Multi-categorial Multiple Right Dislocation in Chinese: A cross-framework study

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Right Dislocation (RD), as illustrated in (1), is a widely observed phenomenon across languages, especially in the colloquial register. Below, the right-dislocated (RD-ed) elements are underlined.

(1) a. He's really smart, John. (English, Kayne 1994)
b. *Il a mangé la soupe, Jean.* 'He ate the soup, Jean.' (French, Lambrecht 1981)
c. *Der war viel zu schön, der Tag.* 'It was too nice, the day.' (German, Altmann 1981)
d. *Lo porto domani, il dolce.* 'I'll bring it tomorrow, the dessert.' (Italian, Benincà 1988)

Opinions vary regarding its exact function (Averintseva-Klisch 2008, Cheung 2009, Ott & de Vries 2016, i.a.), but it is generally agreed that the RD-ed element serves some information-structure (IS) purpose. Considering IS functions are typically fulfilled by Left Dislocation, and movement (in frameworks assuming it) is generally taken to be leftward, RD constitutes a challenge to syntactic theory.

A subtype of RD that has received little attention to date is that involving multiple RD-ed elements; call it multiple RD (MRD). When examples are given in the literature, as in (2), they are usually mentioned in passing, with the theoretical focus still on single-element RD (SRD).

(2) a. He gave them to his sister, Peter, the keys. (English, Kalbertodt 2019)
b. *Maria gli lo ha portato, il dolce, a Gianni.* (Italian, Sun 2022)
'Maria brought it to him, the dessert, to Gianni.'

Within MRD, an even more special and less discussed subtype is that involving multiple categories. Cross-linguistically, nominal and prepositional phrases are relatively common in MRD, as in (2), while elements of other categories are rarer. However, multi-categorial MRD (MMRD) occurs naturally in some dialects of Chinese. Take Dongying Mandarin, for example, which is an understudied minor subvariety of Northern Mandarin Chinese spoken in the Yellow River Delta area. MMRD is no less natural than SRD in this dialect. See (3) for an illustration. These data are collected by myself (a native speaker).

(3) Dongying Mandarin Chinese
a. *Ni shangyihuir mai-di ne gao-de nɒ lie, wo wen, ne nai.*
you last.time buy-REL that put-at where SFP I ask the milk
'Where you put that which you bought last time, I was asking, the milk.'
b. *Chao caihuar chi ae, wo ji ni, jin shangwu.*
stir-fry cauliflower eat SFP I for you this noon
'Stir-fry cauliflower to eat, I for you, this noon.'
c. *Zaezae-zhou ae, dei, mae yunqi lai, haoshi-zhou.*
save-STA SFP must DISP luck DISP carefully-STA
'Save up, (one) must, (their good) luck, carefully.'
(REL = relativizer, SFP = sentence-final particle, STA = stative, DISP = disposal)

In my lived experience, such sentences are not unusual at all, especially in casual, relaxed situations. That said, people would avoid speaking in this manner when they need to sound organized or fluent (e.g., when talking to people of higher social status, discussing heavier topics, noticing they are being observed, etc.).

In these less relaxed situations, RD is still common, but not MMRD. Intuitively, MMRD happens when speakers are not bothering organizing language but just outputting whatever comes to mind first.

While (M)MRD is natural in Dongying Mandarin (and to some extent also in Cantonese; see Cheung 2009), it is a minor sentence type from a typological perspective (with "sentence type" construed broadly). That the sentences in (3) involve RD is indicated by the boundary-marking SFPs. The categories of the RD-ed elements are versatile, including not only nominal phrases but also subject-verb or subject-prepositional-phrase strings, adverbials, modal verbs, and disposal phrases (for affected objects). Prosodically, there is a clear pause before each RD-ed element, and there is no pause in 'I ask' (3a) or 'I for you' (3b), which indicates that such strings are RD-ed as a whole, despite their non-constituent nature in syntax. Besides, the multiple RD-ed elements in (3) may be freely re-ordered. Note that the 'I ask' in (3a) is not a parenthetical, as it does not show parenthetical behavior (see Dehé 2009) either syntactically or prosodically. Syntactically, if we delete a parenthetical, the remaining string is a normal sentence, as in (4).

(4) There were no other applicants(, I believe,) for that job. (English, Quirk et al. 1985)

But if we delete 'I ask' in (3a), the remaining string is still a sentence with RD ('the milk'). Prosodically, Dehé points out that parentheticals have their own pitch, tempo, and loudness; but there are no perceptible differences in these aspects between 'I ask' and 'the milk' in (3a) or the other RD-ed elements in (3). Also note that MMRD is not tied to any particular illocutionary force (i.e., "sentence type" in the narrow sense). For example, the sentences in (3) can all be turned into other illocutionary forces, as in (5).

(5) Dongying Mandarin Chinese

a. *Shangyihuir mai-di ne gao-de nɒ lie, ni, ne nai?* (interrogative)
last.time buy-REL that put-at where SFP you the milk
'(lit.) Where put that which (you) bought last time, you, the milk?'

b. *Chao caihuar chi bae, ŋen ji ŋae, jin shangwu!* (imperative)
stir-fry cauliflower eat SFP you for us this noon
'(lit.) Stir-fry cauliflower to eat, you for us, this noon!'

c. *Zaezae-zhou ninhae, renge dai, mae yunqi lai, yizuer!* (exclamative)
save-STA SFP others will DISP luck DISP altogether
'(lit.) Save up, she/he will, (good) luck, altogether! (surprised and amused tone)'

In this study, I examine previous approaches to RD in three theoretical frameworks—Minimalism, LFG, and Dynamic Syntax (DS)—and find that MMRD is a challenge for all of them. In Minimalism, RD is generally analyzed in one of two ways (see, e.g., Sun 2022, Yip 2024): (i) as stranding of the "RD-ed" element following IS-driven leftward movement of the sentential main body (SMB); (ii) as ellipsis of repeated content from coordinated clauses, again following leftward movement of the "RD-ed" element. In Sun (2022), these are respectively used for inversion-like RD (4a) and afterthought-like RD (4b).

(6) a. *Shang feiji le, wo kuai.* 'Will get on the plane, I soon.' (Standard Mandarin)
b. *Mali mai le ba, baozhi.* 'Probably Mary bought (it), the newspaper.'

The challenge from MMRD is that the two cases tend to co-occur. For instance, 'I ask' (3a), 'I for you' (3b), and 'must' (3c) are inversion-like, while 'the milk' (3a), 'this noon' (3b), and 'luck'/'carefully' (3c) are afterthought-like. Considering the flexible word order of the multiple RD-ed elements, (ii) is a more feasible method, but having to manipulate n+1 sentences when there are n RD-ed elements is resource-demanding.

In LFG, Kalbertodt (2019) also proposes two ways to analyze RD. For RD-ed elements that are more closely connected to the SMB, VP-adjunction in c-structure and topicalization in f-structure are employed, whereas less connected RD-ed elements are treated as "orphans" (i.e., separate trees) in c-structure and as topics of separate (elided) sentences in f-structure. These two analyses are equivalent in spirit to the two analyses in Minimalism (though not in a one-to-one way), so they face the same challenges from MMRD. In addition, Kalbertodt's two analyses are both designed for simple cases like those in (1), where the RD-ed element is a nominal phrase. Thus, it is unclear how they can accommodate the multiple categories involved in MMRD.

Compared to Minimalism and LFG, Dynamic Syntax is less resource-demanding in its treatment of RD, as it does not assume repeated sentences or bulk ellipsis but lets the RD-ed element directly adjoin to the SMB via a LINK (see, i.a., Cann et al. 2005, Wu 2005, Chatzikyriakidis 2016). A difficulty in this approach is that it only works for RD-ed elements with constituent status and clearly defined semantic types/formulae. While this is straightforward for SRD, especially for the simple nominal cases in (1), it is unclear how non-constituent strings like 'I ask'/'I for you' in (3) can be modeled. Besides, a more serious difficulty is that the SMB in MMRD is incomplete, which makes the left-to-right parsing in Dynamic Syntax hard to unfold.

In sum, MMRD cannot be easily tackled in any of the three frameworks examined in this study. I tentatively propose an alternative analysis for it combining ideas from Minimalism and Dynamic Syntax. In a nutshell, I inherit the basic ideas from the minimalist approaches but, instead of letting ellipsis start from full clauses and coordinating constituents, take smaller (or more flexibly sized) units as the starting point of ellipsis (borrowing the DS idea) and coordinating derivational Workspaces (WS's). More specifically, I assume that while the first RD-ed element in MMRD may be stranded from SMB movement, the other RD-ed elements all occupy separate WS's. WS-level theorizing is increasingly prominent in current Minimalism (see, e.g., Chomsky et al. 2023), but multiple WS's have long been used in minimalist syntax in practice (e.g., for the "satellites" on syntactic trees, including specifiers and adjuncts; Fowlie 2013). Inspired by DS, I propose a formal method for different WS's to communicate with one another, but without resorting to the DS-specific techniques. I adopt theory-neutral tools from the field of process calculi instead, such as the session calculus (Yoshida & Gheri 2020). See (7) for a schematic illustration, taking the sentence from (3c) as an example.

(7) **Syntax:** {$_{WS1}$ 'save up [e], must'} & {{$_{WS2}$ 'save up ~~good luck~~'}, {$_{WS3}$ 'carefully ~~save up [e]~~'}}
(WS_1 is coordinated with WS_2 and WS_3 simultaneously, à la Song 2024)
Session: $WS_2 \Leftarrow$!a<⟦WS2⟧>.0, $WS_3 \Leftarrow$!b<⟦WS3⟧>.0, $WS_1 \Leftarrow$?a(x).?b(y).(⟦WS1⟧ ∧ x ∧ y).0
(Each WS coordination step creates a communication channel a, b, …; **!a<…>** means 'send <…> via a'; **?a(x)** means 'receive anything via a and assign it to x'; **0** means 'end'; **dot** means 'then'.)
Semantics: ⟦WS1⟧ ∧ x ∧ y = ⟦WS1⟧ ∧ ⟦WS2⟧ ∧ ⟦WS3⟧
(i.e., the output value of the final process before the whole WS communication session ends)

Note that in MMRD the contents of the several WS's are never merged on the constituent level but are just loosely coordinated at the discourse level (also Ott & de Vries's 2016 idea for afterthought-RD). This is *not* a typical scenario for WS-level derivation but specific to the situation of MMRD, where speakers are too "lazy" to organize the separately generated contents into a single syntactic object (SO). When speakers do make the effort, therefore, MMRD does not occur, and all contents in the "session" are assembled into a single SO, as is standardly done in Minimalism. For simpler RD, no such complication is needed, and I just follow previous approaches, the techniques of which coexist with my new technique for different purposes. Finally, the introduction of session calculus (or some formal tool like it) is presumably an independent need of WS-level theorizing, where information exchange across WS's must follow certain protocols.

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