

A *Say* verb or Complementizer: Analyzing *shuo* following communicatives and non-communicatives *

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1 Introduction

▷ *Say*-based complementation cross-linguistically

- The C head analysis (the upward agreeing with the matrix subject analysis): such as in Kinande ([Baker 2008](#)), Lubukusu ([Diercks 2013](#)), Ibibio ([Duncan & Torrence 2017](#))
- The lexical verb analysis: such as in Uyghur ([Major 2023](#)), Kipsigis ([Driemel & Kouneli 2022](#))
- A binary analysis: category V or C depending on the property of the preceding predicates
 - This paper
 - [Bossi \(2023\)](#): Kipsigis
 - [Yue \(2023\)](#): Sakha

▷ *Say* in Mandarin: *shuo*

- *Shuo* as a speech verb
 - (1) Yuehan **shuo** mingtian hui xiayu.
John say tomorrow will rain
'John said it would rain tomorrow.'
- *Shuo* follows another verb (postverbal *shuo*)
 - following communicative verbs:
 - (2) Yuehan baoyuan **shuo** mingtian hui xiayu.
John complain say tomorrow will rain
'John complained that it would rain tomorrow.'
 - following non-communicative verbs:
 - (3) Yuehan juede/renwei **shuo** mingtian hui xiayu.
John think say tomorrow will rain
'John thought that it would rain tomorrow.'

▷ The core proposal of this paper

- *Say* in Mandarin, *shuo*, exhibits different behaviors contingent upon whether it follows communicative or non-communicative predicates.

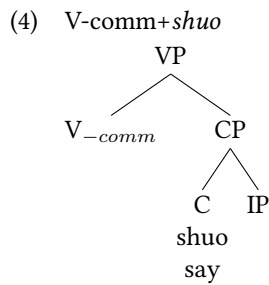
☞ Note: The notion of communicative or non-communicative predicates is from [Anand et al. \(2017\)](#)

Communicatives: *mutter, complain*

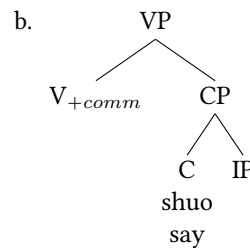
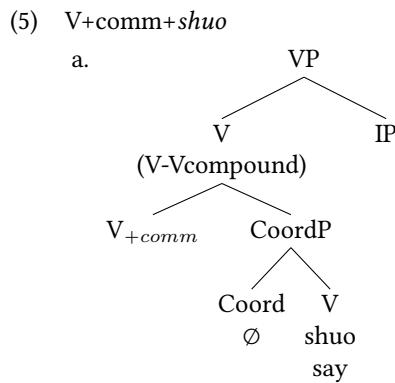
Non-communicatives (doxastic, inferential and emotive): *know/think, show, fear*

- When *say* in Mandarin follows a non-communicative verb, *say* is a complementizer.

*I would like to thank my committee Troy Messick, Mark Baker and Maria Kouneli for advising me through this project. I would also want to thank Travis Major, the audience of ST@R at Rutgers, the audience of the 'many-time-zone' reading group for helpful feedback at different stages of this project.



– When *say* in Mandarin follows a communicative verb, it is ambiguous between the verbal (forming a V-V compound with the preceding communicative verb) and complementizer uses.



▷ **Roadmap**

- §2 How postverbal *shuo* behaves: Diagnostic application and theoretical accounts
- §3 Why more than a single V or single C analysis
- §4 Why the AND-compound structure
- §5 Selectional differences
- §6 Similar patterns in other languages: Kipsigis & Sakha

2 How postverbal *shuo* behaves: communicatives vs. non-communicatives

🗨️ The whole picture of how postverbal *shuo* behaves

	V _{+comm} +shuo	V _{-comm} +shuo
Fronting only LM	✓	×
Direct quotations	✓	×
Aspectual markers	✓	×
<i>Wh</i> -question formations	✓	×
Coordination constructions	✓	×
Verb doubling cleft	✓	×
<i>How</i> -question responses	✓	×
Ellipsis	✓	×
Contrastive focus	✓	×

Table 1: Postverbal *shuo* with communicatives vs. non-communicatives

2.1 Fronting

▷ **Diagnostic application:** ‘V₁+shuo+IP’¹

¹Regarding fronting, as in English, there are variations among speakers. Some individuals might consider fronting marginal, while others are completely comfortable with it.

- fronting only IP:

V_{+comm} ✓

V_{-comm} ✗

- (6) a. Mingtian hui xiayu, Yuehan ye zheyang baoyuan shuo.
 tomorrow will rain John too like.that complain say
 ‘It will rain tomorrow’, John complained like that too.’
 b. *Mingtian hui xiayu, Yuehan ye zheyang juede/renwei shuo.
 tomorrow will rain John too like.that think say
 ‘(int.) That it will rain tomorrow, John thinks like that too.’

- fronting ‘shuo+IP’:

V_{+comm} ✗

V_{-comm} ✓

- (7) a. *Shuo mingtian hui xiayu, Yuehan ye zheyang baoyuan.
 say tomorrow will rain John too like.that complain
 ‘(int.) That it would rain tomorrow, John complained like that too.’
 b. Shuo mingtian hui xiayu, Yuehan ye zheyang juede/renwei.
 say tomorrow will rain John too like.that think
 ‘That it will rain tomorrow, John thinks like that too.’

▷ **Theoretical account**

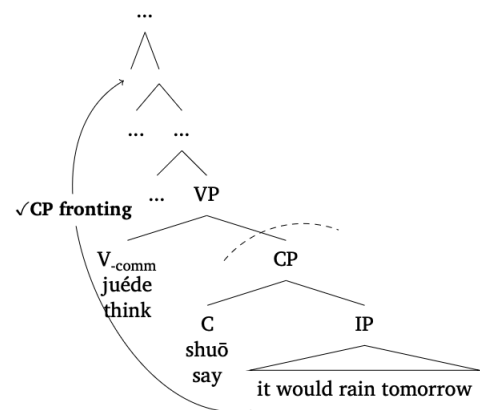
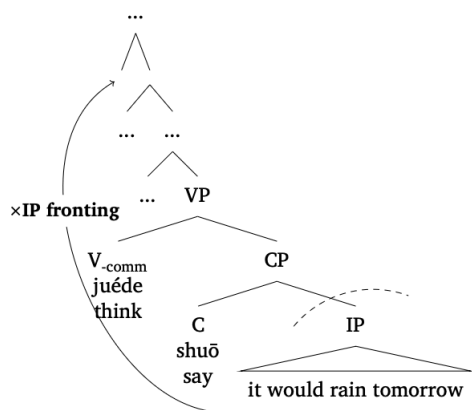
- No C stranding [Abels \(2003\)](#) & [Huang \(2018\)](#)

- (8) a. Nobody believes that anything will happen.
 b. That anything will happen, nobody believes.
 c. *Anything will happen, nobody believes that.

- When V₁ = V_{-comm}: V_{-comm} +shuo+IP

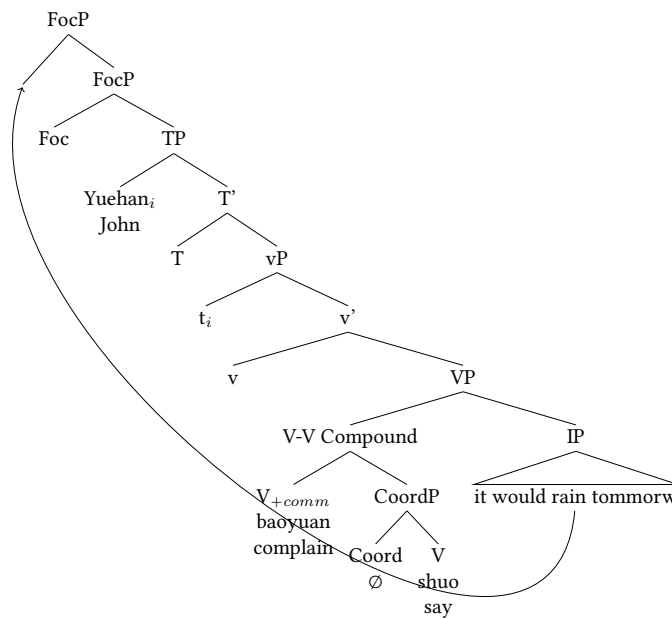
- (9) IP fronting: the ungrammaticality of (6b)

- (10) CP fronting: the grammaticality of (7b)



- When V₁ = V_{+comm}: V_{+comm} +shuo+IP

- (11) The grammaticality of (6a)



☞ The ungrammaticality of (7a) is also borne out from the structure in (11), where ‘*shuo*+IP’ is not a constituent.

2.2 Argument structure: licensing direct quotation

▷ Diagnostic application

- V_{+comm} +*shuo* ✓: This construction allows direct quotations

(12) Yuehan baoyuan shuo: “Wo bu xihuan chi shucai.”
 John complain say 1st.sg NEG like eat vegetable
 ‘John complained, saying “I don’t like eating vegetables.”’

- V_{-comm} +*shuo* ✗: This construction doesn’t allow such direct quotations

(13) *Yuehan juede/renwei shuo: “Wo bu xihuan chi shucai.”
 John think say 1st.sg NEG like eat vegetable
 ‘(lit.) John thinks saying “I don’t like eating vegetables.”’

☞ Note: V_{-comm} exhibit the capability to introduce direct quotations independently. However, in conjunction with postverbal *shuo*, this capability is banned.

(14) (excerpted from Beijing Language and Culture University Corpus Center (BCC))

Meiguo Bulaideng xiansheng renwei: “2012 bu-shi shijie mori, ershi yi-ge zhuanji.”
 America Braden Mr. think 2012 NEG-BE world end but one-CL turning.point
 ‘Mr Braden thought, “2012 is not the end of the world, but a turning point.”’

▷ Theoretical account

- Complementizers (in most languages) cannot license direct quotations.

(15) Grimshaw (2015)
 a. The students thought “This exam is easy.”
 b. *The students thought that “This exam is easy.”

This validates my C-head analysis of *shuo* following non-communicatives.

2.3 Co-occurrence with aspectual markers

▷ Diagnostic application

- $V_{+comm} + shuo$ ✓

- (16) a. Yuehan baoyuan zhe shuo mingtian hui xiayu.
John complain PROG say tomorrow will rain
'John said in a whining way that it would rain tomorrow.'
- b. Yuehan baoyuan guo shuo mingtian hui xiayu.
John complain PST say tomorrow will rain
'John once complained that it would rain tomorrow.'

- $V_{-comm} + shuo$ ✗

- (17) a. *Yuehan juede/renwei zhe shuo mingtian hui xiayu.
John think PROG say tomorrow will rain
'(int.) John was thinking that it would rain tomorrow.'
- b. *Yuehan juede/renwei guo shuo mingtian hui xiayu.
John think PST say tomorrow will rain
'(int.) John once thought that it would rain tomorrow.'

☞ Note: This difference does not derive from the basic event structures associated with the verbs since the co-occurrence of aspectual markers and non-communicatives is also observed. As exemplified in (18), the non-communicative verb *renwei* ('think') can occur with the aspectual marker *guo* when post-verbal *shuo* is not present.²

- (18) BCC

Wo yi-ci dou meiyou renwei guo ni shi nayang de ren
1st.sg one-CLF DOU NEG think PST 2SG be like.that DE person.

'I've never thought you were such a person.'

☞ One point worth-mentioning is that aspectual markers can go inbetween V_{+comm} and *shuo* or occur at the end of the combination of $V_{+comm} + shuo$. This motivates the ambiguous structural analysis of *shuo* following communicative predicates.

- (19) a. Yuehan baoyuan guo shuo mingtian hui xiayu.
John complain PST say tomorrow will rain
'John once complained that it would rain tomorrow.'
- b. Yuehan baoyuan shuo guo mingtian hui xiayu.
John complain say PST tomorrow will rain
'John once complained that it would rain tomorrow.'

▷ Explanation

- The position of aspectual markers tell the status of *shuo* following V_{+comm}
 - *shuo* is parsed as a verb when the aspectual marker goes after the whole compound or when there is no aspectual marker;
 - *shuo* is parsed as a complementizer when it's sandwiched between the V_{+comm} and itself

²The negation here might have made the sentence better but it doesn't mean without negation the sentence is necessarily bad. For example, taking out the negation, (i) is still acceptable.

- (i) Wo cengjing renwei guo ni shi nayang de ren
1st.sg once think PST 2SG be like.that DE person.
'I once thought you were such a person.'

More diagnostics that have been discussed in the paper can be applied here to validate this point.

Fronting

- (20) a. Mingtian hui xiayu, Yuehan ye zheyang baoyuan shuo (guo).
tomorrow will rain John too like.that complain say (ASP)
'“It will rain tomorrow”, John complained.'
- b. *Mingtian hui xiayu, Yuehan ye zheyang baoyuan guo shuo.
tomorrow will rain John too like.that complain ASP say
'(lit.) It would rain tomorrow, John complained that.'
- (21) a. *Shuo (guo) mingtian hui xiayu, Yuehan ye zheyang baoyuan.
say ASP tomorrow will rain John too like.that complain
'(int.) That it would rain tomorrow, John complained.'
- b. Shuo mingtian hui xiayu, Yuehan ye zheyang baoyuan guo.
say tomorrow will rain John too like.that complain ASP
'That it would rain tomorrow, John complained.'

2.4 Coordination

▷ Diagnostic application

- V_{+comm} ✓: ' V_{+comm} shuo IP₁ & shuo IP₂'

- (22) Yuehan **baoyuan shuo** mingtian hui xiayu bingqie (**shuo**) hui hen nan dache.
John complain say tomorrow will rain and say will very hard call.a.taxi
'John complained that it would rain tomorrow and that it would be hard to call a taxi.'

- V_{-comm} ✗: *' V_{-comm} shuo IP₁ & shuo IP₂'

- (23) Yuehan **juede/renwei shuo** mingtian hui xiayu bingqie (***shuo**) hui hen nan dache.
John think say tomorrow will rain and say will very hard call.a.taxi
'(int.) John thought that it would rain tomorrow and that it would be hard to call a taxi.'

Unless (23) is interpreted as follows:

- (24) John [think say tomorrow will rain] and [say will very hard call.a.taxi]

▷ Theoretical account

- Bassi & Bondarenko (2021): There are no real *CP* and *CP* strings in embedded clauses and sequences like *CP* and *CP* consistently entail conjunction reduction (CR)

– This phenomenon is evident cross-linguistically, such as in Russian, Korean, etc.

- (25) Russian contrastive conjunction *a*

*Lena dumala [_{CP}čto Dina pela], a [_{CP}čto Maša tancevala].
Lena thought COMP Dina sang but COMP Masha danced

'Lena thought that Dina sang, but that Masha danced.'

– Some possible strings of the form 'Subject V COMP p and COMP p' (e.g. English, Hebrew)

- (26) *English*

- a. Bill got angry [CP that [TP Masha sang] and [TP Dina danced]].
b. Bill got angry [CP that Masha sang] and [CP that Dina danced].

- However, Bassi & Bondarenko (2021) points out the problem with CP conjunction in that it “should lead to a pathological meaning” since “**no event can have two different propositions as its unique content**”.

☞ Compare (26a) and (26b), in TP conjunction, the correct meaning is able to be derived, with the unique content of the event being a conjunctive proposition. However, in CP conjunction, it doesn’t hold only if the set of events for which (28) holds true is empty.

(27) TP conjunction

$$\llbracket [\text{CP that } [\text{TP Mary sang}] \text{ and } [\text{TP Dina danced}]] \rrbracket = \lambda e_e. [\text{CONT}(e) = \lambda w'. \text{sang}(\text{Mary})_{w'} \wedge \text{danced}(\text{Dina})_{w'}]$$

(28) CP Conjunction

$$\llbracket [\text{CP that Mary sang}] \text{ and } [\text{CP that Dina danced}] \rrbracket = * \lambda e_e. [\text{CONT}(e) = \lambda w'. \text{sang}(\text{Mary})_{w'}] \wedge [\text{CONT}(e) = \lambda w'. \text{danced}(\text{Dina})_{w'}]$$

☞ Rather than categorizing those instances as true CP conjunctions, Bassi & Bondarenko (2021) suggests that such strings are generated through CR. Consequently, (26b) should be reanalyzed as follows.

(29) Bill got angry [CP that Masha sang] and ~~Bill got angry~~ [CP that Dina danced].

- When $V_1 = V_{+comm}$: V_{+comm} **shuo IP and shuo IP** ✓

(30) Yuehan baoyuan shuo mingtian hui xiayu bingqie (shuo) hui hen nan dache.

John complain say tomorrow will rain and say will very hard call.a.taxi

‘John complained that it would rain tomorrow and that it would be hard to call a taxi.’

(31) $\llbracket [\text{VP baoyuan shuo } [\text{TP mingtian hui xiayu}]] \text{ and } [\text{VP baoyuan shuo } [\text{TP hui hen nan dache}]] \rrbracket = \lambda e_e. [\text{CONT}(e) = \lambda w'. \text{rain}_{w'} \wedge \text{hard-to-call-a-taxi}(\text{human})_{w'}]$

- When $V_1 = V_{-comm}$: V_{-comm} **shuo IP and shuo IP** ✗

(32) Yuehan juede/renwei shuo mingtian hui xiayu bingqie (*shuo) hui hen nan dache.

John think say tomorrow will rain and say will very hard call.a.taxi

‘(int.) John thought that it would rain tomorrow and that it would be hard to call a taxi.’

(33) CP Conjunction of (32)

$$\llbracket [\text{CP shuo mingtian hui xiayu}] \text{ and } [\text{shuo hui hen nan dache}] \rrbracket =$$

$$* \lambda e_e. [\text{CONT}(e) = \lambda w'. \text{rain}_{w'}] \wedge [\text{CONT}(e) = \lambda w'. \text{hard-to-call-a-taxi}(\text{human})_{w'}]$$

2.5 Verb doubling cleft

▷ Diagnostic application

- V_{+comm} and V_{-comm} by themselves can undergo verb doubling cleft

(34) a. **Baoyuan**, Yuehan shi **baoyuan** shuo mingtian hui xiayu.

complain John FOC complain say tomorrow will rain

‘Complaining, it was the case that John complained that it would rain tomorrow.’

b. **Juede**, Yuehan shi **juede** shuo mingtian hui xiayu.

think John FOC think say tomorrow will rain

‘(lit.) Thinking, it was the case that John thought that it would rain tomorrow.’

- V_{+comm} ✓

(35) **Shuo**, Yuehan shi baoyuan **shuo** mingtian hui xiayu.

say John FOC complain say tomorrow will rain

‘Saying, it was the case that John complained that it would rain tomorrow.’

- V_{-comm} ✗

(36) ***Shuo**, Yuehan shi juede **shuo** mingtian hui xiayu.
 say John FOC think say tomorrow will rain
 '(int.) Saying, it was the case that John thought that it would rain tomorrow.'

▷ Theoretical account

- Verb doubling test tells us that *shuo* is of different status following V_{+comm} and V_{-comm} : it is a verb after V_{+comm} but not after V_{-comm} .
- In the construction of ' V_{+comm} +*shuo*', is the doubling of *shuo* a violation of Coordinate Structure Constraint? My brief answer here: Not necessarily. It depends on how you treat the doubling of *shuo* here: whether it's movement or base generated there.

3 Why more than a single V or a single C in Mandarin

▷ A single V (whether a verb or converbial)

- It fails to capture the empirical observations of *shuo* in Mandarin.
 - fronting
 - aspectual marking
 - verb doubling cleft constructions
 - argument type selection
 - the combination of *shuo* with an IP does not function as a modifier to the matrix VP in terms of meaning

▷ A single C

While a single C analysis effectively accounts for certain instances where a verbal interpretation of *shuo* would predict different behaviors, it remains inadequate in explaining some other Mandarin data in the following ways:

- In cases where *shuo* follows a communicative verb in Mandarin, it survives in verb doubling cleft constructions
- *shuo* follows a communicative verb can co-occur with aspectual markers.

☞ All the empirical data pertaining to postverbal *shuo* observed in Mandarin show that the syntactic status of postverbal *shuo* is relevant to the specific predicate types preceding it, communicative or non-communicative.

4 Why the AND-compound structure for $V+comm+shuo$

▷ Two types of V-V compounds in Mandarin: resultative compounds³ and AND-compounds^{4 5}

³In resultative compounds, V_2 can have its theta-role identified with either one of the two theta-roles of V_1 . This flexibility is exemplified in (ia), where V_2 assumes its theta-role aligned with the agent of V_1 , and in (ib), where V_2 aligns its theta-role with the theme of V_1 .

- (i) Zhangsan qi-lei-le ma
 Zhangsan ride-tired-ASP horse
 a. 'Zhangsan got tired because of riding a horse.'
 b. 'Zhangsan rode a horse and as a result the horse got tired.'

⁴In parallel to the ' V_{+comm} + *shuo*' construction, a construction of analogous nature in Mandarin is the Serial Verb Construction (SVC) which contains two or more verb phrases or clauses juxtaposed without any marker indicating what the relationship is between them. As expounded by Li & Thompson (1981), there are four types of SVCs. The first type expresses "two or more separate events" and may be understood to be related in different ways, among which one connection that might be analogous to ' V_{+comm} +*shuo*' is the circumstantial linkage of events, signifying the interdependence of the actions within the given context. I shall henceforth refer to this variant of SVCs as the 'Circumstantial Serial Verb Construction (CSVC)'. ' V_{+comm} + *shuo*' is similar to CSVCs in their formation but differs from CSVCs in that the circumstantial relation is not attainable between V_{+comm} and *shuo*. The remaining three types of SVCs can be reduced to other well-studied constructions. In Li & Thompson (1981), one such type is identified as the pivotal construction, wherein "a noun phrase [...] is simultaneously the subject of the second verb and the direct object of the first verb". This bears analogy to a control construction.

- (i) Wo quan ta xue yixue
 1SG advise 3SG study medicine
 'I advised him/her to study medicine.'

⁵The differences between SVCs and AND-compounds lies in the connectedness of the two verbs: a. AND-compounds are strict in not letting elements occur in between the sequences of verb; b. Two verbs in AND-compounds share arguments whereas SVCs may not share any at all.

- meaning connection: V_{+comm} and *shuo* collaboratively convey a reportative meaning, aligning with the defining characteristics of an *AND*-compound.

(37) Yuehan baoyuan shuo mingtian hui xiayu
 John complain say tomorrow will rain
 ‘John complained and said that it would rain tomorrow.’

- thematic connection:

- For *AND*-compounds, strict theta-identification is needed, requiring that V_1 and V_2 share identical agents and themes without any cross-matching.

☞ The construction ‘ V_{+comm} +*shuo*’ parallels with *AND*-compounds in the strict theta-role identification requirement, as V_{+comm} and *shuo* share the same agent, i.e. the sayer, and share the same LM as the theme.

◇ Note: V-V compounds in Mandarin impose strict linear adjacency requirements, with no elements allowed to occur in between the two verb morphemes, even if the first verb is transitive (Li 1990). In contrast, ‘ V_{+comm} + *shuo*’ is more flexible in this regard, as it has been observed that aspectual markers can intervene between V_{+comm} and *shuo*. Thus, proposing that ‘ V_{+comm} + *shuo*’ is ambiguous resolves concerns about the position of aspectual markers.

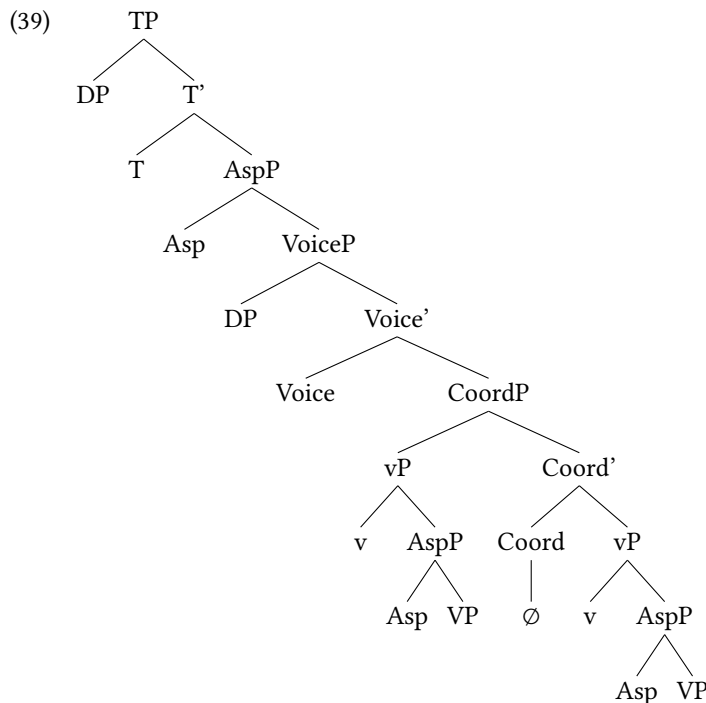
▷ The idea of the coordinated structure for the construction ‘ V_{+comm} +*shuo*’

- *AND*-compounds in Mandarin exhibit similarities with Akan SVCs, which have been argued to involve the covert coordination of little vPs (Martin 2011, Owusu 2022).

(38) Akan Owusu 2022

ò dà sé la neńe òò.
 3SG PST roast F meat eat

‘He roasted meat and ate it.’



(i) a. Zhangsan chi-huai-le duzi.
 Zhangsan eat-bad-Perf. stomach
 ‘Zhangsan has eaten (something bad. As a result,) his stomach is upset.’

b. Zhangsan chang-ku-le Lisi.
 Zhangsan sing-cry-Perf. Lisi
 ‘Zhangsan’s singing made Lisi cry.’

5 Selectional differences

Puzzle: Theoretically, four combinatorial possibilities would arise with communicatives/non-communicatives and postverbal *shuo*, yet only three are attested. → WHY?

5.1 Why can't non-communicatives take the verbal *shuo*

▷ No meaning connection

- No similar or opposite meaning connections for being an *AND*-compound
 - Subcategorization requirements from [Speas \(2004\)](#) and much subsequent work: *say* and other communicative verbs select for a very large complement (a speech act phrase) whereas non-communicatives on the other hand select for smaller complements (an Evaluative/Evidential/Epistemological Phrase).
 - These subcategorization requirements show that:
 - ☞ the verbal *shuo* and communicative verbs can form a V-V compound since they both select for the same type of complement: a speech act phrase.
 - ☞ The verbal *shuo* and non-communicatives, on the other hand, do not select for the same type of complement, hence they are not compatible for *AND*-compounding, hence the only potential parse of a 'V_{-comm} shuo' sequence is one where *shuo* is a complementizer.

5.2 Why is *shuo* ambiguous following communicatives

▷ Grammaticalisation process

From a diachronic perspective, the complementizer *shuo* undergoes grammaticalization originating from the verbal *shuo*. Language acquirers encountering the 'V_{+comm}+shuo' construction may inherently prioritize the verbal *shuo* due to its inherent meaning connection, even if the grammaticalization process has progressed to its current state.

5.3 Why never V+comm+shuoV+shuoC

▷ Haplology: *V+comm+shuoV+shuoC

- (40) *Yuehan baoyuan shuo_{verb} shuo_{comm} mingtian hui xiayu.
 John complain say say tomorrow will rain
 '(int.) John complained and said that it would rain tomorrow.'

6 Similar patterns in other languages

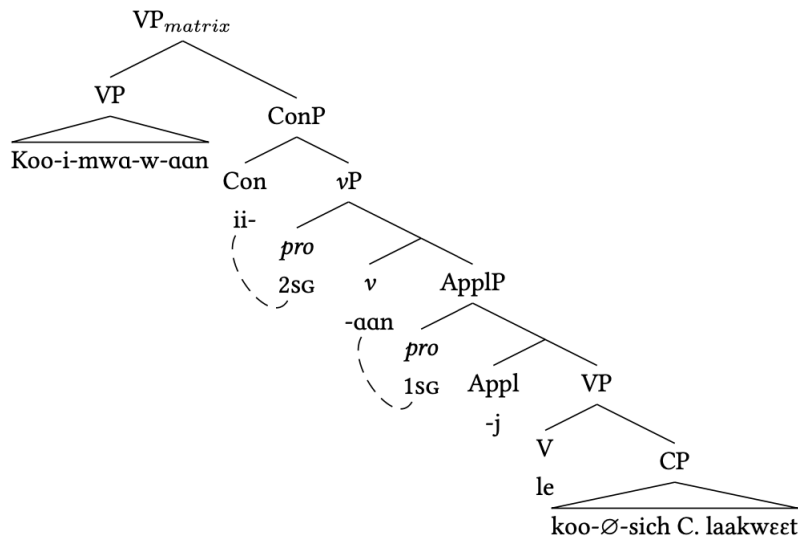
Additional evidence supporting my binary analysis of postverbal *shuo* in Mandarin (C head analysis + verbal analysis) is found in Kipsigis, as discussed by [Bossi \(2023\)](#), and also in Sakha (Turkic) as discussed by [Yue \(2023\)](#).

▷ Two *les* in Kipsigis

- The verbal *le*
 On the basis of the converbial structure of Uyghur *say* ([Major 2021](#), [Major 2023](#)), [Bossi \(2023\)](#) suggests a similar structure for Kipsigis *le*, as depicted in (42) for the sentence (41).

- (41) Koo-i-mwa-w-aan [ii-leen-j-aan koo-∅-sich Cheɣpkœech laakwæt].
 pst-2sg-tell-appl-1sg.O 2sg.sbjv-le-appl-1sg.O pst2-3-birth Chepkoech child
 'You told me that Chepkoech had a baby.'

- (42) Structure for (41)



- The complementizer *le*
 - when *le* co-occurs with a matrix verb unrelated to speech acts, it cannot bear certain verbal inflections akin to those of the preceding verb: e.g., imperfective aspectual marker
 - object marking presents challenges when *le* follows a non-speech predicate like *par* (‘show’): it is feasible for *par* to bear object marking, but *le* cannot.
 - *le* following a non-speech predicate lacks the capacity to accommodate verbal modifiers such as adverbs or prepositional phrases
 - *le* is obligatory, particularly in attitude reports devoid of a speech context, e.g., *ngen* (‘know’)⁶

▷ **Yue (2023)**

Similarly, [Yue \(2023\)](#) argues that Sakha (Turkic) showcases both a *say*-based complementizer and a converbial construction. The differentiation between the two uses of *say* can be discerned through their distinct case marking properties.

7 Conclusion

- This paper expands the current approaches to *say*-complementation cross-linguistically.
- This paper gives a binary analysis to the syntactic characteristics of *say* in Mandarin: when following a non-communicative verb, *shuo* functions as a complementizer; when following a communicative verb, *shuo* is ambiguous between the verbal use of forming a V-V compound with the preceding verb and the complementizer use.

Appendix

- **Other diagnostics**

▷ ***wh*-question formation**

- V_{+comm} ✓
- V_{-comm} ✗

- (43) a. Yuehan dunang (shuo) le shenme?
 John mutter say ASP what
 ‘What did John mutter?’
 b. Yuehan juede/renwei (*shuo) shenme?
 John think say what
 ‘What did John think?’

⁶The obligatoriness of *le* in this case differs from the pattern observed in Mandarin, where *shuo* is not permitted to co-occur with factive verbs, as shown in the appendix.

▷ **how-questions responses**

- V_{+comm} ✓
- V_{-comm} ✗

- (44) Yuehan zenme shuo mingtian hui xiayu?
John how say tomorrow will rain
'How did John say that it would rain tomorrow?'
- (45) a. Yuehan baoyuan shuo mingtian hui xiayu.
John complain say tomorrow will rain
'John complained that it would rain tomorrow.'
- b. #Yuehan juede/renwei shuo mingtian hui xiayu.
John think say tomorrow will rain
'John thought that it would rain tomorrow.'

▷ **ellipsis**

- V_{+comm} ✓
- V_{-comm} ✗

- (46) a. Yuehan baoyuan shuo mingtian hui xiayu, Mali ye shuo le.
John complain say tomorrow will rain Mary too say ASP
'John complained that it would rain tomorrow. Mary said that too.'
- b. *Yuehan juede shuo mingtian hui xiayu, Mali ye shuo le.
John think say tomorrow will rain Mary too say ASP
'(int.) John thought that it would rain tomorrow. Mary also thought so.'

▷ **contrastive focus with negation**

- V_{+comm} ✓
- V_{-comm} ✗

- (47) a. Yuehan mei **baoyuan** shuo mingtian hui xiayu.
John NEG complain say tomorrow will rain
(lit.) 'John didn't **complain** that it would rain tomorrow (; he said it in a different way).'
- b. #Yuehan mei **juede** shuo mingtian hui xiayu.
John NEG think say tomorrow will rain
(int.) 'John didn't **think** that it would rain tomorrow (; he said it in a different way).'

• **The evidential flavor of the complementizer *shuo***

- (48) a. Yuehan juede shuo jufa hen youqu
John think say Syntax very interesting
'John thinks that Syntax is very interesting.'
- b. *Yuehan zhidao shuo jufa hen youqu
John know say Syntax very interesting
'(int.) John knows that Syntax is very interesting.'
- The complementizer function of *shuo* introduces an inherent incompatibility with communicatives falling under the category of Say+Manner/Attitude. This incongruence arises from the fact that communicatives of this type signify the agent's high degree of certainty regarding the embedded proposition, which contradicts the evidential flavor of the complementizer *shuo*.

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