A Domain-Based Model of the Williams Cycle

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§1 Introduction: In this talk I propose a domain-based model of the Williams Cycle. The empirical motivation for this proposal comes from recent work by Yan and Meadows (2025): various long-distance movements in Mandarin Chinese display what Keine (2016, 2019, 2020) defines as *selective opacity* effects. After summarising the main takeaways in their work concerning long-distance VP-fronting, I show an analytical problem in their analysis based on other three kinds of Mandarin nominal movement: they are all seemingly able to land into a matrix position slightly lower than the size of the embedded clause they move across, which in theory is ruled out by any currently-proposed approach of the *Williams Cycle*. To solve this problem, I propose a *domain-based* model of the Williams Cycle, consisting of (i) a tripartite clausal architecture, (ii) a revised featural specification on the *Grimshawan extended projection*, and (iii) a *multiple Agree* system.

§2 Improper verb doubling and the Williams Cycle: Yan and Meadows (2025) focus on how Mandarin *verb doubling* effects differ in long-distance movement configurations. According to them, verb doubling derives from VP-movement that contains (at least) the direct object. This VP-fronting can target two different positions in the clausal spine, either above or below the subject in Spec,TP, therefore they are referred to respectively as *high* and *low* verb doubling. They propose that the high one moves to Spec,CP for the sake of information structure, whereas the low one targets a postulated projection FP outside the verbal domain for the sake of word order (cf. Lai 2021, 2024). The two landing sits of verb doubling is schematised in (1).

(1) [$_{\text{CP}}$ [**VP**$_{\text{High}}$] [$_{\text{TP}}$ [DP$_{\text{Subj}}$] . . . [$_{\text{FP}}$ [**VP**$_{\text{Low}}$] [$_{\text{VoiceP}}$ [[$_{\text{VP}}$ V ~~DP~~$_{\text{Obj}}$] *de* AdvP]]]]]

Yan and Meadows investigate both kinds of VP-fronting in three embedding contexts. They show that <u>high verb doubling is generally permitted, but its low counterpart is highly restricted</u>. For instance, in (2a) and (2b), the same VP *kàn nà-běn xiǎoshuō* ‘read the novel’ fails to land into the post-subject position in the matrix clause, rendering both ungrammatical. That is to say, neither the matrix predicate *rènwéi* ‘think’ (2a) and *qiǎngpò* ‘force’ (2b) permits long-distance low verb doubling. However, as in (2c), the verb *chángshì* ‘try’ allows low verb doubling to occur in the matrix clause. By contrast, high verb doubling in the pre-matrix subject position is always possible in all these embedding contexts (omitted here for the sake of space).

(2) a. *Wassily **kàn nà-běn xiǎoshuō** <u>rènwéi</u> [$_{\text{CP}}$ Piet kàn de hěn kuài].
Wassily read that-CL novel think Piet read DE very quickly
Int.: ‘Wassily thinks that Piet reads the novel very quickly.’ *‘think’+low VP-mvt* ✗

b. *Wassily **kàn nà-běn xiǎoshuō** <u>qiǎngpò</u> [$_{\text{TP}}$ Piet kàn de hěn kuài].
Wassily read that-CL novel force Piet read DE very quickly
Int.: ‘Wassily forces Piet to read the novel very quickly.’ *‘force’+low VP-mvt* ✗

c. Wassily **kàn nà-běn xiǎoshuō** <u>chángshì</u> [$_{\text{FP}}$ kàn de hěn kuài].
Wassily read that-CL novel try read DE very quickly
‘Wassily tries to read the novel very quickly.’ *‘try’+low VP-mvt* ✓

Using two Mandarin-internal diagnostics, Yan and Meadows propose that these verbs represent three groups of embedding predicates, which take different sizes of complement clause, as summarised in (3).

(3)

	High VP-Mvt	Low VP-Mvt	Similar Predicates
Group 1: ‘think’+[$_{\text{CP}}$ . . .]	✓	✗	*juéde* ‘feel’, *zhīdào* ‘know’
Group 2: ‘force’+[$_{\text{TP}}$ . . .]	✓	✗	*bī(pò)* ‘force’, *yǐnyòu* ‘lure’
Group 3: ‘try’+[$_{\text{FP}}$ . . .]	✓	✓	*dǎsuan* ‘intend’, *jìhuà* ‘plan’

Yan and Meadows adopt the level-embedding approach to the Williams Cycle (Williams 2002; Poole 2022; Meadows 2024). Putting aside their detailed implementation, the core idea there is that movement to Spec,XP cannot proceed from some higher Spec,YP or across YP in the clausal spine. Since low verb doubling targets Spec,FP, it is only permitted to move out of a FP-sized clause (4b) rather than bigger CP/TP-sized ones (4a).

(4) a. *[$_{\text{CP}}$ [$_{\text{TP}}$ [$_{\text{FP}}$ **VP** [$_{\text{VoiceP}}$ . . . [$_{\text{CP/TP}}$ . . . **t** . . .]]]]] *forbidden low VP-mvt in Group 1 & 2 in (3)*

b. [$_{\text{CP}}$ [$_{\text{TP}}$ [$_{\text{FP}}$ **VP** [$_{\text{VoiceP}}$ . . . [$_{\text{FP}}$ . . . **t** . . .]]]]] *permitted low VP-mvt in Group 3 in (3)*

§3 Analytical challenge: In later section 5, Yan and Meadows extend their analysis to another well-known movement phenomenon called *object shift*. As summarised in (6), this nominal movement behaves almost identically to VP-fronting, except that low object shift is permitted to move out of the TP-sized clause (5).

(5) Wassily **nà-běn xiǎoshuō** qiǎngpò [$_{\text{TP}}$ Piet kàn de hěn kuài].
Wassily that-CL novel force Piet read DE very quickly
'Wassily forces Piet to read THAT NOVEL very quickly.' *'force'+low object shift* ✓

(6)

	High Object Shift	**Low Object Shift**	**Similar Predicates**
Group 1: 'think'+[$_{\text{CP}}$ . . .]	✓	✗	*juéde* 'feel', *zhīdào* 'know'
Group 2: 'force'+[$_{\text{TP}}$ . . .]	✓	✓	*bī(pò)* 'force', *yǐnyòu* 'lure'
Group 3: 'try'+[$_{\text{FP}}$ . . .]	✓	✓	*dǎsuan* 'intend', *jìhuà* 'plan'

Following the previous literature (Shyu 1995; Paul 2002; Chen 2023), they argue that low object shift moves to a TP-internal topic position, which is higher than FP, thereby distinguishing its locality profile from that of low verb doubling. The problem here is that low object shift out of TP constitutes a violation to the Williams Cycle approach they adopt, as this Internal-TopP is lower than TP in the clausal spine. Yan and Meadows also notice this problem, and eventually suggest that what they refer to as 'TP' is just an umbrella term which in fact can be a bit smaller. Nevertheless, this account comes at some cost: in Mandarin, movement involving *lián . . . dōu* construction and overt *wh*-fronting can also move out of the TP-sized clause and target the post-subject position in the matrix. The former is generally considered as a TP-internal focus movement, while the latter is arguably either a topicalisation or focalisation within the TP. Assuming that TopP and FocP are not the same, one has to accept that the actual size of these so-called 'TP-sized' clauses are always shrinkable, a scenario which is neither empirically well-supported nor theoretically elegant and economical.

§4 Proposal: If we stick to the idea that clause sizes are stable, then we need to allow an constituent to move to a position that is slightly lower than the clause boundary it moves across. This scenario is never possible under the level-embedding approach to the Williams Cycle that Yan and Meadows adopt. Here I propose a domain-based model of the Williams Cycle as follows to allow this 'lower' movement to happen: *Movement to Spec,XP cannot proceed from Spec,YP or across YP, where Y is in a clausal domain higher than X.*

TRIPARTITE CLAUSAL ARCHITECTURE: Lots of work have proposed that the single clausal spine can be divided into three domains based on different criteria (Grohmann 2003, Ramchand and Svenonius 2014, Wiltschko 2014, Wurmbrand and Lohninger 2023). Here I assume that, syntactically these three domains are CP-, TP-, and FP-sized, and semantically they correspond to a proposition, a situation, and an event respectively (in the sense of Ramchand and Svenonius 2014 and Wurmbrand and Lohninger 2023).

FEATURAL SPECIFICATION: Grimshaw (1991, 2000, 2005) proposes that higher functional projections in the clausal spine are extended projections of the lowest, lexical V. According to this theory, a single category feature is decomposed into a lexical feature ([V] or [N]) and a functional feature [F_n] ($n \geq 0$). E.g., V is specified as a feature bundle [V, F_0], which means it functions as the lowest verbal position. By contrast, *v* bears the same lexical feature [V] but differs in its functional one [F_n] ($n > 0$), indicating that this functional projection is placed somewhere along the verbal extended projection. Such kind of featural specification, however, does not suffice to differentiate three domains in the clausal spine. I propose that a third domain feature [D_m] (m = 1, 2, 3) also engages in decomposing the category feature, and indicates the domain to which the projection belongs: [D_1] equates to the event domain, [D_2] to situation, and [D_3] to proposition.

MULTIPLE AGREE: I adapt a multiple Agree system here (cf. Hiraiwa 2001, 2005) to implement the Williams Cycle constraint on movement. As illustrated in (7), for some functional projection YP in the clausal spine that will later host the movement of ZP, the featural specification on the Y head can be represented as [D_m, $u\bar{A}$], in which the latter is responsible for triggering movement (abstracting away the other two sub-category features [V, F_n]). Once the probe on Y starts looking for its goal(s), I posit that it simultaneously agrees with two goals, viz., (i) ZP which will undergo movement, and (ii) the maximal functional projection XP that contains that contains ZP. When Y agrees with XP, what they actually do is to compare the domain they are in respectively: movement is licensed iff Y is in the domain no lower than XP.

(7) $[_{\text{YP}}$ Y $_{[\text{D}_\text{m},\, u\bar{\text{A}}]}$ [. . . [$_{\text{XP}}$ ZP X [. . .]]]]

Returning to the problem above, since TP-internal topic/focus positions and the TP itself all belong to the same situation domain, low object shift out of the TP clause is thus permitted. More details will be discussed.