

MERGE VS. MOVE IN CENTRAL AND PERIPHERAL ADVERBIALS CLAUSES IN CHINESE

EVIDENCE FROM INTERVENTION EFFECTS

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AIM OF THIS WORK

The main goal of the present work is to provide experimental evidence aimed to verify whether the Merge position of an adverbial clause is determined by its type in Mandarin Chinese.

BACKGROUND — ADVERBIAL CLAUSES

Evidence has been provided for the existence of at least two types of adverbial clauses, namely **central and peripheral** adverbials (Haegeman 2002, 2010, 2012).

Central adverbial clauses «modify the proposition expressed by the clause with which they are related».

Peripheral adverbial clauses «provide background propositions to be processed as the privileged discourse context for the proposition expressed in the associated clause».

(cf. Haegeman 2004: 61).

BACKGROUND — ADVERBIAL CLAUSES

Central adverbial clauses derive from relative clauses and can be either adjoined to VP or to an Inflectional projection (cf. Haegeman 2004, Thompson 1994, Nissenbaum 2000), whereas peripheral adverbial clauses do not imply operator movement and are assumed to be merged in the CP domain (cf. Haegeman 2004).

At Spell-Out adverbial clauses are realized in the left periphery of the sentence in a dedicated functional projection, specifically **Spec,FrameP**, regardless of their Merge position. This entails that central adverbial clauses are subject to A'-movement (Frascarelli 2017).

BACKGROUND — A(BOUTNESS/SHIFT)-TOPIC

The A-Topic is an entity providing the specific “file card” (Heim 1982) in the mental folder in which relevant information is to be stored.

TOPIC CRITERION (Frascarelli 2007)

- a) [+aboutness] is connected with an extended EPP feature in the high Topic field that yields a specific discourse-related property, namely ‘Aboutness’.
- b) The [+aboutness] Topic matches with an argument in the main clause through Agree.

→ An A-Topic is present in every sentence that is endowed with illocutionary force (since the proposal of a Topic is a speech act itself; cf. also Krifka 2007).

BACKGROUND — A(BOUTNESS/SHIFT)-TOPIC

The A-Topic is located in the Spec of the ShiftP in C-Domain, a node that is higher than FrameP (Frascarelli 2017).

→ The A-Topic is expected to precede an adverbial clause in the left periphery:

(1) [_{ForceP} [_{ShiftP} A-Topic [_{FrameP} Adverbial clause [_{FinP} [_{TP}

BACKGROUND — FOCUS ON CHINESE

Adverbial clauses:

- Most adverbial clauses in Mandarin Chinese are canonically realized in pre-matrix position (cf. Wang 1995), and it is generally acknowledged that the sentential subject can be realized either before or after the adverbial clause.

Topics:

- In unmarked sentences the subject can be interpreted as a Topic, since Mandarin Chinese is generally considered a Topic-Comment language (Li & Thompson 1976).
- Moreover, in Mandarin Chinese Topics are assumed to undergo A'-movement to the left periphery, if they are not linked to a pronoun inside the TP zone (Huang et al. 2009).

WORKING HYPOTHESES

(i) When the subject is realized before a **central adverbial clause**, both the subject and the adverbial clause undergo A'-movement to the left periphery, namely,

- Subject: from Spec,TP to Spec,ShiftP (to serve as an A-Topic)
- Adverbial clause: from its Merge position within the TP-split domain (cf. Cinque 1999) to Spec,FrameP

→ Intervention effects are expected, affecting the acceptability of the sentence.

(ii) In the case of **peripheral adverbial clauses**, no A'-movement is implied

→ No intervention effect is at stake, regardless of the position of the subject. Thus, sentence acceptability should not be affected.

THE EXPERIMENT

- 2x2 design: two types of adverbial clauses and two positions for the matrix subject
→ 4 experimental conditions:

Condition 1: conditional clause – **matrix subject** – matrix clause

Condition 2: **matrix subject** – conditional clause – matrix clause

} Central adverbial clause

Condition 3: concessive clause – **matrix subject** – matrix clause

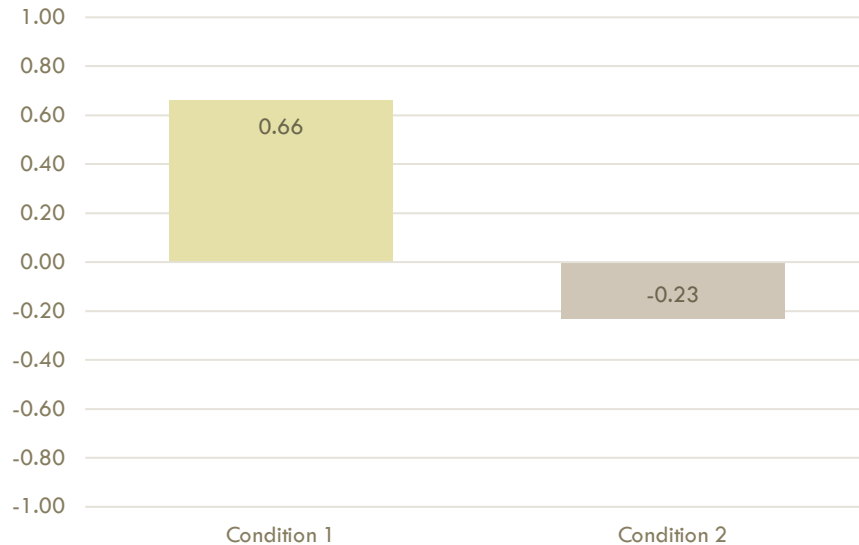
Condition 4: **matrix subject** – concessive clause – matrix clause

} Peripheral adverbial clause

THE EXPERIMENT

- 4 conditions x 8 lexical items for a total of **64 experimental items**.
- Two lists of 32 items have been created, following a Latin Square design.
- 70 informants expressed their acceptability judgment on a Likert scale (from 0 to 10)
- Results have been turned into z-scores and **statistically analyzed** (Student's t-tests)

CONDITIONAL ADVERBIAL CLAUSES



$t(69) = 7.6, p = < .001$

Condition 1 (M: 0.66, SD: 0.51)

[*Ruguo neng ba yu dou chi-wan*],
if can ba fish all eat-finish

Sunli *hui hen gaoxing.*

Sunli can very happy

‘[If (she) can finish all the fish], **Sunli** will be happy.’

Condition 2 (M: -0.23, SD: 0.71)

Sunli, [*ruguo neng ba yu dou*

Sunli if can ba fish all

chi-wan], *hui hen gaoxing.*

eat-finish can very happy

‘**Sunli**, [if (she) can finish all the fish], (she) will be happy.’

PROPOSAL (CENTRAL ADVERBIAL CLAUSES)

Central adverbial clauses are subject to A'-Movement.

However, in Condition 1 only the adverbial clause moves, hence no intervention effect can be at stake:

Condition 1:

[_{FrameP} [_{Adv} *Ruguo pro neng ba yu dou chi-wan*] [_{TP} *Sunli hui t_{Adv} hen gaoxing*]]

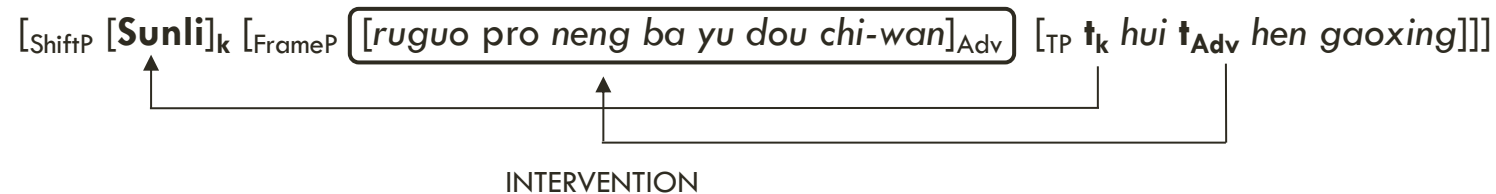
NO INTERVENTION

→ The sentence is indeed acceptable (M: 0.66), as expected.

PROPOSAL (CENTRAL ADVERBIAL CLAUSES)

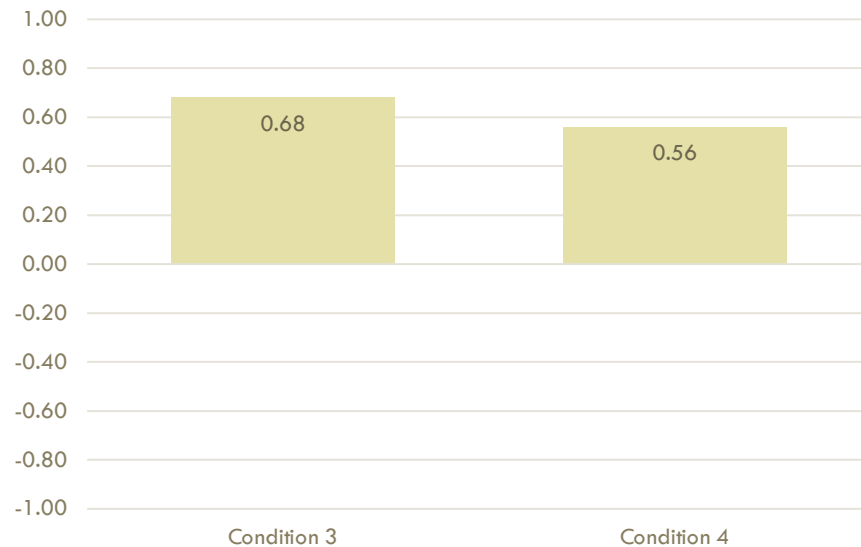
In Condition 2 the subject moves to Spec,ShiftP, triggering intervention effects with the A'-movement of the adverbial clause:

Condition 2:



→ The sentence is not acceptable (M: -0.23), as expected.

CONCESSIVE ADVERBIAL CLAUSES



$t(69) = 1.1, p = .14$

Condition 3 ($M: 0.68, SD: 0.97$)

[*Suiran tongguo le gaokao*],
although pass PERF university admission exam
danshi Sunli haishi bu gaoxing.
but Sunli still NEG happy.

‘[Although (she) passed the university admission exam],
Sunli is still not happy.’

Condition 4 ($M: 0.56, SD: 0.86$)

Sunli, [*suiran tongguo le gaokao*],
Sunli although pass PERF university admission exam
danshi haishi bu gaoxing.
but still NEG happy.

‘**Sunli**, [although (she) passed the university admission exam],
(she) is still not happy.’

PROPOSAL (PERIPHERA ADVERBIAL CLAUSES)

- Peripheral adverbial clauses are merged as independent CPs, in Spec,FrameP.

Hence, in Condition 4 only the subject moves from Spec,TP to Spec,ShiftP

→ no intervention effect is at stake:

Condition 4:

[_{ShiftP} [**Sunli**]_k [_{FrameP} [*suiran pro tongguo le gaokao*]_{Adv} [_{TP} **t_k** *haishi bu gaoxing*]]]

A diagram illustrating the movement of the subject 'Sunli' from Spec,TP to Spec,ShiftP. A horizontal line connects the trace 't_k' in Spec,TP to the subject 'Sunli' in Spec,ShiftP. An arrow points from the trace to the subject. Below the line, the text 'NO INTERVENTION' is written.

As for Condition 3, no A'-Movement is at stake:

Condition 3:

[_{FrameP} [*suiran pro tongguo le gaokao*]_{Adv} [_{TP} **Sunli** *haishi bu gaoxing*]]]

(ADDITIONAL) STATISTICAL ANALYSIS

Condition 2

vs Condition 1: $t(69) = 7.6$, $p = < .001$

vs Condition 3: $t(69) = -5.2$, $p = < .001$

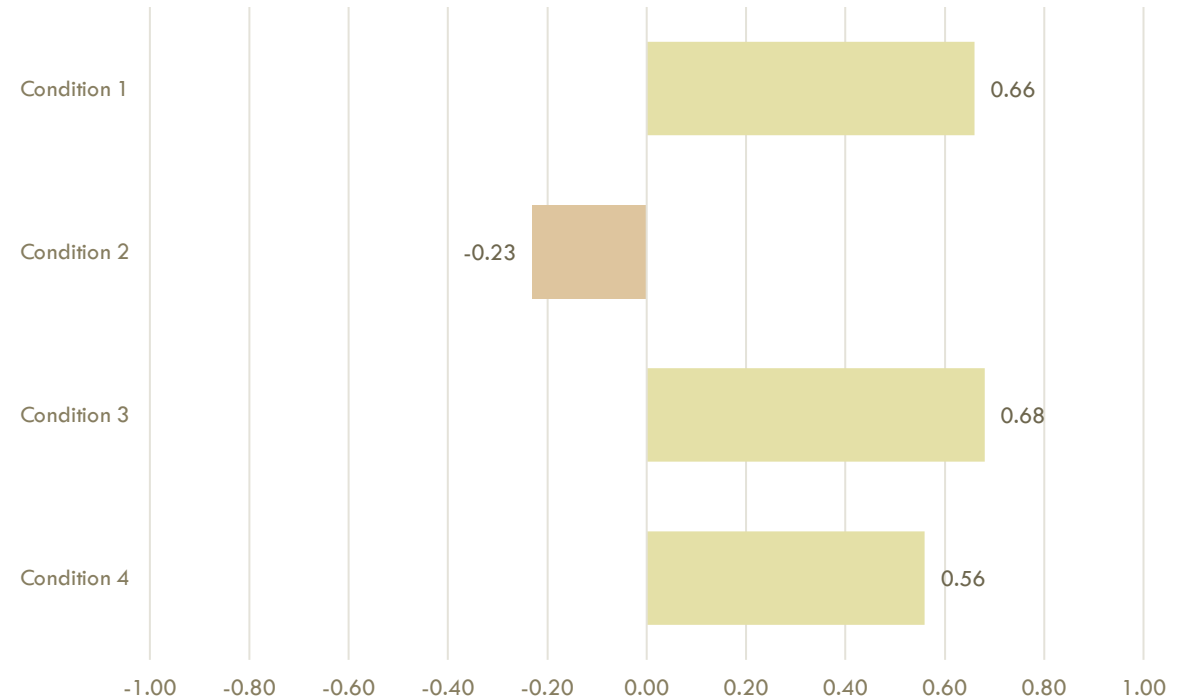
vs Condition 4: $t(69) = -4.8$, $p = < .001$

Condition 1

vs Condition 3: $t(69) = -0.2$, $p = 0.43$

vs Condition 4: $t(69) = 0.7$, $p = .24$

Condition 3 vs Condition 4: $t(69) = 1.1$, $p = .14$



Condition 1: conditional – subject – matrix

Condition 2: subject – conditional – matrix

Condition 3: concessive – subject – matrix

Condition 4: subject – concessive – matrix

TOPIC CRITERION?

→ Every root sentence has an A-Topic

Hence, when the matrix subject follows the adverbial clause we assume the presence of a silent A-Topic matching with the matrix subject in Spec,TP through an AGREE relation:

Condition 1:

[_{ShiftP} <Sunli> [_{FrameP} [*Ruguo pro neng ba yu dou chi-wan*]_{Adv} [_{TP} **Sunli** *hui t_{Adv} hen gaoxing*]]]

AGREE

Condition 3:

[_{ShiftP} <Sunli> [_{FrameP} [*suiran pro tongguo le gaokao*]_{Adv} [_{TP} **Sunli** *haishi bu gaoxing*]]]

AGREE

SUBJECTS AS “IN SITU” G-TOPICS

TOPICS AND LANGUAGE TYPOLOGY (Jiménez-Fernández & Miyagawa 2014: 290)

- (i) The topic feature for A-Topics must remain at C regardless of the language type;
- (ii) The topic feature associated with [...] **G(iven)-Topics may remain at C or be inherited by T depending on the type of language.**

The «Aboutness-shift Topic [...] can be overt or silent and, **when silent, it can be repeated by means of low copies for the sake of topic continuity**» (Frascarelli 2007: 709)

Therefore, we assume that **‘Sunli’ (following the adverbial clause) is a G-Topic.**

CONCLUSIONS

In Mandarin Chinese a distinction between central and peripheral adverbial clauses must be assumed.

Specifically:

- (i) Conditional (**central**) adverbial clauses are **subject to movement** from a TP internal position to Spec,FrameP.
- (ii) Concessive (**peripheral**) adverbial clause are **merged as independent CPs** in Spec,FrameP.

Furthermore, data show that

- (iii) **A-Topics are subject to movement** in Mandarin Chinese (differently from CLLD in languages like Italian; Cinque 1990, Frascarelli 2000).

THANK YOU
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