts for movement and non-movement properties of LD alike, while avoiding recourse to a left-peripheral template. Cinque's Paradox is resolved.

4. Preliminary notes on embedded LD

One issue that I have set aside so far is LD in embedded contexts, which many languages permit in one form or another. I will not attempt to provide a comprehen-

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what is commonly referred to as Right-dislocation and 'afterthoughts.' Ott (2015) and Ott and Onea (in press) extend this approach to clause-medial non-restrictive appositives. If this approach is on the right track, elliptical fragments can occur internally to HC, but crucially only under tightly constrained pragmatic conditions, which are not met in any of the examples considered in the main text.

52. When a HT co-occurs with LD, the HT precedes $\Sigma$:

\[(i) \quad \{Az \ mene / *Mene \ az\} o\~{s}te \ me \ e \ jad \ }\check{\varepsilon}e\]
\[I.\text{nom} \ \text{me.ACC} \ \text{me.ACC} \ I.\text{nom} \ \text{still} \ \text{me(CL).ACC} \ \text{is} \ \text{anger that}\]
\[\text{togava ne te poslu\~{s}ax}.\]
\[\text{then not you.ACC listened.1SG}\]
\['Me, I am still angry that I didn't listen to you then.'\]

(Bulgarian; Krapova and Cinque 2008)

This, too, follows naturally, given that HTs are not cataphorically linked to their host clauses by ellipsis; they merely bear a loose 'aboutness' relation to their hosts (cf. Alexiadou 2006). As such, the relation between HT and host is interpretively less cohesive than that between CP\(_1\) and CP\(_2\), resulting in the order HT $<$ $\Sigma$. 

sive analysis of embedded LD in this paper, but will merely point to some possible directions suggested by the approach developed here.

The Germanic languages generally permit LD in embedded root contexts, licensed by a restricted class of predicates (cf. Vikner 1995; Heycock 2006; Frey 2009). In Swedish and Icelandic, embedded Σs occur under complementizers; German and Dutch do not permit this pattern but (somewhat marginally) allow for Σs to intervene between matrix and embedded clause.

   'I've heard that Johan bought his first car two weeks ago.'
   (Swedish; Holmberg 2015)

b. Jón segir að þessum hring, honum hafi Ólafur lofað Mariú.
   'John says that Olaf promised this ring to Mary.'
   (Icelandic; Thráinsson 2007)

53. Many speakers do not find pseudo-embedded LD very natural, as reported by Thráinsson (2007) for Icelandic and by Anagnostopoulou (1997) for Dutch. I have nothing to say on this.

54. German and Dutch permit a further pattern in which no complementizer occurs and HC has matrix word order:

   (i) Ich glaube den Peter, den haben sie verhaftet.
   'I think they arrested Peter.'
   (German)

   Anticipating the discussion below, Σ in (i) can be analyzed as an embedded fragment corresponding to B’s response in (ii); juxtaposing B’s response with a parallel root clause containing κ (iii) yields the dislocation in (i).

   'Who did they arrest?' – B: 'I think it was Peter.' (lit. 'I think Peter. ')
   (German)

   (iii) \[CP_{\mu} \quad ich glaube \quad CP_1 \quad \text{den Peter, den haben sie verhaftet} \quad CP_2 \quad \text{den habe sie verhaftet}]\]

   Embedded fragments occur in German and Dutch but not in Swedish or Icelandic (Temmerman 2013), which consequently lack analogous constructions.
(107) a. Credo (che) il tuo libro (*che) loro lo 
I.think that the your book that they it
apprezzerebbero molto.
would appreciate a lot
‘I think that they would appreciate your book a lot.’ (Italian; Rizzi 1997)
b. Ipe oti {ti Maria / *i Maria} tin emathe kala
said that Maria.ACC Maria.NOM her learnt well
tosa hronia.
so many years
‘He said that he knows Maria well after so many years.’
(Greek; Alexiadou 2006)
c. … ale babička řekla, že Pana Kopyto, toho znají.
but grandma said that Mr. Kopyto.ACC him.ACC know
‘… but grandma said they know Mr. Kopyto.’ (Czech; Sturgeon 2008a)
d. U-cabang-a ukuthi abantwana ba-kaThandi uJohn
you-think-fv that child.2 poss.2-of.Thandi.1a John.1a
a-ka-thandi neg
NEG-sm.1a-like-NEG ABS.2
‘You think that John doesn’t like Thandi’s children.’ (Zulu; Zeller 2004)
e. Ivan kaza, če na Marija ti s ništo ne si
Ivan said that to Maria you.NOM with nothing not is
i pomognal.
hér.DAT helped
‘Ivan said that you haven’t helped Maria at all.’
(Bulgarian; Krapova and Cinque 2008)

As in root LD, embedded Σs are morphosyntactically connected to the subsequent 
HC (as evidenced, e.g. by obligatory case matching in (107b)) while matched by 
κ within HC rather than by a gap. Ideally, then, the solution to Cinque’s Paradox 
developed above should extend to this case.
Despite their linear integration, embedded Σs are extra-sentential add-ons just like their counterparts in root dislocations. Owing to the presence of κ, matrix clause and the embedded HC are always structurally complete independently of Σ. Furthermore, the presence of an embedded Σ does not consistently turn the lower clause into an island (traces used for convenience only).

(108) a. ?Non so [a chi], pensi che, queste cose, le dovremmo dire \( t_i \),
we.should say 'I don’t know to whom you think we should say these things.'

(Italian; Rizzi 2004)

b. ?No sé [a quién], crees que, estas cosas, se las debemos decir \( t_i \),
we.should say 'I don’t know to whom you think we should say these things.'

(Spanish)

c. ?No sé [a qui], penses que, aquestes coses, les hauríem de dir \( t_i \),
we.should say 'I don’t know to whom you think we should say these things.'

(Catalan)

d. Piosi nomizis, ti Maria, oti \( t_i \) tha tin psifize?
who you.think ACC Maria that  would her vote

'Who do you think would vote for Maria?' (Greek; Iatridou 1995)

Rizzi (2004) acknowledges that these facts are problematic for his system, in which both root and embedded Σs raise to a dedicated position in the left periphery of HC. Quite unlike fronted \( wh \)-phrases in embedded clauses, which create

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55. Villalba (2000) notes some unexplained variation in this domain, with some extractions distinctly worse than others. In German(ic), too, such extractions are highly marginal at best:

(i) *?Ich frage mich was \( t_i \) du glaubst, dem Peter, dass ich dem \( t_i \)
I ask myself what you think DAT Peter that  I him
schicken werde.
send will

'I wonder what you think I will send to Peter.'

(German)

I have no account of this apparent variation.
wh-islands, Σs do not block extraction from HC; furthermore, this extraction shows no argument/adjunct asymmetry, again unlike extraction out of wh-islands. In lieu of an explanation, Rizzi stipulates that “topics do not act as interveners in other Ā-chains,” “falling outside of the observed typology [of Ā-movement types]” for minimality.

I suggest that embedded Σs in languages like Italian correspond directly to Σs in root contexts. That is, Σs are elliptical root clauses, underlingly parallel to the embedded clause and inserted parenthetically to the right of the embedded complementizer. (109) illustrates schematically; CP_µ designates the matrix clause and || marks sentence boundaries.56

(109) \[ [\text{CP}_\mu \ldots \text{CP}_2 \text{C} \| \text{CP}_1 \Sigma \Delta \| \ldots \kappa \ldots \] \]

An example like (107a) is derived as follows (★ marks the linear position at which CP_1 is parenthetically inserted; it serves expository purposes only):

(110) \[ [\text{CP}_\mu \text{credo} \text{CP}_2 \text{che} \star [\text{loro lo apprezzerebbero molto}]]\]

As before, we explain Σ’s sentential properties (above: case and thematic matching of Σ and κ) without making it a constituent of HC = CP_2, sidestepping Cinque’s Paradox.

A natural corollary of the root-clause status of the embedded Σ is its prosodic isolation from HC (as typically indicated by commas in orthographic rendition). Feldhausen (2014) finds that Spanish and Italian embedded Σs

56. López (2009) claims that Catalan permits subextraction from the embedded Σ into the matrix clause:

(i) [Del seu avi] dius que [les històries ti], cada noia of the her grandfather you.say that the stories each girl
les coneix totes.
them.ACC knows all
‘You say that each girl knows all of her grandfather’s stories.’ (Catalan; López 2009)

The analysis proposed here predicts such extractions to be illicit, given that parentheticals are robustly opaque for subextraction (de Vries 2007). It is not clear, however, that (i) in fact involves genuine subextraction from Σ; e.g. Bach and Horn (1976) and Chomsky (1977) argue for reanalysis-based derivations instead. On this view, the deviance of such cases for many speakers would be due to the reanalysis of del seu avi as an adverbial modifier of the matrix predicate. (In line with this alternative analysis, an informant reports that he finds (i) marginally acceptable only with an unbound reading of the Σ-internal pronoun.) A resolution of this issue is beyond the scope of this paper.
define their own intonation phrases (IPs); the following illustrates schematically for (107a) above:

\[(\text{IP}_2 \text{loro lo apprezzerebbero molto})]_{\text{IP}}\]

On the present approach, and adopting a syntax–prosody mapping as proposed in Selkirk 2005, 2011, (110) maps straightforwardly onto (111): being a root clause, Σ defines an autonomous intonational unit.\(^{57}\) An approach that assumes embedded Σs to occupy some sentence-internal position within the left periphery of the embedded clause has no natural account for the phrasing observed by Feldhausen.

Note further that insertion of parentheticals can cause complementizer duplication in casual speech:

\[(112)\]

a. I don’t know who you think that, in this situation, (that) John should talk to.

b. Di que, dado que a terra e redonda, que non e possible circundala.

‘He says that, since the earth is flat, it is not possible to circumnavigate it.’

(Galician; Iatridou and Kroch 1992)

I take such “recomplementation” effects to arise in performance, owing to the prosodic fragmentation of the complex sentence as a result of parenthetical insertion (but see Villa-García 2012 for a different perspective). Expectedly, recomplementation occurs with embedded LD:

\[(113)\]

a. Disseram-me que, esse livro, que não o podem dar ao Pedro.

‘They told me that they cannot give that book to Pedro.’

(European Portuguese; Barbosa 2000)

---

57. Feldhausen (2014) discusses some complications of this picture. Σ’s IP sometimes includes the preceding complementizer; given the latter’s proclitic character, I take this to be a prosodic restructuring effect. (Downing 2011 finds this effect in Bantu as well.) Furthermore, in Catalan Σ is standardly prosodically integrated into the preceding matrix clause, i.e. here Σs are followed but not preceded by an IP boundary. This is not too surprising and compatible with (109), as it is well known that various types of parentheticals, such as comment clauses, can integrate into the preceding tonal unit, as surveyed by Dehé and Kavalova (2007) citing Taglicht (1998, 196): “parentheticals may, in intonational phrasing, group to the left, but not to the right.” I thus do not take the existence of such regrouping to be a problem for the syntactic proposal in (109).
b. Susi dice que a los alumnos, (que) les van a dar regalos.

‘Susi says that they are going to give the students presents.’

(Spanish; Villa-García 2012)

With regard to (113b), Villa-García notes that the second que is optional, exactly as in (112a). With regard to (113a), Barbosa observes an obligatory “parenthetical intonation” of Σ, set off from the surrounding clauses by prosodic pauses.

Returning to the narrow-syntactic derivation, the analysis furnishes a principled explanation for the permeability of embedded clauses with dislocation shown in (108): Σs are inserted parenthetically, hence do not affect dependencies on the “primary plane,” i.e. CPµ and the embedded CP2. 58 (114) illustrates for (108a) above:

\[
\begin{align*}
\text{a. } & \left[ CP\mu \cdots \left[ CP_2 \text{che } \cdots [a \text{ chi }] \cdots \right] \right] \rightarrow \text{extraction} \\
\text{b. } & \left[ CP\mu \cdots [a \text{ chi}] \cdots \left[ CP_2 \text{che } \cdots t_i \cdots \right] \right] \rightarrow \text{parenthetical insertion} \\
\text{c. } & \left[ CP\mu \cdots [a \text{ chi}] \cdots \left[ CP_2 \text{che } \Sigma \cdots t_i \cdots \right] \right]
\end{align*}
\]

Such an extraction is thus analogous to the following:

\[
(115) \quad \text{I don’t know who, you think that, in this situation, John should talk to } t_i.
\]

In neither case does the insertion of an extra-sentential parenthetical disrupt the syntactic coherence of matrix and embedded clause. 59 (I assume that the slight degradation of the examples in (108) compared to (115) relates to the additional processing cost incurred by ellipsis in Σ in conjunction with the crossing A-dependency, but the issue deserves further study.)

58. Note that English topic-island examples discussed e.g. in Rochemont 1989 are not on a par with the examples considered in the main text:

\[
(\text{i}) \quad \begin{align*}
\text{a. } & * \text{I asked what, to Lee, Robin gave.} \\
\text{b. } & * \text{Lee forgot which dishes, on the table, you are going to put.}
\end{align*}
\]

Given the absence of κ, subtraction of Σ yields an incomplete sentence, hence Σ could not be parsed as a parenthetical.

59. Note that the invisibility of parentheticals to syntactic operations is an empirical fact (see, e.g. Peterson 1999) that holds true regardless of whether we choose to model parenthetical insertion as a narrow-syntactic operation (as in de Vries 2007) or, following Haegeman 1991, as an extra-grammatical process, as I tacitly assume here.
Why do languages like Italian, Greek and Zulu permit insertion of an elliptical Σ to the right of a complementizer, whereas German and Dutch disallow this? Borrowing a term from Ross (1973b), why would the relevant parentheticals niche differently in different languages? I will not attempt to give a comprehensive answer here but offer a speculation. Manzini (2010) and Roussou (2010) argue that Romance and Greek ‘complementizers’ are in fact not of category C, but rather nominals that are part of the matrix clause and embed a full CP. Schematically:

\[(116) \ [CP \ldots V [NP N_{\text{complementizer}} [CP \ldots ]]]\]

If this is on the right track, and perhaps extends to languages like Icelandic (accounting for its “generalized V2” character), then this might provide the relevant factor accounting for differential niching of Σs in Italian/Greek (117a) and German/Dutch (117b).

\[(117) \ a. \ [CP_{\mu} \ldots V [NP \text{che} CP_{2} ]] \]

\[b. \ [CP_{\mu} \ldots V \star [CP_{2} \text{dass } \ldots ]]\]

Assuming that (117a) is the structure of Catalan embedded LD, consider the schematic representation of example (118a) given in (118b). Note that CP_{\mu} is a complete sentence without the interpolated Σ, and that Σ linearly precedes an embedded wh-phrase, showing that Σ niches in between the matrix including que and the embedded clause proper.

\[(118) \ a. \ \text{Pregunten que, el gavinet, on el ficàras.} \]

\[\text{they.ask that the knife where it you.will.put} \]

\[\text{‘They are asking where you will put the knife.’ (Catalan; Vallduví 2002)}\]

\[b. \ [CP_{\mu} \text{pregunten que } \star [CP_{2} \text{on}_{k} \text{el ficàras } t_{k} ] \]

\[\text{[CP_{1} \text{DP el gavinet}_{i} ] } \Delta.\]

\[c. \ *\text{Pregunten, el gavinet, que on el ficàras.}\]

By contrast, in the German example (106ci) Σ niches in between matrix and embedded clause, as in (117b). On this view, then, the elliptical CP_{1} (= Σ) is uniformly inserted to the immediate left of its postcedent CP_{2} (= hc). This appears to be a natural niching position from a processing point of view, given that CP_{2} is the parallelism domain for resolution of deletion in CP_{1}. If the Manzini–Roussou view of complementizers is correct for Romance/Greek but does not extend to German, Swedish etc., the difference in the niching possibilities of embedded Σs follows.

These speculative remarks no doubt leave open many questions, and I have ignored LD in subordinate clauses other than complement clauses. Nevertheless,
I believe that a coherent if incomplete picture emerges: root LD appears to be essentially uniform crosslinguistically, as many authors have assumed. By contrast, embedded LD shows a good deal of variation that is as yet not well-understood, and is quite likely to reflect an amalgam of factors relating to complementation, prosody, etc. rather than a unitary parameter of variation. Here I have suggested the outlines of an analysis of embedded LD, in the hope that it can serve as a point of departure for further inquiry.

5. Concluding discussion

Cinque (1983) concluded that HTs are an essentially discursive phenomenon, whereas LD falls squarely within the purview of sentence grammar. While his conclusion is solidly backed by empirical evidence (the connectivity effects reviewed in Section 3.3), it is at odds with the otherwise extra-sentential status of Σ in LD (the ‘separation effects’ reviewed in Section 3.2) – this is the situation I have referred to as Cinque’s Paradox.

I have argued that the paradox can be resolved by analyzing Σs as sentence fragments, derived by clausal ellipsis resolved under semantic identity with HC. By ascribing to Σ a parallel but silent clausal structure, the analysis reconciles its extra-sentential status with the observed connectivity effects. The LD pattern (1), then, is the surface expression not of a monolithic sentential structure (119a) but of a sequence of root clauses (119b).

\[(119) \quad a. \quad \left[ \text{TopP} \Sigma \left[ \text{FocP} \ldots \left[ \ldots \kappa \ldots \right] \right] \right] \]
\[b. \quad \left[ \text{CP}
_1 \Sigma \Delta \right] \quad \left[ \text{CP}_2 \ldots \kappa \ldots \right] \quad (\Delta = \text{deletion})\]

On this approach, CP
_1 and CP
_2 are computed separately; Σ is at the ‘left periphery’ of HC only by virtue of immediate linear precedence in discourse. Two-way endophoric linkage ties the two clauses together into a coherent discourse unit, despite their structural discontinuity. Dislocation in embedded clauses can then be understood as linear insertion of parenthetical Σ to the left of the embedded clause, as I suggested in Section 4.

Beyond resolving Cinque’s Paradox, the chief advantage of this analysis is that it explains central properties of the construction without resorting to a primitive syntactic template. This is achieved, crucially, by rejecting Cinque’s (1983) original conclusion that fueled the cartographic approach: the composition of the left periphery, it turns out, is a matter of both sentence grammar and discourse grammar. It is furthermore important to note that the analysis relies on independently motivated ingredients. As far as I know, all languages discussed here permit sen-
potential fragments in other contexts, e.g. as fragment responses (see Merchant 2004a and Brunetti 2003; also e.g. Park 2005; İnce 2012). The use of such fragments in a way that anticipates a subsequent parallel sentence would need to be blocked by stipulation. It is thus incumbent upon any attempt to refute the analysis developed here to specify why speakers could not deploy sentence fragments in the LD configuration (119b), given their independent availability.

One issue I have not addressed within the confines of this paper is the information-structural side of LD. The literature is ripe with disagreement and contradictions concerning these properties even within individual languages. In the Romance languages, $\Sigma$s are typically used as contrastive topics (López to appear),60 but some claim that LD syntax is compatible with contrastive focus as well (Benincà and Poletto 2004; Bocci 2007). In Hungarian, $\Sigma$s express implied contrast but not explicit contrast (Lipták 2011). In German and presumably also Czech, $\Sigma$s have variable discourse functions, none of which could not alternatively be achieved by simple fronting (Repp and Drenhaus 2015, Ott 2014); similarly, Raposo (1996) (cited in Barbosa 2000) claims that fronting and LD in European Portuguese are semantico-pragmatically equivalent. From a crosslinguistic point of view, then, there appears to be little plausibility in assigning $\Sigma$s a distinct structural position associated directly with some information-structural role (cf. Lipták 2011); rather, LD appears to support Cinque's (1983) hypothesis that the same grammatical structure can have different information-structural functions in different languages (see also Baker 2001). This could be implemented by means of language-particular mapping rules associating syntactic configurations with information-structural representations, as proposed by Neeleman and de Koot (2008); see Büring 2013 for relevant related discussion. Alas, pursuing this line of reasoning further must be left to future research.

A related question relevant in this context (but likewise not taken up here) is whether dislocation could be forced by purely structural factors, as argued e.g. by Barbosa (1995, 2000) for preverbal subjects in European Portuguese, by Koster (1978) for sentential subjects in Germanic, and by Baker (1996) for overt NP arguments in polysynthetic languages like Mohawk. Where the grammar forces dislocation, no specific semantic or pragmatic effects are expected (cf. Baker 2001, Biberauer and Richards 2006), which is correct at least for the cases just mentioned.

Many questions remain, concerning both details of the realization of LD in individual languages and the intricacies of crosslinguistic variation. As López (to

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60. For a proposal for why certain languages but not other require a structural “outsourcing” of contrastive-topic constituents in the way suggested here, see Wagner 2012.
appear) points out, “we find broad similarities and fine-grained contrasts between languages” in the syntax of LD, and the present paper has unabashedly focused on the former. It has not been my intention here to provide an all-encompassing account, but rather to propose, in deliberately broad strokes, an alternative framework for analyzing left-peripheral ‘satellite’ constituents that resolves Cinque’s Paradox. The hope, as always, is that future work can fill the remaining gaps.

References

Abels, Klaus. 2012. The Italian left periphery: A view from locality. Linguistic Inquiry 43. 229–254. DOI: 10.1162/LING_a_00084


DOI: 10.1007/978-94-015-8617-7_2


DOI: 10.1002/9780470756416.ch13


Barros, Matthew, Patrick D. Elliott & Gary Thoms. 2014. There is no island repair. Ms., Rutgers University, University College London and University of Edinburgh.


Brandt, Patrick & Eric Fuß (eds.). 2006. Form, structure, and grammar. Berlin: Akademie Verlag. DOI: 10.1524/9783050085555


Chung, Sandra. 2013. Syntactic identity in sluicing: How much and why. Linguistic Inquiry 44. 1–44. DOI: 10.1162/LING_a_00118
Cinque, Guglielmo. 1983. ‘Topic’ constructions in some European languages and ‘connectedness’. In Konrad Ehlich & Henk van Riemsdijk (eds.), *Connectedness in sentence, discourse and text*, 7–41. Tilburg: KUB.


Emonds, Joseph. 2004. Unspecified categories as the key to root constructions. In Adger et al. (eds.), 75–120. DOI: 10.1007/1-4020-1910-6_4


Connectivity in left-dislocation and the composition of the left periphery


Grewendorf, Günther. 2008. The left clausal periphery: Clitic left-dislocation in Italian and left-dislocation in German. In Shaer et al. (eds.), 49–94.


Taglicht, Josef. 1998. Constraints on international phrasing in English. *Journal of Linguistics* 34. 181–211. DOI: 10.1017/S0022226797006877
Connectivity in left-dislocation and the composition of the left periphery


Wagner, Michael. 2012. Contrastive topics decomposed. *Semantics and Pragmatics* 5. 1–54. DOI: 10.3765/sp.5.8


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