Multi-categorial multiple right dislocation in Chinese

A cross-framework study

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Introduction: RD (pretheoretical umbrella term)

Right dislocation (RD) is a crosslinguistically common pattern in the colloquial register.

(1) a. He$_i$'s really smart, John$_i$ (is). (English, Kayne 1994)

b. *Il$_i$ a mangé la soupe, Jean$_i$.*
he has eaten the soup Jean (French, Lambrecht 1981)

c. *Lo$_i$ porto domani, [il dolce]$_i$.*
it bring.1SG tomorrow the dessert
'I'll bring it tomorrow, the dessert.' (Italian, Benincà 1988)

Introduction: MRD

A subtype of RD that has received little attention—that involving multiple RD-ed units (MRD).

(2) a. He$_i$ gave them$_j$ to his sister, Peter$_i$, [the keys]$_j$. (English, Averintseva-Klisch 2009)

b. *Il$_i$ la$_j$ lui$_k$ a donnée, à Jean$_k$, [son père]$_i$, [sa moto]$_j$.*
he it to.him has given to Jean his dad his motorbike
'He gave it to him, to Jean, his dad, his motorbike.' (French, Calve 1985)

In familiar European languages, MRD is a straightforward extension of SRD (single RD).

Introduction: MMRD

An even more special and less discussed pattern: **multi-categorial multiple RD (MMRD)**. It occurs naturally in some Chinese dialects, especially in casual and relaxed speech.

(3) *Chao caihuar chi **ae**, wo ji ni, jin shangwu.* [Dongying Mandarin]
stir-fry cauliflower eat SFP I for you this noon
'Stir-fry cauliflower, I for you, this noon.' ≈ 'I'll stir-fry cauliflower for you for lunch.'

📍 Dongying Mandarin: a subvariety of Northern Mandarin Chinese

NB the sentence-final particle (SFP) marks the end of the main sentence.

Introduction: MMRD

More examples of MMRD:

(4) a. *Bu niaehur* ***ae****, zhe sie diaefen, yi daer ye.* [Dongying Mandarin]
not sticky SFP this CL.PL starch one bit also
'Not sticky, this starch, even a bit.'
≈ 'This bag of starch isn't sticky at all (i.e., is of poor quality).'

b. *Gae-bu-liao* ***liae****, shɒ ye, zhe yi mer.*
do-not-RES SFP anything also this one period
'Can no longer do, even anything, this period of time.'
≈ 'One can't do anything anymore these days (due to COVID-19).'

c. *Zaezae-zhou* ***ae****, dei, mae yunqi lai, haoshi-zhou.*
save-DUR SFP must DISP luck LAI carefully-DUR
'Save up, must, (take) luck (to), carefully.' ≈ 'We must carefully save up our good luck.'

Introduction: MMRD

Basic characteristics:

- RD-ed units highly versatile in syntactic category/constituency
- mostly no coreferential term (aka correlate) in main clause
- typically very incomplete main clause

Intuitively, MMRD happens when speakers are not bothering organizing language but just outputting whatever comes to mind first. It is a kind of “disorganized” speech systematically allowed by Chinese syntax—a **minor sentence type** in a broad sense.

Two additional characteristics:

- Free ordering of RD-ed units
- Not limited by illocutionary force (i.e., sentence type in the narrow sense)

More about data: MMRD shows free word order.

(5) a. *Zaezae-zhou **ae**, dei, mae yunqi lai, haoshi-zhou.* [Dongying Mandarin]
save-DUR SFP must DISP luck LAI carefully-DUR
'Save up, must, (take) luck (to), carefully.'(= 4b)

b. *Zaezae-zhou **ae**, dei, haoshi-zhou, mae yunqi lai.*
save-DUR SFP must carefully-DUR DISP luck LAI
'Save up, must, carefully, (take) luck (to).'

c. *Zaezae-zhou **ae**, mae yunqi lai, dei, haoshi-zhou.*
save-DUR SFP DISP luck LAI must carefully-DUR
'Save up, (take) luck (to), must, carefully.'

d. … All permutations work—depends on which comes to mind first!

More about data: MMRD is not limited by illocutionary force.

(6) a. *Bu niaehur* ***man****, zhe sie diaefen, yi daer ye?* (interrogative)
not sticky SFP this CL.PL starch one bit also
'Not sticky, this starch, even a bit?' ≈ 'This bag of starch isn't sticky at all?' 🤔

b. *Chao caihuar chi* ***bae****, ngen ji ngae, jin shangwu!* (imperative)
stir-fry cauliflower eat SFP you for me this noon
'Stir-fry cauliflower, you for me, this noon!'
≈ 'Stir-fry cauliflower for me for lunch today, please!' 😋

c. *Zaezae-zhou* ***ninhae****, renge dai, mae yunqi lai, yizuer!* (exclamatory)
save-DUR SFP others will DISP luck LAI altogether
'Save up, she/he will, (take) luck (to), altogether!'
≈ 'She/he is going to save up all her/his good luck! (surprised and amused tone)' 😂

Plan

In this study, I will

- review previous approaches to RD in three frameworks (Minimalism, LFG, Dynamic Syntax)
- conclude that MMRD is a challenge for all of them
- propose a new analysis integrating useful ideas from previous studies

Overview

Minimalism

RD usually analyzed in one of two ways:

1. in a single clause, “RD-ed” unit stranded upon leftward movement of the rest of the clause ⬅️ the monoclausal approach
2. coordination of two clauses plus ellipsis in the second clause, upon leftward movement of the “RD-ed” unit ⬅️ the biclausal approach

Both have been applied to Chinese (S)RD—Sun (2022) applies them to inversion-like RD and argument RD, respectively.

Minimalism: Chinese

Two types of SRD in Chinese:

(7) a. *Shang feiji* ***le,*** *wo kuai.* [Standard Mandarin]
get.on plane SFP I soon
'Get on the plane, I (will) soon.'
≈ 'I'll get on the plane soon.' (inversion-like SRD)

b. *Mali mai* [e]$_i$ ***le*** ***ba,*** *baozhi*$_i$.
Mary buy PRO SFP SFP newspaper
'Probably Mary bought (it), the newspaper.' (argument SRD) (Sun 2022)

Argument SRD is like the common European RD pattern.

Minimalism: Chinese

Sun's (2022) analysis:

(8) a. **Inversion-like SRD: focus fronting**
[$_{FocP}$ [$_{vP}$ t$_i$ *shang feiji le*]$_j$ [$_{Foc'}$ Foc [$_{IP}$ *wo*$_i$ [$_{I'}$ I [$_{AspP}$ *kuai* [$_{Asp'}$ Asp t$_j$]]]]]]
'Get on the plane, I (will) soon.'

b. **Argument SRD: coordination-plus-ellipsis** (à la Ott & de Vries 2016)
[$_{:P}$ [$_{CP_1}$ *mali mai* pro$_i$ *le ba*] [$_{:'}$ [$_{CP_2}$ *baozhi*$_i$ ~~[$_{IP_2}$ *mali mai* t$_i$ *le*]~~]]]
'Probably Mary bought (it), the newspaper.'

A special "colon coordinator" in (8b): Koster's (2000) specifying coordination

(8a) more flexible: does not require the RD-ed (i.e., stranded) string to be a constituent
Limitation of focus fronting: one-round-per-clause (hence inapplicable to MRD)

Minimalism: European languages

Ott & de Vries's (2016) schema:

(9) $[_{CP_1} \ldots \text{correlate}_i \ldots]$ (:) $[_{CP_2}\ d\text{XP}_i\ \sout{[\ldots t_i \ldots]}]$

Two types of (S)RD:

- Colon coordination (in syntax): backgrounding (BRD) ⬅ topic-like
- Direct juxtaposition (in discourse): afterthought (ARD) ⬅ focus-like

(10) *Ich habe heute [einen Star]$_i$ getroffen: [den John Travolta]$_i$!* [German]
I have today a.ACC star met the.ACC John Travolta
'I met a star today: John Travolta!' (ARD) (Ott & de Vries 2016)

(The ":" here is a punctuation mark, not the colon coordinator.)

Minimalism: European languages

Ott & de Vries's (2016) derivations:

(11) a. $[_{:P}\ [_{CP_1}$ he$_i$'s really smart$]\ [_{:'}$: $[_{CP_2}$ John$_i$ [t$_i$ ~~is really smart~~$]]]]$ (BRD)

b. $[_{CP_1}$ ich habe heute einen Star getroffen$]$ (ARD)
$[_{CP_2}$ [den John Travolta].ACC$_i$ [~~habe ich t$_i$ getroffen~~$]]$

In general, the coordination-plus-ellipsis approach cannot handle inversion-like RD in Chinese, because Ott & de Vries's *d*XP is by definition a phrasal constituent.

Kalbertodt (2019):

- Empirical focus on German, so only about the **coreferential** pattern in European languages
- Not directly useful for MMRD, but shows us how RD can be handled by LFG

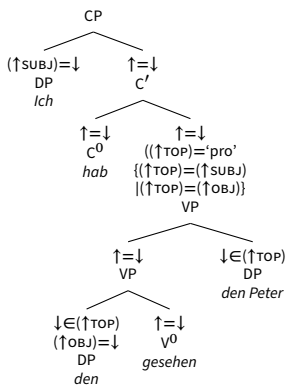
Also distinguishes BRD and ARD—e.g., same string, different intonation

(12) a. *Ich hab ihn$_i$ gesehen, [den Peter]$_i$.* (BRD, deaccented) [German]
I have him seen the Peter

b. *Ich hab ihn$_i$ gesehen. [Den Peter]$_i$.* (ARD, nuclear accent)
I have him seen the Peter (Kalbertodt 2019)

(13) *Ich hab ihn$_i$ gesehen, den Peter$_i$.* 'I have seen him, Peter.' (BRD)

a. c-structure



b. f-structure

$$\begin{bmatrix} \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'pro'} \\ \text{PERS} & 1 \\ \text{NUM} & \text{SG} \\ \text{CASE} & \text{NOM} \end{bmatrix} \\ \text{PRED} & \text{'sehen}\langle(\uparrow\text{SUBJ})(\uparrow\text{OBJ})\rangle\text{'} \\ \text{TENSE} & \text{PERFECT} \\ \text{TOP} & \left\{ \begin{bmatrix} \text{PRED} & \text{'pro}_i\text{'} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{CASE} & \text{ACC} \\ \text{GEND} & \text{MASC} \end{bmatrix}, [\text{``den Peter}_i\text{''}] \right\} \\ \text{OBJ} & [\quad] \end{bmatrix}$$

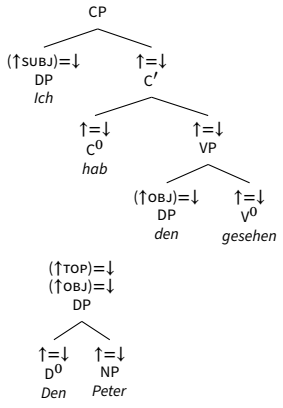
Kalbertodt's analysis:

- c-structure: VP-adjunct
- part of main clause
- f-structure: topic function
- correlate *den* also topic

Basically a monoclausal analysis

(14) *Ich hab ihn$_i$ gesehen. Den Peter$_i$.* 'I have seen him. Peter.' (ARD)

a. c-structure



b. f-structure

$$\begin{bmatrix}
\text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'pro'} \\ \text{PERS} & 1 \\ \text{NUM} & \text{SG} \\ \text{CASE} & \text{NOM} \end{bmatrix} \\
\text{PRED} & \text{'sehen}\langle(\uparrow\text{SUBJ})(\uparrow\text{OBJ})\rangle\text{'} \\
\text{TENSE} & \text{PERFECT} \\
\text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'pro'} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{CASE} & \text{ACC} \\ \text{GEND} & \text{MASC} \end{bmatrix} \\
\text{TOP} & \begin{bmatrix} \text{SPEC} & \text{DEN} \\ \text{PRED} & \text{'Peter'} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{CASE} & \text{ACC} \\ \text{GEND} & \text{MASC} \end{bmatrix} \\
\text{OBJ} & [\quad]
\end{bmatrix}$$

Kalbertodt's analysis:

- separate c-structure (DP)
- called an "orphan"
- not part of main clause
- f-structure: object & topic

Basically a biclausal analysis

Dynamic Syntax

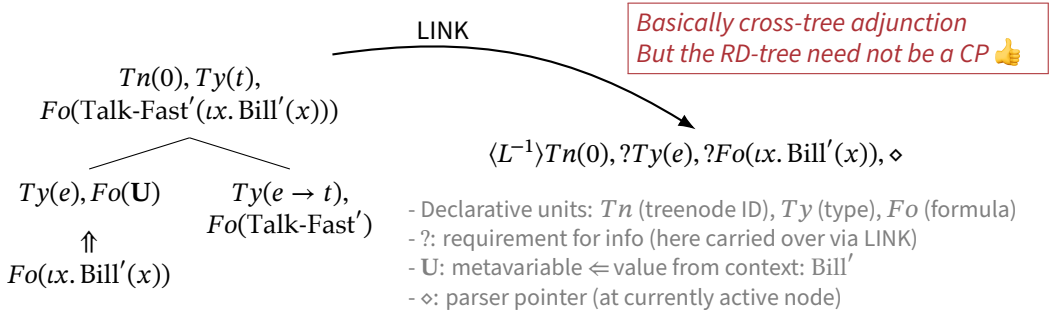
Different from Minimalism/LFG, Dynamic Syntax (DS) directly reflects **time-linear parsing**. Thus, it has built-in **resource-awareness**, which is well reflected in its treatment of RD.

DS analysis of RD (Cann et al. 2005, Wu 2005, Chatzikyriakidis 2016):

- BRD: two linked trees
- ARD: via an implicit question

Still only designed for familiar European patterns and inapplicable to MMRD.

(15) He$_i$ talks too fast, [the new secretary]$_i$. (Cann et al. 2005; see also Wu 2005)



Left tree: main clause (address 0, type t)
Right tree: RD-ed unit (address 'reversely linked to $Tn(0)$', requiring $\text{Bill}'_{\langle e\rangle}$)
The ?-requirements can only be met by a term that refers to Bill.

Dynamic Syntax: ARD

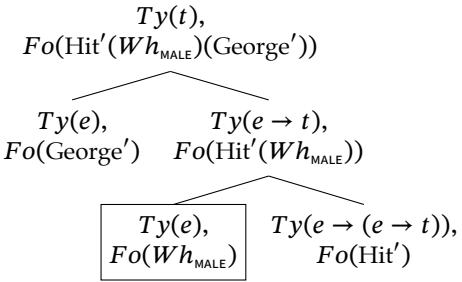
Chatzikyriakidis (2016): clarification answers to implicit questions

(16) *Ton*$_i$ *htipise o Giorgos„ [ton Giani]*$_i$. [Greek]
him.ACC hit the George the.ACC John.ACC
'George hit him„ John.' (ARD)

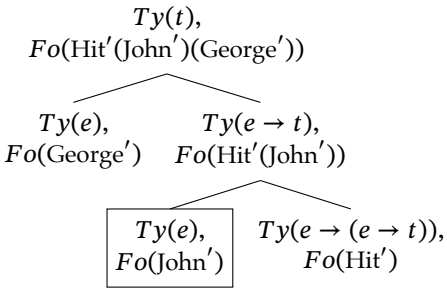
(Chatzikyriakidis uses "„" to indicate a "period intonation" associated with afterthoughts.)

Interpretive effect: 'George hit him. You want to ask who George hit? George hit John.'
(i) Parse main clause. (ii) Parse afterthought. (iii) Make implicit question. (iv) Substitution.

(17) a. Implicit question
'Who$_{\text{MALE}}$ did George hit?'



b. Substitution 'George hit John.'



(adapted from Chatzikyriakidis 2016)

Dynamic Syntax: MRD

Multiple ARD in Chatzikyriakidis's (2016) analysis:

(18) *Ton$_i$* *ida„* [*ton* *Giorgo*]$_i$„ *xtes.* [Greek]
him.ACC saw.1SG the.ACC George.ACC yesterday
'I saw him„ George„ yesterday.' (two metavariables: 'who', 'when')

Interpretive effect: 'I saw him. You want to ask who I saw? I saw George. You also want to ask when I saw George? I saw George yesterday.'

Limitations:

- Only works for constituent RD (since each DS tree must have a well-defined type)
- Relies on a relatively complete main clause (left-to-right parsing feeds on lexical content)

Literature review summary

Having reviewed how RD is analyzed in three theoretical frameworks, I conclude that MMRD is a challenge for all of them.

Table: Three previous approaches to RD

Approach	**Framework**	**Advantage**	**Problem**
Focus fronting	Minimalism	can derive inversion-like, nonconstituent RD	limited to SRD
Coord.+ellipsis	Minimalism	can derive MRD	limited to constituent RD, resource-demanding
Lite multi-tree syn.	DS (LFG)	can derive MRD, resource-sensitive	limited to constituent RD, needs complete main clause

Overview

A new analysis

Proposal:

- Inheriting basic minimalist settings so that focus fronting can normally proceed
- Using **multi-workspace** derivation to implement lite multi-tree syntax in Minimalism

The reason why the original coordination-plus-ellipsis approach is resource-demanding is because it manipulates full-fledged CPs. There is no such requirement in multi-workspace derivation. The content of a side workspace may well be a *v*P, DP, etc.

Multi-workspace derivation has long been used in practice (e.g., Zwart 2011, Fowlie 2013).

(19) [The man] kicked the ball. (Zwart 2011; pre-derived subject)

A new analysis: deriving MMRD

An MMRD sentence:

(20) *Zaezae-zhou* ***ae****, dei, mae yunqi lai, haoshi-zhou.* [Dongying Mandarin]
save-DUR SFP must DISP luck LAI carefully-DUR (= 4c)
'Save up, must, (take) luck (to), carefully.' ≈ 'We must carefully save up our good luck.'

We can derive this sentence using **three workspaces** with just enough structure.

(21) a. WS_1 (main + RD_1): [$_{ForceP}$ [$_{FocP}$ [$_{vP}$ *zaezae-zhou* pro$_o$]$_k$ [$_{Foc'}$ Foc t$_j$]]$_i$ [$_{Force}$ *ae*] [$_{GroundP}$ [$_{IP}$ pro$_s$ [$_{I'}$ [$_{I}$ *dei*] t$_k$]$_j$ [$_{Ground'}$ Ground t$_i$]]]] (à la Sun 2022)

b. WS_2 (RD_2): [$_{vP}$ pro$_s$ [$_{v'}$ [$_{v}$ *mae*] [$_{ApplP}$ *yunqi*$_o$ [$_{Appl'}$ [$_{Appl}$ *lai*] [$_{VP}$ ~~*zaezae-zhou*~~ t$_o$]]]]]

c. WS_3 (RD_3): [$_{vP}$ [$_{AdvP}$ *haoshi-zhou*] [$_{vP}$ pro$_s$ [$_{v'}$ *v* [$_{VP}$ ~~*zaezae-zhou*~~ pro$_o$]]]]

(Here I put RD_1 in WS_1 to demonstrate focus fronting, but it may also have its own WS.)

A new analysis: How (not) to coordinate workspaces?

Next, we coordinate the three workspaces, but

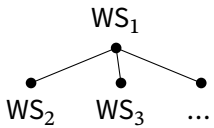
- not by discourse juxtaposition since not all our workspaces contain sentences
- nor by a CoP (or :P) in phrasal syntax since it encodes more asymmetry than desirable
  - we do not want [WS_1 : [WS_2 : [WS_3 : ...]]] (pace Sun 2022)
  - because in MMRD only the main clause is fixed in position, while the RD-ed units can be freely reordered (i.e., no evidence of structural asymmetry)
  - so we want something like [$WS_1 > \{ WS_2, WS_3, \ldots \}$] instead
    (where “>” means ‘structurally above / more prominent than’)

A new analysis: coordination via adjunction

$$[\ \mathrm{WS}_1 > \{\ \mathrm{WS}_2, \mathrm{WS}_3, \ldots\ \}\ ]$$

Set Merge cannot yield this structure (binary-branching!) but **Pair Merge** can (cf. Song 2024).

- Let WS_1 pair-merge with $\mathrm{WS}_{i\geq 2}$ separately, each on a different plane.
  (see Chomsky 2004 et seq. and especially Chomsky 2019)
- Get $\{\langle \mathrm{WS}_1, \mathrm{WS}_2\rangle, \langle \mathrm{WS}_1, \mathrm{WS}_3\rangle, \langle \mathrm{WS}_1, \ldots\rangle\}$. 1
- Order-theoretically, this is equivalent to $\langle \mathrm{WS}_1, \{\mathrm{WS}_2, \mathrm{WS}_3, \ldots\}\rangle$. 2
- Both 1 and 2 describe the same partial order, as in the following Hasse diagram:



A new analysis: loose semantic conjunction

Corresponding to this "loose coordination" in syntax, we can let the workspaces' contents be only **loosely conjoined** in semantics too:

- not by the boolean $\wedge$ since not all workspaces have type-t values in our lite setting
- a generic coproduct (aka disjoined union) operation $\oplus$ is more suitable
  $[\![\text{WS}_1]\!] \oplus [\![\text{WS}_2]\!] \oplus [\![\text{WS}_3]\!] \oplus [\![...]\!]$

(22) *Zaezae-zhou* ***ae****, dei, mae yunqi lai, haoshi-zhou.* [Dongying Mandarin]
save-DUR SFP must DISP luck LAI carefully-DUR (= 4c)
'Save up, must, (take) luck (to), carefully.' ≈ 'We must carefully save up our good luck.'

Interpretive effect (more pedantically):
'[$_{\text{WS}_1}$ Save up (sth.), we must]; [$_{\text{WS}_2}$ saving luck]; [$_{\text{WS}_3}$ carefully saving (sth.)].'

Bonus: protocolizing cross-workspace communication

We can take a step further and give the cross-workspace information integration a formal protocol—using a process calculus such as the **session calculus** (Yoshida & Gheri 2020).

In session-based modeling of concurrency and distributed systems, a communication **session** involves **participants** $\mathrm{p}, \mathrm{q}, \ldots$ and their **processes** $P, Q, \ldots$.

(23) $\mathrm{p} \triangleleft P = !\mathrm{c}\langle m \rangle.?\mathrm{d}(x).\mathbf{0}$
(The process P of participant p: send a message m via channel c, receive any message via channel d and assign it to variable x, and terminate.)

(See paper version for more detail.)

Bonus: protocolizing cross-workspace communication

We can view the cross-workspace information integration in an MMRD sentence as a session:

- Each workspace is a participant.
- Each Pair Merge step establishes a communication channel.
- The integrated information is ultimately fed to the C-I system (also viewed as a participant).

Our running example: '[$_{WS_1}$ Save up, must], [$_{WS_2}$ (take) luck (to)], [$_{WS_3}$ carefully].'

(24) a. $\mathrm{WS}_2 \lhd P_{\mathrm{WS}_2} = !\mathrm{a}\langle[\![\mathrm{WS}_2]\!]\rangle.\mathbf{0}$ (WS_2 sends its content as a message via channel a and terminates.)

b. $\mathrm{WS}_3 \lhd P_{\mathrm{WS}_3} = !\mathrm{b}\langle[\![\mathrm{WS}_3]\!]\rangle.\mathbf{0}$ (WS_3 sends its content as a message via channel b and terminates.)

c. $\mathrm{WS}_1 \lhd P_{\mathrm{WS}_1} = ?\mathrm{a}(x).?\mathrm{b}(y).!\mathrm{s}\langle[\![\mathrm{WS}_1]\!] \oplus x \oplus y\rangle.\mathbf{0}$
(WS_1 receives two messages via channels a and b and assigns them to x and y, loosely conjoins the received messages with its own content, sends the coproduct via channel s, and terminates.)

d. $\mathrm{CI} \lhd P_{\mathrm{CI}} = ?\mathrm{s}(z).\mathbf{0}$ (CI receives a message via channel s, assigns it to z, and terminates.)

Overview

Summary

My analysis of Chinese MMRD is as follows:

(25) *Zaezae-zhou* ***ae****, dei, mae yunqi lai, haoshi-zhou.* [Dongying Mandarin]
save-DUR SFP must DISP luck LAI carefully-DUR (= 4c)
'[$_{WS_1}$ Save up, must], [$_{WS_2}$ (take) luck (to)], [$_{WS_3}$ carefully].'

Syntax: Derived in three workspaces with just enough structure, loosely joined by Pair Merge
PF: Main clause fixed in position, RD-ed units flexible in ordering
LF: Three parallel (i.e., concurrent) thoughts, loosely joined by coproduct $\oplus$
Session: Multi-workspace derivation is like distributed computing

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Selected references I


Cann, R., R. Kempson & L. Marten
The dynamics of language: An introduction, Elsevier, 2005


Chatzikyriakidis, S.
Afterthoughts in Greek
Journal of Linguistics 53, 279–325, 2016


Kalbertodt, J.
Right dislocation and afterthought in German
Universität zu Köln dissertation, 2019


Ott, D. & M. de Vries
Right-dislocation as deletion
Natural Language & Linguistic Theory 34, 641–690, 2016

Selected references II

Song, C.
On Hilbert's epsilon operator in FormSequence
Biolinguistics 18, Article e14061, 2024

Sun, Y.
The syntax of right dislocation in Mandarin Chinese and Italian
Università degli Studi di Padova dissertation, 2022

Wu, Y.
The Dynamic Syntax of left and right dislocation
University of Edinburgh dissertation, 2005

Yoshida, N. & L. Gheri
A very gentle introduction to multiparty session types
Distributed computing and internet technology, 73–93, Springer, 2020