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From motion to speech act: The discourse function of *luai-k^{h}ə* in Ji'an Gan Chinese

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Abstract
In Ji'an Yunlou Gan Chinese, the fused motion verb combination *luai-k^{h}ə* 'come-go' presents a paradox. It is syntactically low, at the *v*P or VP edge, but interpretatively high, affecting speech-act structure. It activates both speaker and hearer roles, shifting second-person subjects to inclusive interpretations in directives and acting as an attention-getter or 'negotiator' in commissives. Pursuing analogies to Basque, Japanese, and Jingpo, we propose a movement-free analysis, following Cheng and Sybesma (2003, 2004) and Cheng (2019) for a similar paradox in Chinese: *luai-k^{h}ə* carries a bundled feature complex anchored to the Speech-act Phrase (SAP).

Keywords Syntacticization of discourse · SpeakerAddresseeP · Motion verbs · Gan Chinese

1 Introduction

This paper contributes to the ongoing discussion of the syntactic representation of discourse, often referred to as the Treetops (Miyagawa 2022), by examining data from a variety of Gan Chinese that both challenge and refine core assumptions about the architecture of the clause periphery. Focusing on a lexicalized expression formed from two motion verbs, *luai* 'come' and *k^{h}ə* 'go', we show that discourse-related interpretations may be systematically associated with elements that are realized in a low syntactic position.

Over the past decades, a growing body of literature has been dedicated to the discussion of the syntactic representation of discourse and speech-act interpretation (see the detailed overviews by Miyagawa 2022: 1–31 and Wiltschko 2025: 19–24). A turning point came with Speas and Tenny (2003), building on Ross (1970), who

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proposed that the discourse participants or the speech-act roles, namely the speaker and the hearer, should be syntactically represented in a dedicated layer above the CP domain, referred to as s(peech)a(ct)P. Since then, different approaches have been proposed for the syntacticization of speech acts. According to Wiltschko (2025), three major models have been proposed:

Neoperformative Approach: functional projections dedicated to speech acts and discourse participants (e.g., the saP in Speas and Tenny 2003, S(peaker)A(ddressee)P from Miyagawa 2022). Within this framework, speech-act roles may trigger agreement features analogous to person agreement (e.g., Oyharçabal 1993; Miyagawa 2022).

Commitment-Based Approach: Krifka's (2013, 2015) introduces two intermediate projections between illocutionary force and propositional content: CommitP, encoding public commitment to propositional truth, and JudgeP, encoding the speaker's private perspective. Miyagawa (2022) and Miyagawa and Hill (2023) adopt CommitP and its bridging role while dispensing with JudgeP.

Interaction-Based Approach: Wiltschko's (2021) model grounded in classic speech-act theory, which rejects dedicated syntactic projections for discourse participants. Instead, speaker and hearer roles are introduced indirectly through ground-holders indexed to the interlocutors, with addressee-oriented GroundAdr structurally dominating speaker-oriented GroundSpkr.

Although our structural layout differs in certain respects, particularly with regard to the division of labor between speech-act encoding and discourse participant representation (see Sect. 4.1), the approach adopted in this paper aligns primarily with the principles and core arguments of the first two approaches. Building on the frameworks of Speas and Tenny (2003) and Miyagawa (2012, 2022), we assume that discourse participants are syntactically represented and that their involvement may be syntactically constrained, even when the relevant elements are not realized in the highest clausal position.

The core data discussed in this paper center around the discourse function of the lexicalized use of the motion verb combination *luai*^{213}*k*^{h}ə^{33} (来去, lit. 'come-go', hereafter, *luai-k*^{h}ə) in Ji'an Yunlou (吉安云楼) Gan Chinese (hereafter, JYG). What makes this fused form interesting is that it seems to index joint involvement of both discourse participants, that is, the speaker and the hearer. This property becomes especially clear when *luai-k*^{h}ə is contrasted with simplex motion verbs *luai* 'come' and *k*^{h}ə 'go' in minimal pairs. Consider the following two contexts:

Context A Two people are cleaning together. The speaker notices the addressee is sweating heavily and suggests they both take a short break, that is, a joint break. The use of combination *luai-k*^{h}ə is felicitous, as in (1a), whereas the use of a single motion verb (*luai* 'come' or *k*^{h}ə 'go') is infelicitous, as shown in (1b):[1]

[1] Unless otherwise indicated, the data presented in this paper are primarily based on elicited and introspective judgments provided by one of the authors, a native speaker of the Ji'an Gan variety under investigation. To ensure reliability, three additional native speakers were consulted to crosscheck the data and provide independent grammaticality judgments where necessary. This applies in particular to the grammaticality judgments discussed in Sects. 3.1, 3.2, and 4.3, for which all four native-speaker consultants were systematically consulted.

(1) a. hen^{324} luai^{213}-k^{h}ə^{33} ɕiɛ^{55} ia^{55}.
2SG COME-GO rest a moment
'Let's take a break.'
b. #hen^{324} luai^{213}/k^{h}ə^{33} ɕiɛ^{55} ia^{55}.
2SG COME/GO rest a moment
'You go/come to take a break.'

Since the two sentences differ only with respect to the verbal predicate and both take a singular second-person subject, the effect of "shared" participation must be attributed exclusively to the use of *luai-k^{h}*ə.

Context B The speaker and the addressee are discussing how to divide cleaning tasks. The speaker proposes to sweep the floor, while remaining open to the addressee's preferences or possible revisions. In this context, uttering (2a) with *luai-k^{h}*ə is appropriate. By contrast, (2b), which contains a simplex motion verb, conveys a stronger sense of unilateral commitment and leaves little room for interactional negotiation, and is therefore infelicitous.

(2) a. haŋ^{324} luai^{213}-k^{h}ə^{33} sau^{33}-t^{h}i$^{324\text{-}24}$ha^{55}.
1SG COME-GO sweep-ground
'I'm going to sweep the floor (if that works, or: let me sweep).'
b. #haŋ^{324} luai^{213}/k^{h}ə^{33} sau^{33}-t^{h}i$^{324\text{-}24}$ha^{55}.
1SG come/go sweep-ground
'I am going to sweep the floor.'

If the division of labor has already been decided (e.g., by a parent) and the speaker is merely reporting an assigned task, uttering (2a) with *luai-k^{h}*ə becomes infelicitous, since no negotiation or alignment with the addressee is at stake.

Across the two minimal pairs, although the grammatical subject refers to only one participant in the interaction, that is, the addressee in (1) and the speaker in (2), the other discourse participant is nonetheless implicitly involved whenever *luai-k^{h}*ə is used. The relevant eventuality is hence construed as jointly oriented, or interactionally shared. When the action is exclusively anchored to one participant, or when the plan is already fixed and nonnegotiable, the use of *luai-k^{h}*ə is disfavored. Pragmatically, native speakers often report that using *luai-k^{h}*ə makes the request more polite, which could be seen as a politeness device in this language.

As will be discussed in detail below, *luai-k^{h}*ə functions as a discourse-participant introducer in the two major speech acts in which it appears—directives and commissives—even though it surfaces in a low sentence-medial position. In hearer-oriented directives such as (1), it shifts a second-person interpretation ('You take a break') toward an inclusive reading ('Let's take a break'). In speaker-oriented commissives such as (2), it activates the hearer role and creates a negotiation-oriented interpretation, shifting 'I am going to…' toward 'Let me…' or 'If you want me to…'. This suggests that *luai-k^{h}*ə operates directly in the domain of discourse participants and illocutionary force.

The data investigated in this paper raises two challenges for current discussions on sentence-peripheral structure, or Treetops: first, this one element appears to bundle two person-related (i.e., discourse participants) features: one targeting the speaker

in hearer-oriented directives and one targeting the hearer in speaker-oriented commissives. Note that prior research on the discourse participants' markers, such as the sentence-final allocutive agreement marker in Souletin Basque and the politeness marker *-mas* in Japanese (Oyharçabal 1993, Miyagawa 2010, 2022), typically shows that these elements align with only one discourse participant, predominantly the hearer.

Second, although the fused *luai-k^{h}ə* exhibits a relatively low syntactic position, as we will show in Sect. 4, it nevertheless fulfils a grammatical function that is discourse-oriented and sensitive to the participants of the illocutionary act. It seems that the fusion of the two motion verbs enriches its functional profiles by gaining properties commonly associated with the encoding of speech acts. Crucially, we identify striking distributional parallels between *luai-k^{h}ə*, which contributes politeness in addition to its other grammatical functions, and the Japanese politeness marker *-mas*. As will be shown in Sect. 4.3, both are restricted in root environments as defined by Emonds (1970) and exhibit Main Clause Phenomena (MCP), which Miyagawa (2012, 2017) argues indicate the existence of syntactic projections for encoding speech acts.

To address the challenges, we need to carefully examine both the functions of *luai-k^{h}ə* and its possible syntactic representation. Section 2 will be devoted to identifying the full range of semantic contributions made by this fused element. Based on this, in Sect. 3, we will focus on the pragmatic contribution of the element, particularly how it engages discourse participants within the two primary speech acts in which this element appears, namely, directives and commissives. In Sect. 4, we will investigate its syntactic position and show its high interpretive function, consistent with MCP or root phenomena, further supported by its close parallels with the Japanese politeness marker *-mas*. Furthermore, we will provide a syntactic account of how this low element acquires the high interpretation, following Cheng and Sybesma (2003, 2004) and Cheng (2019) in handling a similar paradox in Chinese, such as postverbal potential *DE* and the aspectual marker *le*.

2 Semantics of *luai-k^{h}ə*

JYG is traditionally referred to by local native speakers as the Xīn'ān shēng (新安声 'Xin'an accent'), a variety that exhibits characteristics associated with both Hakka and Gan Chinese.[2] Although little research has been conducted on *luai-k^{h}ə* in JYG, the lexicalized combination of the two motion verbs *come* (来) and *go* (去) is attested in several Sinitic languages, such as Min (Li and Pan 1998), Hakka (Xiang 1997), and Gan (Li 2024a,b, unpublished manuscript). Based on Li Guilan's review, this construction serves multiple functions across these varieties of Chinese, ranging from its original motion meaning 'to come and go' to a modal function that expresses intention or willingness, with a bleached motion meaning, such as 'will (go to) do

[2]This Gan variant belongs to the Ji-Cha subgroup (吉茶片) of Gan Chinese, which is located in the southern part of the Gan-speaking region, bordering areas where Hakka is spoken (Xie 2008: 117–122). Due to this geographical setting and historical Hakka migration to this region, this dialect demonstrates characteristics of both Gan and Hakka dialects. Phonologically speaking, JYG processes notable features that are consistent with specific Hakka variants (Yan and Yu 2013: 277–290, Xie and Li 2019: 31).

or desire to go (to do)', and finally to a speech-act function inviting someone to do something together (cf. Li and Huang 1995: 95). In this section, we show that *luai-k^{h}ə*, along with the semantic erosion of the original motion meanings, acquires multiple functions, including that of a bouletic modal, a future temporal marker, and a speech acts related marker introducing commissives and directives.

2.1 The fusion of two motion verbs

Before examining the exact meaning of *luai-k^{h}ə*, we would like to point out that *luai-k^{h}ə* in some contexts can also be treated as a combination of two distinct verbs, *luai* 'come' and *k^{h}ə* 'go', with their original concrete verbal meanings, as illustrated in (3) and (4):

(3) haŋ^{213}-tɕ^{h}ian^{213} haŋ^{213}-hɛu^{324}, luai^{213}-k^{h}ə^{33} tɕi$^{51\text{-}24}$ t^{h}ɔŋ^{33} k^{h}ə^{33}tə^0.
walk-forward walk-backward come-go several CL SFP
'Walking back and forth, (you have) come and gone a few times!'

(4) ɕi^{55}ŋuan^{55} tau^{33} huo^{213}lan^{213}, luai^{213}-k^{h}ə^{33} iau^{33} muan^{213}tuo^{55} tɕ^{h}ian^{213}.
Xi'an to Netherlands come-go need very much money
'A round trip (come and go) from Xi'an to the Netherlands costs quite a lot.'

This verbal interpretation is further supported by the fact that their form displays variation: they can appear in a duplicated form, such as *luai-luai k^{h}ə-k^{h}ə*, or with the additive particle *tian*^{24} (连) inserted in between them, as in *luai-tian-k^{h}ə*. Additionally, phonetically, *luai* and *k^{h}ə* in (3) and (4) can receive equal stress and can be uttered with a pause in between.

However, the *luai-k^{h}ə* discussed in this paper should be analyzed as a fused lexical unit. Unlike its verbal counterpart, this combination is morphologically frozen and does not permit any form alternation. Specifically, *luai-k^{h}ə* must always occur as an inseparable unit: it cannot be duplicated or separated by other elements. Phonetically, no pause between the two morphemes is allowed. Occasionally, the second morpheme may undergo phonetic erosion, which is often associated with a high degree of lexicalization, resulting in a reduced form such as *luai*^{213} ə^0 (cf. Yang 2024: 376 for other frozen combinations in Chinese).

More importantly, as we will demonstrate shortly, along with the fusion, the original motion meaning can also be eroded: the *come* meaning of the first morpheme is no longer preserved in the fused word, and the *go* meaning of the second morpheme becomes optional depending on the context. What follows is the functional enhancement: this fused word acquires new semantics and pragmatic functions. Based on these observations and following Li Guilan (2024a: 442) and her analysis of a corresponding construction in the Jishui (吉水) Gan variety, we therefore treat *luai-k^{h}ə* as a single lexicalized item resulting from the process of grammaticalization.

2.2 The semantics of *luai-k^{h}ə*

Consistent with Li (2024b), who observes that the 'come-go' combination in Jishui Gan is typically used in sentences with a first-person subject or in imperatives with a (null) second-person subject, our data from JYG show that *luai-k^{h}ə* occurs most

frequently in sentences with a first person singular subject, as exemplified in (5), an exclusive first person plural subject, as in (6), an inclusive first person plural subject, as in (7), a second person subject as in (8), and a null subject as in (9):[3]

(5) haŋ^{324} (ŋ^{213}tɕin^{55}) luai^{213}-k^{h}ə^{33} ɕy$^{55\text{-}51}$yan$^{324\text{-}55}$ sɔŋ^{324}-k^{h}uo^{51}.
1SG now COME-GO school give-lecture
'I will (=let me) give lectures at school (now).'

(6) haŋ$^{324\text{-}24}$ni^{55} luai^{213}-k^{h}ə^{33} muai^{51}-tuŋ^{55}ɕi^{55}.
1PL.EXC COME-GO buy-things
'We will (=let us) go shopping.'

(7) haŋ^{324}ni^{33} luai^{213}-k^{h}ə^{33} tɕy^{51}fuan^{324}.
1PL.INC COME-GO cook
'Let's cook.'

(8) hen^{324} (ŋ^{213}tɕin^{55} kuan$^{51\text{-}24}$k^{h}uai^{33}) luai^{213}-k^{h}ə^{33} ɕy$^{55\text{-}51}$yan$^{324\text{-}55}$ k^{h}ə^{33}tə^{0}.
2SG now hurry COME-GO school SFP
'You (=let's) (quickly) go to school (now).'

(9) (muŋ$^{51\text{-}24}$) luai^{213}-khə^{33} muai^{51} muŋ^{24}nə^{55} ts^{h}uai^{33} o^{55}.
Immediately COME-GO buy little grocery SFP
'(Let's) go to do some groceries (immediately).'

As evidenced by the translations, the motion meaning 'to come' in all the sentences above remains undetectable. By contrast, the concrete motion semantics associated with *k^{h}ə* 'go', namely, physical displacement from one location to another, may still be preserved in certain contexts. For instance, *luai-k^{h}ə* can be followed by a locative phrase specifying a destination, as in (5) and (8), in which case a literal motion interpretation remains available.

However, the motion semantics inherited from *k^{h}ə* can also undergo substantial semantic erosion. As illustrated in (6), (7), and (9), *luai-k^{h}ə* may appear in purposive constructions followed by a bare infinitive, where it receives a more abstract interpretation roughly paraphrased as 'proceed to do an activity'. In these cases, a literal meaning of physical movement, such as 'going (to school)' in (5), is no longer required. This is expected, given that *luai-k^{h}ə* in such environments selects a verbal complement rather than a locative phrase. For example, in (7), *luai-k^{h}ə* merely expresses the speaker's willingness or intention to cook, without implying any actual movement from one place to another.

[3]The use of *luai-k^{h}ə* with a third-person subject is very restricted. In one instance, it occurs in the second part of a serial verb construction:

(i) hau^{24}ti^{55} tsuai^{51} tɕ^{h}i^{213} ts^{h}a^{55}tsə^{51} luai^{213}-k^{h}ə^{33} ɕy$^{55\text{-}51}$yan$^{324\text{-}55}$.
my son ride bicycle go school
'My son goes to school by bicycle.'

In this context, it is largely interchangeable with *k^{h}ə* 'to go', along with the loss of the motion meaning of 'to come'. A sentence like (i), lacking an explicit time reference, can be understood as either future or habitual. For example, (i) can mean either 'My son will go to school by bicycle' or 'My son usually goes to school by bicycle'. This greater temporal flexibility contrasts with the usages discussed in this paper, as we will show shortly. Therefore, we will not discuss this case in our paper. In another instance, it is used in a task-assigning context, which we will discuss in Sect. 3.

Crucially, alongside the complete loss of 'come' semantics and the erosion of 'go' semantics in these instances, *luai-k*^{h}*ə* demonstrates functional enrichment, as it acquires a bouletic modal function, indicating the agent's intention or plan. On this basis, we argue that the fused form *luai-k*^{h}*ə* should be classified as a modal verb rather than a motion verb**.** Syntactically, it projects a ModP with a bouletic flavor, a point we return to in Sect. 4.2.

Another semantic property of *luai-k*^{h}*ə* in its modal use is that it consistently gives rise to a future-oriented temporal interpretation. In the absence of an overt temporal adverbial, this requirement surfaces as a default interpretation in which the eventuality is understood to occur after the utterance time, often with a sense of imminence. In declarative sentences (5) and (6), the subject, represented by the agent, will soon carry out the event; in sentences (7) to (9), the speaker gently encourages the hearer to participate in the events in the near future. This future orientation is further supported by the compatibility of *luai-k*^{h}*ə* with temporal adverbials denoting the immediate future, such as ŋ^{213}*ʨin*^{55} 'now' in (5) and (8), and *muŋ*$^{51\text{-}24}$ 'immediately' in (9). By contrast, if we use a temporal phrase that indicates past time, for instance, ts^{h}*an*^{324}*ni*^{55} 'yesterday', or habitual adverbs *uɔŋ*^{51}*uɔŋ*^{51} 'usually', these sentences will become unacceptable.

At first glance, this pattern resembles what Li Guilan (2024a: 427) characterizes as the "prospective aspectual" function of the *come* morpheme in Gan, which highlights the immediacy of an event and frequently cooccurs with other prospective markers. However, we argue that an analysis of *luai-k*^{h}*ə* in JYG as a prospective aspectual marker is not adequate, for at least three reasons.

First, *luai-k*^{h}*ə* can function as a main predicate. Note that in Mandarin, modal verbs, such as the root modal *huì* 'be able', can function as main predicates and may be followed directly by an object. *Luai* − *k*^{h}*ə* patterns similarly, as shown in (5) and (8), especially in contexts where a residual 'go' meaning is still available. This behavior is characteristic of modal or lexical verbs, but unexpected for prospective aspectual markers.

Second, the temporal interpretation associated with *luai-k*^{h}*ə* is not restricted to the near or immediate future. While it readily combines with adverbials denoting imminence, it also allows temporal phrases referring to the distant future, as illustrated in (10).

(10) haŋ^{324} kuo^{33}-san$^{55\text{-}51}$ɕi^{55}-nian^{213} luai^{213}-k^{h}ə^{33} ku^{24}tə^{55}
1SG in-thirty-years COME-GO there
'I will (=let me) go there in thirty years.'

Note that a temporal phrase indicating the distant future cannot be used with a corresponding construction in Jishui Gan, as reported by Li Guilan (unpublished manuscript). This contrast indicates that *luai-k*^{h}*ə* in JYG is not tied to the immediacy requirement typically associated with prospective aspect.[4]

[4]One possible explanation for the wider temporal range of *luai-k*^{h}*ə*, compared to *luai* alone, which is typically associated with immediate future contexts, lies in the different temporal-deictic properties of *go* and *come*. Crosslinguistically, *go*-based markers tend to allow reference to future time in general, whereas *come*-based markers are more strongly associated with immediacy (Bybee et al. 1994: 269, cf.

Third, *luai-k*^{h}ə shows relatively weak person restrictions. As demonstrated in (5)–(9), it can combine with both first- and second-person subjects, and, as noted in Footnote 3, it is also compatible with third-person subjects in a task-assigning context. This flexibility stands in contrast to prospective aspectual markers, which are often closely associated with the speaker's immediate intentions and are therefore primarily restricted to first-person contexts (Jendraschek et al. 2014: 158).

Taken together, these properties listed above support a modal analysis, and the future orientation follows from its semantics of intention or planning, rather than from aspectual encoding of immediacy.

In addition to its modal flavor and future interpretation, *luai-k*^{h}ə also carries illocutionary force. Examples (5)–(9) illustrate the two major speech acts in which it appears. In (5) and (6), the speaker expresses an intention or willingness to perform a future action, yielding a commissive interpretation in the sense of Austin (1962) and Searle (1976). By contrast, (7)–(9) are directives, in which the speaker attempts to get the hearer to act, for example, by inviting the hearer to cook together or urging the addressee to go to school or shopping. This distribution follows naturally from the bouletic nature of *luai-k*^{h}ə: in commissives, the speaker is the intention holder, whereas in directives, the speaker induces the hearer's intention to act.

In sum, we identify in this subsection three interrelated semantic contributions of *luai-k*^{h}ə in JYG: (i) while the motion meaning of 'come' has completely disappeared, the fused form still allows 'go' to retain its literal motion interpretation in certain verbal uses; (ii) alongside the semantic erosion, *luai-k*^{h}ə acquires a bouletic modal meaning, expressing intention or planning; and (iii) its use consistently imposes a future-oriented interpretation. Ultimately, we demonstrate that *luai-k*^{h}ə in any given sentence realizes one of two types of speech acts, namely commissives or directives, depending on how the modal meaning is anchored to the discourse participants in different clause types.[5]

These properties are not exclusive to the fused form *luai-k*^{h}ə. As simplex morphemes, both come and go may independently express modal and speech-act-related meanings: *k*^{h}ə 'go' can appear in directives, while *luai* 'come' may express speaker-oriented commitment in commissives. Replacing *luai-k*^{h}ə with these simplex forms therefore does not necessarily result in ungrammaticality.

However, the fused form is not semantically equivalent to its simplex counterparts. In directives such as (8) and (9), *luai-k*^{h}ə induces an inclusive interpretation involving both speaker and hearer, even with a second-person or null subject. This inclusive reading disappears when the simplex *k*^{h}ə is used instead. The contrast suggests that *luai-k*^{h}ə, unlike the simplex motion verbs, obligatorily activates an additional discourse participant. Although this effect is less overt in commissives, where the

Emanation 1992). The fused form *luai-k*^{h}ə, containing the *go* component, therefore naturally lends itself to a generalized future-oriented interpretation compatible with intention or planning, rather than a narrowly defined prospective aspect.

[5] Interestingly, the cluster of semantic and pragmatic properties associated with *luai-k*^{h}ə is compatible with well-attested grammaticalization pathways of motion verbs in other languages (e.g., Motion verb > modal > future marker > illocutionary marker, see Abraham 1991; Bybee et al. 1994; Jarad 2013). However, since this paper is about the synchronic analysis, we leave a detailed diachronic investigation for future research.

speaker is already central to the speech act, we argue below that *luai-k^{h}ə* systematically activates both speaker and addressee roles in the illocutionary structure. This property distinguishes it from its simplex counterparts.

3 The role of speaker and hearer

In this section, we will demonstrate that, in addition to the basic semantics outlined in Sect. 2, the use of *luai-k^{h}ə* inevitably involves the roles of discourse participants or the two pragmatic roles (P-roles) as defined by Speas and Tenny (2003), namely, the speaker role and the hearer role. The use of *luai-k^{h}ə* will underscore the existence of these two roles and can further render the implicit participation of the pragmatic roles explicit. We will first demonstrate its discourse function in the more evident case, directives, and then show its role in commissives.

3.1 The speaker role in directives

When *luai-k^{h}ə* is used in an imperative sentence, it serves a distinctive pragmatic and semantic function: it encourages the addressee to carry out the action denoted by the predicate while simultaneously mitigating the force of the command by signaling that the speaker will also join. As a result, the utterance is interpreted less as a direct order and more as a suggestion, proposal, or invitation involving joint action.

This effect can be illustrated by examples (11) and (12). When a speaker wishes to urge a procrastinating classmate to go to school without sounding overly authoritarian, sentence (11a) is preferred. Similarly, when a hungry speaker wants to prompt his partner to start cooking but avoids sounding bossy or peremptory, sentence (12a) is naturally used:

(11) a. Ø/hen^{324} luai^{213}-k^{h}ə^{33} ɕy$^{55\text{-}51}$yan$^{324\text{-}55}$ k^{h}ə^{33}tə^{0}.
2SG COME-GO school SFP
'You (=let's) go to school.'

b. Ø/hen^{324} k^{h}ə^{33} ɕy$^{55\text{-}51}$yan$^{324\text{-}55}$ k^{h}ə^{33}-tə^{0}.
2SG go school SFP
'You go to school.'

(12) a. Ø/hen^{324} ŋ^{213}tɕin^{55} kuan$^{51\text{-}24}$k^{h}uai^{33} luai^{213}-k^{h}ə^{33} tɕy^{51}fuan^{324}!
2SG now hurry COME-GO cook
'You (=let's) quickly go to cook now!'

b. Ø/hen^{324} ŋ213tɕin^{55} kuan$^{51\text{-}24}$k^{h}uai^{33} k^{h}ə^{33} tɕy^{51}fuan^{324}.
2SG now hurry go cook
'You quickly go to cook now.'

While both the fused verb *luai-k^{h}ə* and the simplex *k^{h}ə* 'go' are grammatically well-formed and common in Sinitic imperatives, they differ in two key respects. First, *luai-k^{h}ə* constructions are perceived as more polite. The fused form weakens directive force, favoring a consultative or invitational stance over the straightforwardly directive *k^{h}ə*. Second, they differ in participant structure. Following Xrakovskij's (2001) distinction between the recipient and performer of a prescription, *k^{h}ə* imperatives

identify the hearer as both. By contrast, *luai-k^{h}ə* imperatives interpret the performer role inclusively: the action is to be carried out by speaker and hearer jointly.

Notably, this inclusion of the speaker is not overtly marked by a first-person subject, nor can it be derived from the default second-person interpretation of imperatives. Instead, the inclusive interpretation must be attributed to the semantic contribution of *luai-k^{h}ə* itself. In this respect, the interpretations of these sentences closely correspond to those where an explicit first-person plural inclusive pronoun appears as the subject. In fact, our consultants consistently report that when an inclusive first-person plural pronoun is overtly realized, the fused form *luai-k^{h}ə* is strongly preferred, as in (13a). Replacing it with the single motion morpheme *k^{h}ə* results in sentences that are perceived as pragmatically odd, incomplete, or infelicitous, as in (13b). Speakers often remark that such sentences sound as if an additional clause-final particle (e.g., a tag inviting confirmation) is missing, as shown in (13c)

(13) a. haŋ^{324}ni^{33} luai^{213}k^{h}ə^{33} ʨy^{51}fuan^{324} k^{h}ə^{33}tə^{0}.
1PL.INC COME.GO cook SFP
'Let's go to cook.'

b. *haŋ^{324}ni^{33} k^{h}ə^{33} ʨy^{51}fuan^{324} k^{h}ə^{33}tə^{0}.
1PL.INC go cook SFP
Intended: 'Let's go to cook.'

c. haŋ^{324}ni^{33} k^{h}ə^{33} ʨy^{51}fuan^{324} i^{55} k^{h}ə^{33}?
1PL.INC go cook Q GO
'Let's go to cook, do you go?'

These observations point to a discourse-participant-based cooccurrence restriction in Gan imperatives. When the speaker intends to participate in the action together with the hearer, the fused *luai-k^{h}ə* construction is required. Conversely, when the speaker does not intend to join the action, *luai-k^{h}ə* is categorically excluded, and only the single motion verb *k^{h}ə* is licensed, as illustrated in (14):

(14) Interaction between discourse-participant and motion elements
(Speaker) +, Hearer +: *luai-k^{h}ə* / **k^{h}ə*
Speaker −, Hearer +: **luai-k^{h}ə* / *k^{h}ə*
Note: Parentheses indicate that the speaker does not have to be overtly expressed.

Based on (14), we can conclude that whenever the speaker's participation in the joint action is impossible in a directive, the use of *luai-k^{h}ə* is predicted to be infelicitous. This prediction is borne out. As suggested by one of our reviewers, sentences like (15), which force an interpretation where the speaker cannot participate in the joint action, render the use of *luai-k^{h}ə* unacceptable.

(15) *hen^{324} luai^{213}-k^{h}ə^{33} kau^{33} haŋ^{324}.
2SG COME-GO teach me
Indented: 'You come to teach me.'

The above observations lead us to posit an additional semantic contribution of *luai-k^{h}ə*: in an imperative, it signals the speaker's involvement in performing the action denoted by the predicate. While the speaker is always a discourse participant

in any imperative, *luai-k^{h}ə* specifically encodes the speaker as an active performer of the prescribed action, rather than a mere source of the directive. This inclusive imperative reading is also independently attested in a neighboring Gan variety (Li 2024b, unpublished manuscript).

So far, all the examples in (11) and (12), where the SPEAKER role is activated by using *luai-k^{h}ə* consist of imperative sentences. Does this imply that the SPEAKER role introducer is selective in clause typing? In other words, is the speaker-inducing interpretation of *luai-k^{h}ə* restricted to an imperative?

Our data shows that *luai-k^{h}ə* can also activate the speaker role in various other types of clauses. Consider the following sentences:

(16) hen^{324} iau^{33} luai^{213}-k^{h}ə^{33} p^{h}en^{51} la^{55}ʨi^{55}.
2SG need COME-GO throw trash
'You need to go to throw out the trash (with me).'

(17) hen$^{324\text{-}24}$ni^{55} in^{55}kuai^{55} luai^{213}-k^{h}ə^{33} ɕy$^{55\text{-}51}$yan$^{324\text{-}55}$ sɔŋ^{324}-k^{h}uo^{51}.
2PL should COME-GO school attend-class
'You should go to school to attend the class (with me).'

(18) hen$^{324\text{-}24}$ni^{55} i^{55} hɛn$^{51\text{-}24}$ luai^{213}-k^{h}ə^{33} sɔŋ^{324}-k^{h}uo^{51}?
2PL Q willing COME-GO attend-class
'Are you willing to go to attend the class (with me)?'

(19) hen^{324} ŋ^{213}ʨin^{55} i^{55} luai^{213}-k^{h}ə^{33} ʨy^{51}fuan^{324}?
2SG now Q COME-GO cook
'Do you want to go to cook (with me) now?'

As shown in (16) and (17), *luai-k^{h}ə* is used in declarative sentences with the deontic modal *iau*^{33} (要) 'need' in (16) and *in*^{55}*kuai*^{55} (应该) 'should' in (17). Clearly, although the subjects of the sentences are again second-person pronouns, the speaker's role in the events denoted by the VP remains active: as suggested in the translation, the speaker will also be involved in the event they believe the hearer should undertake. Similarly, when *luai-k^{h}ə* is used in interrogative sentences, as demonstrated in (18) and (19), the speaker role is actively present as well, even though it is not overtly indicated by the second-person subject. It appears that *luai-k^{h}ə*, acting as an introducer of the speaker role, is not confined to one specific clause type, as it does not exclusively select imperatives.

What, then, unifies the contexts in which *luai-k^{h}ə* highlights the speaker role? A closer look at examples (16)–(19) shows that, despite differences in clause type, they are all used to convey directive speech acts indirectly. The declaratives in (16) and (17) function as requests or orders, while the questions in (18) and (19) prompt the hearer to act. This illustrates a mismatch between clause type and illocutionary force: although directives are canonically expressed by imperatives, declaratives and interrogatives may also indirectly convey directive intentions (Speas and Tenny 2003; König et al. 2007; Coniglio et al. 2012). We therefore suggest that, whenever a sentence is pragmatically interpreted as directive, *luai-k^{h}ə* functions as a speaker-role activator.

Our language consultants confirm our assumption: The speaker role becomes salient only if using the utterance with *luai-k^{h}ə* to perform a directive speech act.

Our consultants report two possible interpretations of sentence (17): one is an utterance with an indirect directive illocutionary force, which the speaker uses to urge the hearer to go to school, and the other is a purely declarative statement expressing the speaker's opinion regarding the hearer's obligation. Only the former brings the role of the speaker into the discourse event. The function of *luai-k^{h}ə* in the latter mirrors its usage in a serial verb construction, which is interchangeable with the single *k^{h}ə* (see Footnote 3). This confirms our conclusion that only in the directive is the SPEAKER role highlighted by using *luai-k^{h}ə*.

This pattern extends to task-assignment contexts, where the performer of the action may be a third person. Compared with first- and second-person arguments, however, third-person subjects cooccurring with *luai-k^{h}ə* are much more restricted (see Footnote 3). This asymmetry suggests that *luai-k^{h}ə* is intrinsically oriented toward the discourse roles of speaker and hearer, rather than toward third-person referents. Our consultants report that third-person subjects are acceptable only in task-assignment contexts, where the speaker informs the hearer how tasks are distributed among different participants. Importantly, although the third person is not the direct addressee of the directive, they may still serve as the performer of the assigned action.

To test this restriction systematically, we designed a scenario involving three tasks, *sweeping*, *buying groceries*, and *cooking*, that are assigned to the speaker, the hearer, and a third person, respectively. In this configuration, clauses with second- or third-person subjects must use the simplex motion verb *k^{h}ə* 'go'; the fused *luai-k^{h}ə* is categorically excluded, since the speaker cannot join in either of the other two tasks. The contrast is shown in (20):

(20) haŋ^{324} sau^{33}-t^{h}i$^{324\text{-}35}$ha^{55}. hen^{324} k^{h}ə^{33}/*luai^{213}-k^{h}ə^{33} muai^{51}-tuŋ^{55}ɕi^{55}.
1SG sweep-floor 2SG go/COME-GO buy-thing
kə^{324} k^{h}ə^{33}/*luai^{213}-k^{h}ə^{33} ʈɕy^{51}fuan^{324}.
3SG go/COME-GO cook
'I'll sweep the floor. You will go to do some shopping. He'll go to cook.'

By contrast, when the speaker does not have an assigned task and instead chooses to join the third person, the distribution changes. In this case, only the third-person clause can occur with *luai-k^{h}ə*, while *k^{h}ə* becomes degraded or unacceptable, as in (21).

(21) hen^{324} k^{h}ə^{33}/*luai^{213}-k^{h}ə^{33} muai^{51}-tuŋ^{55}ɕi^{55}, kə^{324} *k^{h}ə^{33}/ luai^{213}-k^{h}ə^{33}
2SG go/COME-GO buy-thing 3SG go/ COME-GO
ʈɕy^{51}fuan^{324}.
cook
'You will go to do some shopping. He'll go to cook (with me).'

Furthermore, when neither the speaker nor the hearer has an explicitly assigned task, sentences in which a third-person subject cooccurs with *luai-k^{h}ə* give rise to two possible interpretations, as illustrated in (22):

(22) kə^{324} luai^{213}-k^{h}ə^{33} ʈɕy^{51}fuan^{324}.
3SG COME-GO cook
'He'll go to cook (either with me, or with you and me).

More specifically, the sentence may mean that either the speaker joins the third person and the two cook together, or both the speaker and the hearer join the third person, so that all three participants are involved in the cooking event.[6]

In sum, these task-distribution facts demonstrate that *luai-kʰə* is sensitive not merely to grammatical person, but to the configuration of discourse roles in a directive event. In imperative and task-assigning constructions, *luai-kʰə* requires the inclusion of the speaker in the set of performers. This reinforces the view that the fused COME-GO construction in this language encodes a form of discourse-role agreement with the speaker (and also the hearer, as we will see in the next subsection).

The foregrounding of the speaker role cannot be attributed to clause type or to the directive force itself, since directives are inherently hearer-oriented: the hearer is the recipient and expected performer of the prescribed action (Searle 1976; Speas and Tenny 2003). This is evident from the fact that, when *luai-kʰə* is replaced by simplex *kʰə* in examples (11)–(18), the directive interpretation remains, but the speaker is no longer involved in the event. It is only with the use of *luai-kʰə* that the speaker role becomes activated and foregrounded. In this respect, *luai-kʰə* resembles the English adhortative *let's*, which introduces joint participation by the speaker alongside the hearer. The fact that *luai-kʰə* is not sensitive to clause type but is sensitive to the speech act, that is, it must be a directive, has interesting syntactic implications: the role of activating the discourse participant does not operate at the layer for clause typing but rather on the illocutionary force, a point we will discuss in detail in Sect. 4.

A question arises: What is the function of *luai-kʰə* if the sentence does not express a directive illocutionary force? For instance, in the other type of speech act that *luai-kʰə* is frequently used, namely, a commissive, the role of the speaker has already been activated by the commissive speech act and usually marked by the first person subject. Then, what is the discourse function of *luai-kʰə* in this speech act?

3.2 The hearer role

According to Searle (1976), directives and commissives may share similar sincerity conditions, both involving mental states such as desire or intention. They differ, however, in their illocutionary point: directives aim to get the hearer to perform an action, whereas commissives commit the speaker to a future course of action. A commissive is therefore inherently speaker-oriented, with the speaker's perspective already foregrounded. Unlike directives, however, the hearer role is not necessarily active in a typical commissive. This raises an important question: if *luai-kʰə* introduces speaker participation in directives, what function does it serve in commissives, where the speaker role is already overtly present?

[6] One reviewer raises the important question of why examples such as (22) allow two interpretations, namely one in which only the speaker joins the third person in the event, and another in which both the speaker and the hearer participate, if *luai-kʰə* equally involves both discourse participants. We suggest that the syntax of *luai-kʰə* guarantees the activation of both discourse-participant roles at the SAP level, but does not rigidly determine the precise form of their participation in the event itself (a point we will also discuss in Sect. 4.4.2). In the first reading of (22), the hearer's participation as an event participant is pragmatically excluded or backgrounded (e.g., because the hearer is already assigned another task), although the hearer remains interactionally involved as the recipient or evaluator of the proposed arrangement. Once such contextual restrictions are removed, the broader inclusive interpretation as in the second reading of (22) becomes available.

Earlier in (2) (repeated here as (23)), we discussed a scenario in which *luai-k^{h}ə* is used to express the speaker's commitment to a future action, and argued that such uses should be analyzed as commissive illocutionary acts. In what follows, we further substantiate this claim by examining two contexts in which speakers volunteer to undertake a task, and by comparing *luai-k^{h}ə* with the simplex motion verb *luai* 'come', which is also often used in commissives.

Context 1: Two colleagues are discussing how to divide tasks on a designated cleaning day. One participant first proposes the task he is willing to take on. He can use one of the two utterances in (23):

(23) a. haŋ^{324} luai^{213}-k^{h}ə^{33} sau^{3}-t^{h}i$^{324\text{-}24}$ha^{55}.
1SG COME-GO sweep-ground
'I'm going to sweep the floor (if that works, or: let me sweep).'

b. haŋ^{324} luai^{213} sau^{33}-t^{h}i$^{324\text{-}24}$ha^{55}.
1SG come sweep-ground
'I am going to sweep the floor.'

Context 2: A married couple has just returned home from work. The wife feels hungry, and the considerate husband immediately proposes to prepare some food. In this situation, he may choose between the following two utterances in (24):

(24) a. haŋ^{324} ŋ^{213}tɕin^{55} kuan$^{51\text{-}24}$k^{h}uai^{33} luai^{213}-k^{h}ə^{33} tɕy^{51}fuan^{324}.
1SG now hurry COME-GO cook
'I will hurriedly cook now (if you want me, or: let me hurriedly cook now).'

b. haŋ^{324} ŋ^{213}tɕin^{55} kuan$^{51\text{-}24}$k^{h}uai^{33} luai^{213} tɕy^{51}fuan^{324}.
1SG now hurry come cook
'I will hurriedly cook now.'

Although both *luai-k^{h}ə* and simplex *luai* may introduce a commissive, they differ in two important respects. First, *luai-k^{h}ə* not only expresses the speaker's intention, but also explicitly takes the hearer's stance into account, inviting acknowledgment, approval, or negotiation. This nuance is reflected in English paraphrases such as *let me* or if you want me to. By contrast, simplex *luai* merely states the speaker's intention; if the speaker wishes to invite the hearer's response, an additional sentence-final particle is typically required. Second, *luai-k^{h}ə* is consistently perceived as more polite. In collaborative contexts such as (23), simplex *luai* may sound overly assertive, whereas *luai-k^{h}ə* leaves interactional space for the hearer's opinion. In this respect, our language consultants note that the use of *luai-k^{h}ə* pragmatically resembles the addition of the sentence-final expressive particle *hɛ^{55}*, which adds a tactful or consultative flavor, as illustrated in (25b).

(25) a. haŋ^{324} luai^{213}-k^{h}ə^{33} sau^{33}-t^{h}i$^{324\text{-}24}$ha^{55}.
1SG COME-GO sweep-ground
'I will (=let me) sweep the floor.'

b. haŋ^{324} luai^{213} sau^{33}-t^{h}i$^{324\text{-}24}$ha^{55} hɛ^{55}.
1SG come sweep-ground SFP
'I will sweep the floor, okay?'

As noted, adding *hɛ*^{55} provides an alternative means of drawing the hearer's attention to the speaker's commitment when a simplex motion verb is used. Importantly, native speakers also report that *hɛ*^{55} can appear in (25a), where the fused form *luai-k*^{h}ə is used. This is unsurprising, as Chinese readily allows multiple elements with similar functions to cooccur within a single sentence without causing any difficulty. The observation above illustrates the precise function of *luai-k*^{h}ə in a commissive: When the speaker role is already overtly encoded by a first-person subject, *luai-k*^{h}ə does not merely reinforce commitment; instead, it activates the hearer role by foregrounding the hearer's right to acknowledge, or respond to the proposed commitment. In this way, the hearer is shifted from a background participant to an active interlocutor in the current discourse.

More generally, although politeness marking is most commonly associated with directives, where speakers seek to mitigate the impositive force placed on the hearer, we suggest that a comparable mechanism is also operative in commissives. When speakers present their own commitments while simultaneously foregrounding the hearer's discourse role, the commitment is no longer conveyed as entirely unilateral or overly forceful. Instead, it is framed as interactionally negotiable and responsive to the hearer's stance, thereby giving rise to a politeness effect in discourse.

We have just shown that the contrast between examples such as (23a) and (24a) and (23b) and (24b) crucially hinges on whether the hearer role is activated. Although a hearer may be passively present in (23b) and (24b) by virtue of the conversational discourse, the speaker in these cases has no intention of involving the hearer in the commitment. The utterance merely reports the speaker's decision or willingness, without inviting acknowledgement, negotiation, or response. This observation allows us to formulate a further prediction. If *luai-k*^{h}ə indeed functions to activate the hearer role in commissive contexts, then it should be incompatible with situations in which no hearer role is present at all, not even in a passive or backgrounded sense. A particularly useful diagnostic for testing this prediction is provided by self-talk contexts.

Wiltschko (2025) identifies two modes of self-talk: one is the *I*-centered or "thinking out loud" mode, which involves only the speaker role; the other is the *you*-centered or "having a conversation with oneself" mode, in which the speaker also takes on the role of the hearer. She demonstrates that these two modes are associated with different linguistic profiles, which may correspond to either the grammatical representation of the speaker or that of the addressee. For instance, *I*-centered self-talk is compatible with cognitive predicates and internal planning but excludes addressee-oriented constructions such as vocatives, imperatives, or addressee-directed discourse markers. *You*-centered self-talk, by contrast, readily licenses such constructions.

If our analysis of *luai-k*^{h}ə is on the right track, we expect the following asymmetry: in an *I*-centered self-talk commissive**,** where no hearer role is present, *luai-k*^{h}ə should be unavailable; in a *you*-centered self-talk commissive, where the speaker effectively addresses themselves, for instance, the speaker is entertaining alternative plans by having an internal dialogue and negotiation, *luai-k*^{h}ə should be acceptable. To test this prediction, we designed two self-talk scenarios and asked our language consultants which utterances they would naturally use.

Scenario 1: *I*-centered self-talk Imagine that late at night, you are mentally organizing your schedule for the next day. You already have a clear plan: first sweep the floor, then meet a friend, and finally watch a movie. You are not questioning or revising the plan; you are simply rehearsing it internally. Which of the following sentences could naturally occur in your inner monologue?

(26) a. mian^{213}nian^{55}-tsau^{51} haŋ^{324} ɕian^{55} k^{h}ə^{33} sau^{33}-t^{h}i$^{324\text{-}35}$ha^{55},
tomorrow-morning 1SG first go sweep-ground
lan^{213}hɛu^{324} haŋ^{324} k^{h}ə^{33} tɕian^{33} p^{h}uŋ^{213}iu^{51}, tsui^{33}hɛu3^{24} k^{h}ə^{33}
then 1SG go visit friend lastly go
k^{h}uan^{33} t^{h}ian^{324}in^{51}.
watch movie
'Tomorrow morning, I will go to sweep the floor, then go to visit a friend, and watch a movie at the end.'

b. mian^{213}nian^{55}-tsau^{51} haŋ^{324} ɕian^{55} luai^{213}-k^{h}ə^{33} sau^{33}-t^{h}i$^{324\text{-}35}$ha^{55},
tomorrow-morning 1SG first COME-GO sweep-ground
lan^{213}hɛu^{324} haŋ^{324} luai^{213}-k^{h}ə^{33} tɕian^{33} p^{h}uŋ^{213}iu^{51}, tsui^{33}hɛu3^{24}
then 1SG COME-GO visit friend lastly
luai^{213}-k^{h}ə^{33} k^{h}uan^{33} t^{h}ian^{324}in^{51}.
COME-GO watch movie
'Tomorrow morning, (I guess) I'll sweep the floor first, then (maybe) go visit a friend, and watch a movie at the end.'

Our consultants unanimously report that sentence (26b) is infelicitous in this context. In *I*-centered self-talk, "speakers" consistently avoid *luai-k^{h}ə*, instead opting for simplex motion verbs (*luai* or *k^{h}ə*) or other volitional expressions.

Scenario 2: *You*-centered self-talk (internal dialogue and negotiation) Now, imagine you are talking to yourself as you try to decide which tasks to do tomorrow. Your plan is not fixed; you are actively considering alternatives and negotiating possibilities with yourself. In this situation, which sentence would you choose?

(27) a. mian^{213}nian^{55}-tsau^{51} haŋ^{324} k^{h}ə^{33} sau^{33}-t^{h}i$^{324\text{-}35}$ha^{55}, hai^{213}sə^{55}
tomorrow-morning 1SG go sweep-ground or
k^{h}ə^{33} tɕian^{33} p^{h}uŋ^{213}iu^{51}.
go visit friend
'Tomorrow morning, I will either go to sweep floor, or go to visit a friend.'

b. mian^{213}nian^{55}-tsau^{51} haŋ^{324} luai^{213}-k^{h}ə^{33} sau^{33}-t^{h}i$^{324\text{-}35}$ha^{55},
tomorrow-morning 1SG COME-GO sweep-ground
hai^{213}sə^{55} luai^{213}-k^{h}ə^{33} tɕian^{33} p^{h}uŋ^{213}iu^{51}.
or COME.GO visit friend
'Tomorrow morning, (I guess) I will go to sweep floor, or (maybe) go to visit a friend.'

In this *you*-centered self-talk context, consultants judge the use of *luai-k^{h}ə* in (27b) to be fully natural. Here, the "speaker" is effectively addressing themselves as a

hearer, entertaining alternative courses of action and leaving the commitment open to revision. The consultative and hearer-involving function of *luai-k*^{h}ə is therefore fully compatible with this mode of self-talk. Instead, (27a), according to our consultants, sounds like the "speaker" will definitely choose between the two events.

The two-self-talk model provides additional support for our analysis. *Luai-k*^{h}ə cannot be used in commissive contexts that lack a hearer role altogether, as in *I*-centered self-talk. By contrast, it is licensed in contexts, whether dialogic or monologic, in which a hearer is projected and actively engaged, even when the speaker and the hearer are coreferential, as in *you*-centered self-talk.

In this section, we examine the function of *luai-k*^{h}ə in two major speech acts: hearer-oriented directives and speaker-oriented commissives. We show that, in directives, *luai-k*^{h}ə activates the speaker role, while in commissives it activates the hearer role. Crucially, its function is not sensitive to clause type, but to illocutionary force: as long as a directive or commissive speech act is realized, whether directly or indirectly, *luai-k*^{h}ə introduces the relevant discourse participant. This suggests that speaker and hearer roles are represented in a pragmatic domain where discourse participants interact with illocutionary force. The fact that this function is grammaticized in JYG raises an important syntactic question: is there a structural layer above illocutionary force that encodes both speaker and hearer roles?

4 The syntax of luai-k^{h}ə

In Sect. 3, we show that *luai-k*^{h}ə systematically activates discourse-participant roles that are not otherwise encoded in the clause. In particular, when either the speaker or the addressee is not overtly realized as a thematic argument, that is, via an overt subject or PRO, *luai-k*^{h}ə forces the interpretation of that missing participant. In this sense, *luai-k*^{h}ə guarantees the realization of two core "pragmatic roles" (P-roles) in Speas and Tenny's sense: the speaker and the hearer.[7] We argue that *luai-k*^{h}ə should therefore be regarded as a modal element sensitive to both discourse participants.

In this section, we will first review the relevant proposals on the syntactic realization of the speaker and the hearer. Then, we show that *luai-k*^{h}ə patterns distributionally with elements, such as Japanese politeness marker *-mas*, that require access to the speech-act domain, despite surfacing low in the clause, as discussed by Miyagawa (1987, 2017, 2022). Finally, we propose an analysis in which *luai-k*^{h}ə carries a bundled set of person features that must be anchored to discourse roles made available by the clausal architecture.

4.1 The syntactic layers for speech acts and the three pragmatic roles

Since Speas and Tenny's (2003) seminal attempt to provide a syntactic representation of discourse participants, many scholars have presented evidence supporting the syn-

[7] In this paper, we do not draw a distinction between *addressee* and *hearer* and use both terms to refer to the relevant discourse participant whom the speaker directly addresses. Importantly, this notion excludes nonaddressee hearers, such as individuals who merely overhear a conversation. As argued by Zu (2018: 46), following Haddican (2015, unpublished manuscript), such nonaddressee hearers do not trigger discourse-related grammatical phenomena, including allocutive agreement.

tacticization of speech acts and/or their participants. While there is broad consensus that speech-act-related information is structurally represented, proposals diverge with respect to both the labeling of the relevant projections and their structural placement.

With respect to labeling, proposals include Speech-Act Phrase (saP, Speas and Tenny 2003; Haegeman and Hill 2013), ActP (Krifka 2014, 2020), Illocutionary Phrase (IllP, Coniglio et al. 2012), Speaker-Addressee Phrase (SAP, Zu 2018; Miyagawa 2022), and Responding Phrase (RespP), and Grounding Phrase (GroundP, Wiltschko 2021). These approaches also differ regarding whether speech-act-related projections belong to the (split) CP domain, for example, ForceP in Coniglio et al. (2012), or extend beyond CP, as argued by Wiltschko (2021) and Miyagawa (2022). A brief overview of representative proposals is given in (28).

(28) Syntactic layers in the Speech-act Domain and/or C-domain
saP (Speaker > Hearer) > SentienceP (EvalP > EviP) > CP (Speas and Tenny 2003)
ActP > CommitP > JudgP > TP (Krifka 2014, 2020)
IllP > CTP > … > TP (Coniglio et al. 2012)
saP_1 > saP_2 > ForceP > … TP (Haegeman and Hill 2013)
SpP > AdrP > SenP > TP (Zu 2018)
RespP > GroundP ($Ground_{Adr}P$ > $Ground_{spkr}P$) > CP (Wiltschko 2021)
SAP (SpkP > AddrP) > CommitP > CP (Miyagawa 2022)

Two core insights can be drawn from these different approaches: one is that discourse participants can be structurally represented, thus it is not merely a pragmatic issue; the second is that the layer(s) for speech-act are structurally higher than the propositional content.

4.1.1 The SAP

In this paper, we primarily adopt the frameworks developed by Speas and Tenny (2003), Zu (2015, 2018), and Miyagawa (2012, 2022), all of which posit dedicated syntactic layers for discourse participants. For terminological consistency, we adopt Miyagawa's label Speaker-Addressee Phrase (SAP).

Crucially, SAP is not intended to encode specific speech acts in the sense of Ross (1970), as its head does not contribute performative content; instead, SAP merely provides a structural representation of discourse participants. Following Zu (2015, 2018) and Miyagawa (2022), we adopt a split SAP, consisting of a Speaker Phrase (SpkP) and an Addressee Phrase (AddrP), rather than the unsplit, VP-shell-like configuration proposed by Speas and Tenny (2003).

In what follows, we present two pieces of morphosyntactic evidence showing that the speaker and addressee are not merely pragmatic notions, but are genuine syntactic objects, comparable to traditional person features involved in agreement relations.

Evidence 1: Allocutive agreement in Basque As documented by Oyharçabal (1993), Souletin, an eastern dialect of Basque, exhibits a distinct set of person agreement markers, known as allocutive agreement, in addition to the regular subject and object agreement system. Allocutive agreement indexes properties of the addressee, varying

according to gender (masculine vs. feminine) and relative social status (e.g., higher than the speaker or not).

As demonstrated in (29) (Oyharçabal (1993), cf. Miyagawa 2022: 14), when the same propositional content *Peter worked* is uttered to different addressees, which are discourse participants without a (theta) role in the event, the verbal morphology changes accordingly: a second-person masculine marker $-k$ appears when the addressee is a male friend (29a); a second-person feminine marker $-n$ appears when the addressee is a female friend (29b); and a distinct formal/polite marker $-z\ddot{u}$ is used when the addressee holds a higher social status than the speaker (29c).

(29) a. To a male friend
Pettek lan egin di*k*.
Peter.ERG work do.PRF 3ERG.MASC
'Peter worked.'

b. To a female friend
Pettek lan egin di*n*.
Peter.ERG work do.PRF 3ERG.FM
'Peter worked.'

c. To someone socially higher in status
Pettek lan egin di*zü*.
Peter.ERG work do.PRF 3ERG.HON
'Peter worked.'

Importantly, allocutive agreement cannot be reduced to argument agreement, since this agreement targets the addressee despite the absence of any thematic relation. Miyagawa (2022: 42–46) argues that allocutive agreement in Souletin must be structurally linked to C or a projection higher than C, based on the observation that allocutive morphology competes with material in the C-domain, such as Q-marking, and that it is generally not allowed in relative clauses and complement clauses (cf. Oyharçabal 1993: 107). This strongly supports the view that addressee features are syntactically represented in the left periphery.

Evidence 2: Discourse participant agreement in Jingpo Further support for the syntactic representation of discourse participants comes from Jingpo, a Tibeto-Burman language discussed in detail by Zu (2015, 2018). Zu (2018) shows that Jingpo sentence-final particles systematically track either the addressee or the speaker's affective involvement, even when these roles are not associated with any argument position.

First, Jingpo shows addressee agreement in sentence-final particles. As shown in (30), when a speaker asks, 'What time is it?' in a context with no salient addressee (e.g., genuine self-talk), the SFP agrees with the third-person subject *hkying* 'time'. By contrast, when there is a clear addressee, the SFP agrees with the second person.

(30) Addressee agreement in Jingpo (Zu 2018: 32, cf. Dai 2010: 10)

a. hkying gade htu *sa?*-ta?
time how-many point 3SG-WH
'What time is it?'

b. hkying gade htu *sə*-ta?
time how-many point 2SG-WH
'What time is it?'

Jingpo also exhibits speaker agreement, which reflects the speaker's perspectival or affective involvement with the subject. As shown in (31), when the speaker (here, a teacher) wishes to signal a close or affiliative relationship with the subject 'students', a distinct SFP is used in (31b). The neutral form in (31a) lacks this speaker-oriented interpretation.

(31) Speaker Agreement in Jingpo (Zu 2018: 34, cf. Dai 2010: 5)

a. Jongma du hkum *mas*-ai.
student arrive complete 3PL-DECL
'The students have all arrived.'

b. Jongma du hkum *saga*-ai.
student arrive complete 3PL-DECL
'The students have all arrived.'

To sum up, in Jingpo, sentence-final morphology systematically alternates depending on (i) whether an addressee is present and (ii) the degree of speaker involvement with the subject. These Jingpo facts are particularly relevant to our analysis of *luai-k*^{h}ə, as we show in Sect. 3. The addressee agreement in Jingpo directly parallels our observations from self-talk contexts: when no addressee is structurally activated, *luai-k*^{h}ə is degraded, whereas in contexts where the speaker conceptually "talks to themself" as an addressee, *luai-k*^{h}ə becomes acceptable. Moreover, just as Jingpo employs sentence-final particles to signal the speaker's affective or perspectival involvement, *luai-k*^{h}ə can be used to mark the speaker's active participation in a directive event.

4.1.2 Sentience phrase

Because SAP only represents discourse participants, the realization of a full-fledged speech act requires an additional structural layer that links these participants to the propositional content. This intermediary layer corresponds closely to Searle's (1969) notion of the illocutionary point, that is, the communicative purpose of an utterance. A comparable proposal is Coniglio et al.'s (2012) IllP, which they distinguish from clause-typing projections within the CP domain. In their model, IllP encodes illocutionary force and functions as an interface between propositional content and discourse context. This "illocutionary-point-denoting" closely parallels the Sentience Phrase (SenP) proposed by Speas and Tenny (2003) and further developed by Zu (2018).

Following this line of work, we adopt the label SenP for the intermediary projection and assume, following Speas and Tenny (2003) and Zu (2018), that it introduces the Seat of Knowledge (SoK), as the third pragmatic role. Structurally, SoK occupies the specifier of SenP immediately below SAP. In statements and commissives, the speaker typically serves as SoK, whereas in questions and directives the role shifts to the hearer, who evaluates the proposition or carries out the prescribed

action. Positioned between SAP and the propositional domain, SenP realizes illocutionary force and mediates between discourse participants and propositional content, resembling IllP (Coniglio et al. 2012), ForceP (Haegeman and Hill 2013), and Commitment Phrase (Miyagawa 2022; Miyagawa and Hill 2023, cf. Krifka 2014, 2020, Geurts 2019), though we do not treat it as inherently commitment-related.

Importantly, one key diagnostic distinguishing SAP from SenP, according to Zu (2018:74) is embeddability: SenP may occur in embedded contexts, including attitude complements, whereas SAP may not. The reader is referred to Zu (2018) for a more detailed discussion on the SenP. This distinction between SAP and SenP will receive empirical support from the contrast in embeddability between constructions containing the fused form *luai-k*^{h}ə and those with a simplex motion verb, as we show in Sect. 4.2, a contrast that mirrors Zu's diagnostics for distinguishing SAP from SenP.

4.1.3 The three layers of the speech-act domain

After the introduction of the SAP and the SenP, the schematic representation of the speech act-related projections assumed in this paper is provided in (32):

(32) The syntactic representation for the speech-act domain
SpkP > AddrP > SenP … > CP
[$_{\text{SpkP}}$P1[Spk][$_{\text{AddrP}}$ P2[Addr][$_{\text{SenP}}$ Pi[Sen][…[CP]]]]
(P1 = Speaker, P2 = Hearer, Pi = Seat of Knowledge, where i = 1, or i = 2, or another referent)

We propose that three syntactic layers are responsible for speech-act structure: SpkP, AddrP, and SenP. While we adopt much of Miyagawa's (2012, 2022) framework, we depart from his claim that SAP must be projected in every clause. In our view, the explicit representation of speaker and hearer is not universally required for sentence interpretation. Consequently, SAP is projected only when discourse-participant information is syntactically relevant. By contrast, we maintain that every clause necessarily encodes an illocutionary force, and therefore must project at least a SenP.

We do not pursue the internal fine structure of SenP or potential projections between SenP and CP, as this lies beyond the scope of the present study, though we leave open the possibility that SenP itself may be further articulated.

Finally, following Speas and Tenny (2003) and Zu (2018), we assume that the SoK role may either be coindexed with a discourse participant in SAP via direct interaction with the speaker or addressee, or remain independent of them. In the latter case, SoK corresponds to an external or shifted perspective, as in logophoric contexts where the point of view is attributed to an individual other than the discourse participants.

4.2 *Luai-k*^{h}ə as a root modal

In the previous sections, we argued that *luai-k*^{h}ə activates the discourse-participant role that is not directly determined by the illocutionary force: in directives it activates the speaker role, while in commissives it activates the hearer role. In this way, the use of *luai-k*^{h}ə ensures that both discourse-participant roles associated with the SAP domain are active. Given this discourse-oriented function, one might expect *luai-k*^{h}ə

to occupy a sentence-peripheral position associated with speech-act structure. Its surface distribution, however, shows that it is realized much lower in the clause.

The data suggest that *luai-k^{h}ə* may surface in two low positions. The first is a relatively higher position at the edge of the *v*P domain. In disposal *pa*^{51} (把) constructions, this occurrence precedes *pa*^{51}, as shown by the first occurrence in (33). The second is an even lower, VP-related position, namely in the left periphery of the complement introduced by *tɛ*^{55} (得), as shown by the second occurrence in (33).

(33) hen^{324} luai^{213}-k^{h}ə^{33} pa^{51} nɛn^{55} p^{h}en$^{324\text{-}24}$nə^{55} t^{h}ia^{213} tɛ^{55} (luai^{213}-k^{h}ə^{33})
2SG COME-GO DISP this bottle take PRT COME-GO
muai^{324}-kiɛ^{55} kə^{324}.
sell-COMPL 3SG
'You (=let's) take these bottles to sell them.'

The two occurrences may appear independently or simultaneously, a fact that will become central to the interpretive-chain analysis in Sect. 4.4. Additional evidence for the lower VP-related position comes from examples such as (5) and (8), where *luai-k^{h}ə* functions as the main predicate and directly introduces an internal argument. In such cases, it behaves like a predicate head within the VP domain rather than merely preceding another verbal predicate.

The relative height of the higher occurrence can be diagnosed by its interaction with root modals and polarity-related elements. As shown in (34)–(36), this *v*P-edge occurrence appears below deontic and dynamic modals, such as *in*^{55}*kuai*^{55} 'should' and *hɛn*$^{51\text{-}24}$ 'be willing to', as well as below the polar question marker *i*^{55}.

(34) hen$^{324\text{-}24}$ni^{55} in^{55}kuai^{55} luai^{213}-k^{h}ə^{33} ɕy$^{55\text{-}51}$yan$^{324\text{-}55}$ sɔŋ^{324}k^{h}uo^{51}.
2PL should COME-GO school attend class
'You should go to attend the class in the school (with me).'

(35) hen$^{324\text{-}24}$ni^{55} i^{55} hɛn$^{51\text{-}24}$ luai^{213}-khə^{33} sɔŋ^{324}k^{h}uo^{51}?
2PL Q willing COME-GO attend class
'Are you willing to go to attend the class (with me)?'

(36) hen^{324} ŋ^{213}ʈɕin^{55} i^{55} luai^{213}-k^{h}ə^{33} ʈɕy^{51}fuan^{324}?
2SG now Q COME-GO cook
'Do you want to go to cook (with me) now?'

These examples suggest that the higher occurrence of *luai-k^{h}ə* is structurally lower than root modal projections and polarity-related projections, but higher than the projection hosting disposal *pa*^{51}, which has been argued to occupy a position associated with VoiceP above *v*P (Sybesma 2021: 55). The lower occurrence, by contrast, is tied to the VP-related domain associated with the *tɛ*^{55} complement structure.

Despite these positional differences, the two occurrences share the same modal and discourse-oriented interpretation. We therefore analyze *luai-k^{h}ə* as a root modal, more specifically as the head of a low ModP that may be realized either at the edge of the *v*P domain or in a lower VP-related position. In this respect, it resembles the low modal positions proposed by Cheng and Sybesma (2003, 2004) for Chinese postverbal modals, though *luai-k^{h}ə* additionally carries discourse-participant-related semantics.

This configuration also parallels the Japanese politeness marker *-mas*, which Miyagawa (2022) analyzes as originating in a low agreement-related projection above *v*P while receiving interpretation in the discourse domain. Similarly, although *luai-k*^{h}ə surfaces in low positions, its interpretation is discourse-oriented. As we show in the next section, it is also restricted to root environments and displays Main Clause Phenomena (MCP), suggesting that its interpretation is ultimately linked to the SAP domain.

4.3 Root restriction and parallels with Japanese -mas

Note that it not unusual that a physically low element exhibits a high pragmatic function, for instance, Coniglio et al.'s (2012) discussion on German modal particles such as *ja* or *doch*, as well as Miyagawa's (1987, 2017, 2022) analysis of the politeness marker *-mas* in Japanese. In their analyses, they all provide evidence linking the usage of these elements, which appear structurally low yet high in interpretation, to the root phenomenon discussed by Emonds (1970) and Hopper and Thompson (1973). Emonds (1970) defines a few root environments where some nonstructure-preserving transformation, such as negative constituent preposing (NCP), can occur:

(37) Root environments
A root will mean either the highest S in a tree, an S immediately dominated by the highest S, or the reported S in direct discourse. (Emonds 1970: 6)

The three root contexts defined by Emonds can be evidenced by the fact that NCP can occur in the matrix clause, that is, the highest S, in the subordinate clause introduced by *because*, that is, the S immediately dominated by the highest S, and in the complement clause of reporting verbs, that is, the reported S. However, NCP or other root transformations cannot occur in many other subordinate clauses that are beyond the scope of the contexts defined above, such as in an appositive. See the examples below, from Miyagawa (2022: 80):

(38) a. Never had I had to borrow money.
b. Because never had I had to borrow money, I have a lot saved.
c. John said that never had he had to borrow money.
d. *The fact that never had he had to borrow money is well-known.

Considering Hopper and Thompson's (1973) counterexamples and linking them to Ross's Performative Analysis (1970), Miyagawa (2012, 2017) reinterprets Emonds's (1970) three root contexts by associating them with the presence of SAP, rather than with the nonstructure-preserving transformations. While Miyagawa retains Emonds's original idea that some clauses, that is, root clauses, hold a special status, which appears to permit certain MCP (cf. Aelbrecht et al. 2012), he proposes that this status enables a specific type of agreement directed toward the speech-act participants–the speaker or the hearer. This agreement is akin to the traditional ϕ-feature agreement with the subject (or the object) as the goal.

This agreement with discourse participants is restricted to root clauses. As discussed above, allocutive agreement in Souletin and speaker/addressee agreement in Jingpo are both root phenomena. Similarly, Miyagawa argues that the Japanese po-

liteness marker *-mas*, another form of allocutive agreement, involves person features evaluated in the SAP and is likewise restricted to root environments.

Miyagawa further shows that the distribution of *-mas* closely matches Hopper and Thompson's (1973) root environments. Besides matrix clauses, *-mas* may appear in complements of speech verbs and in certain adverbial clauses, such as *because*-clauses. For detailed discussion, see Miyagawa (2010, 2012, 2022).

As shown in the table below from Miyagawa (2012: 103), the Japanese politeness marker *-mas*, which activates the SAP, is more restricted than the topic marker *-wa* in complement and adverbial clauses.

(39) Distribution of Japanese *-mas* and *-wa* in subordinate clauses

	Type A (say)	Type B (believe)	Type C (deny)	Type D (be surprised)	Type E (know)	*because*	*when*
-mas	✓	*	*	*	*	✓	*
-wa	✓	✓	*	*	✓	✓	*

The table in (39) shows that elements associated with the projection of SAP, namely, those that encode discourse participants, are subject to stricter distributional constraints than other clause-level elements such as topic markers. In particular, SAP-related material is limited in the range of embedded environments and adverbial clauses in which it may appear. If *luai-k^{h}ə* is indeed associated with the SAP domain, we expect it to display comparable MCP, with its distribution restricted to root environments in the sense of Emonds (1970). Our data confirm this expectation.

Beyond matrix clauses, *luai-k^{h}ə* is licensed in complement clauses selected by so-called Type A predicates, as illustrated in (40). It is also acceptable in a limited set of "peripheral" adverbial clauses (Haegeman 2003), including reason adverbials (45) and concessive conditional adverbials (48). Crucially, these adverbial clauses belong to the class of "peripheral" adverbial clauses, which, according to Haegeman (2003), retain a full clausal left periphery, including "ForceP", the locus of illocutionary force. In such environments, the occurrence of *luai-k^{h}ə* is expected and indeed attested.[8] By contrast, in the majority of subordinate clauses that lack a speech-act layer, *luai-k^{h}ə* is systematically excluded. In this respect, its distribution closely parallels that of the Japanese politeness marker *-mas*, further supporting the view that *luai-k^{h}ə* is anchored to the speech-act domain and is subject to MCP-related constraints.

(40) Type A

tsɔŋ^{55}san^{55} ua^{324} hen^{324} muŋ^{24} luai^{213}-k^{h}ə^{33} sau^{33}-t^{h}i$^{324-24}$ha^{55}.
Zhangsan say 2SG immediately COME-GO sweep-ground
'Zhangsan says that you (and me) go to sweep the floor immediately.'

[8] According to Haegeman (2003), central adverbial clauses include temporal, event conditionals, manner, and result clauses, whereas peripheral adverbial clauses comprise reason, concessive, and speaker-oriented conditionals that establish discourse relations rather than event modification. The differences between central and peripheral subordinates lie in their merging positions and internal structures. According to Haegeman, unlike peripheral adverbial clauses, central subordinate clauses lack ForceP, the projection where illocutionary force is encoded.

(41) Type B
*tsɔŋ^{55}san^{55} len^{324}ui^{213} hen^{324} muŋ^{24} luai^{213}-k^{h}ə^{33}
Zhangsan think 2SG immediately COME-GO
sau^{33}-t^{h}i$^{324-24}$ha^{55}.
sweep-ground
'Zhangsan thinks that you (and me) (will) go to sweep the floor immediately.'

(42) Type C
*hen^{324} pu^{55} k^{h}uo$^{51-24}$nɛn^{213} muŋ^{24} luai^{213}-k^{h}ə^{33}
2SG not possible immediately COME-GO
sau^{33}-t^{h}i$^{324-24}$ha^{55}.
sweep-ground
'It's impossible for you (and me) to go to sweep the floor immediately.'

(43) Type D
*tsɔŋ^{55}san^{55} hɛn^{51} ʨ^{h}ia^{55}ʨin^{55} hen^{324} muŋ^{24} lua^{i213}-k^{h}ə^{33}
Zhangsan very surprise 2SG immediately COME-GO
sau^{33}-t^{h}i$^{324-24}$ha^{55}.
sweep-ground
'Zhangsan is very surprised that you (and me) (will) go to sweep the floor immediately.'

(44) Type E
*tsɔŋ^{55}san^{55} ʨiau^{51}tɛ^{55} hen^{324} muŋ^{24} luai^{213}-k^{h}ə^{33}
Zhangsan know 2SG immediately COME-GO
sau^{33}-t^{h}i$^{324-24}$ha^{55}.
sweep-ground
'Zhangsan knows that you (and me) (will) go to sweep the floor immediately.'

(45) *because*-adverbial
in^{55}ui^{324} hen^{324} muŋ^{24} luai^{213}-k^{h}ə^{33} sau^{33}-t^{h}i$^{324-24}$ha^{55}, su^{51}i^{51}
because 2SG hurry COME-GO sweep.ground so
haŋ$^{324-24}$ni^{55} ui^{324} ŋuan^{33}sə^{213} uan^{213}sen^{213}.
1PL can on time finish
'Because you (and me) will go to sweep the floor immediately, so we can finish on time'

(46) *when*-adverbial
*hen^{324} muŋ^{24} luai^{213}-k^{h}ə^{33} sau^{33}-t^{h}i$^{324-24}$ha^{55} kai^{33}-sə^{213}kan$^{55-24}$nə^{55},
2SG hurry COME-GO sweep-ground when
haŋ^{324}ni^{33} ui^{324} k^{h}uan^{33}tau^{51} kə^{324}.
1PL can see 3SG
'When you (and me) go to sweep the floor immediately, we can see him.'

(47) *if*-adverbial
*lu^{213}kuo^{51} hen^{324} muŋ^{24} luai^{213}-k^{h}ə^{33} sau^{33}-t^{h}i$^{324-24}$ha^{55}, haŋ^{324}ni^{33}
if 2SG hurry COME-GO sweep-ground 1PL
tɕ^{h}iu^{324} ui^{324} k^{h}uan^{33}tau^{51} kə^{324}.
then can see 3SG
'If you(and me) go to sweep the floor immediately, we can see him.'

(48) *although/even-if*-adverbial
tɕi^{55}p^{h}iɛn^{324} hen^{324} muŋ^{24} luai^{213}-k^{h}ə^{33} sau^{33}-t^{h}i$^{324-24}$ha^{55}, haŋ^{324}ni^{33}
even 2SG hurry COME-GO sweep-ground 1PL
ia^{324} sau^{33}-pu^{55}-uan^{213}.
still sweep-not-finish
'Even if you (=let's) go to sweep the floor immediately, we still can't get it done.'

In sum, we find a close parallel between the distribution of *luai-k^{h}ə* in JYG and that of the Japanese politeness marker *-mas*, as discussed by Miyagawa (2012, 2017, 2022): both of them are restricted to root environments, and are excluded from embedded clauses unless these clauses allow for the interpretation of a full-fledged speech act. Following Miyagawa, we can attribute the restricted distribution of *luai-k^{h}ə* in subordinate contexts to its sensitivity to MCP, which in turn signals the presence of the SAP. The availability of SAP presupposes a syntactic environment sufficiently rich to accommodate discourse participants.

In contrast, simplex motion morphemes such as *luai* or *k^{h}ə*, though compatible with directive and commissive interpretations, exhibit a broader syntactic distribution. As shown in (40) to (48), our language consultants report that, in addition to occurring in root contexts, a simplex *luai* or *k^{h}ə* can also occur in the complement clauses introduced by type C and type D, as well as in *if*-conditionals. The table below summarizes the distributional differences between *luai-k^{h}ə* and the simplex motion morphemes across a range of syntactic environments.

(49) Distributional differences between *luai-k^{h}ə* and simplex motion morphemes

	Type A (say)	Type B (believe)	Type C (deny)	Type D (be surprised)	Type E (know)
luai-k^{h}ə	✓	*	*	*	*
luai^{213} or *k^{h}ə*^{33}	✓	*	✓	✓	?
	because	*even though*	*when*	*if*	
luai-k^{h}ə	✓	✓	*	*	
luai^{213} or *k^{h}ə*^{33}	✓	✓	*	✓	

Without committing ourselves to a detailed account of why simplex motion verbs are permitted in some embedded contexts but not others, the crucial observation is that their wider distribution suggests a structurally smaller domain, which allows

for more flexible embedding. We propose that, in directive or commissive uses, a single motion morpheme is interpreted at the level of SenP, where illocutionary force can still be realized. Importantly, such configurations do not require a full-fledged projection of SAP, and hence do not necessitate the syntactic representation of both discourse participants.

This is reminiscent of the discussion by Coniglio et al. (2012: 25) regarding the distinctions between central subordinate clauses (e.g., conditionals, temporal clauses) and peripheral subordinate clauses (e.g., reason, concessive clauses). While both types can host an IlloP, the projection in the former instantiate a structurally impoverished version. In our terms, both simplex motion verbs and the fused form *luai-k*^{h}ə may encode speech acts via IlloP; however, only *luai-k*^{h}ə requires a fully articulated speech-act domain that includes SAP. As a result, its distribution is more tightly constrained, requiring syntactic environments that can host both the speaker and the addressee. The embeddability contrast between *luai-k*^{h}ə and simplex come-go also provides independent support for Zu's (2018) distinction between SAP and SenP, the latter of which is generally embeddable according to Zu.

More broadly, the striking distributional parallels between the Japanese politeness marker *-mas* and the JYG motion modal *luai-k*^{h}ə, both of which enforce speaker–hearer interaction and are largely confined to root environments, offer compelling evidence for linking MCP effects to the availability of SAP. We therefore conclude that, although *luai-k*^{h}ə surfaces in a low modal position, its interpretation crucially depends on access to high discourse-related projections. Its strict root distribution follows naturally from the requirement that SAP be present and active, a condition that embedded environments typically fail to meet.

4.4 How *luai-k*^{h}ə gets interpreted

We argued in Sect. 4.2 that *luai-k*^{h}ə occupies relatively low positions: a higher occurrence at the edge of the vP domain, below lower root-modal projections such as MP$^{\text{Deo}}$ and MP$^{\text{Dyn}}$ (Tsai 2010), and a lower occurrence in a VP-related position associated with the *tɛ*^{55} complement structure. Despite these low surface positions, *luai-k*^{h}ə exhibits clear discourse-oriented effects. Like Japanese *-mas*, it is restricted to root environments and displays MCP, suggesting that its interpretation depends on access to the speech-act domain. The central question, then, is how a morphologically low element like *luai-k*^{h}ə receives a high discourse interpretation.

4.4.1 An interpretive chain for *luai-k*^{h}ə

Miyagawa (2022), building on Yamada (2019), proposes that the Japanese politeness marker *-mas* is not merely a morphological marker of politeness, but an instance of allocutive agreement involving the discourse participant structure. In his analysis, *-mas* is base-generated in a low functional projection above *v*P, namely an AgrP associated with discourse-participant agreement. More specifically, *-mas* carries an uninterpretable allocutive ϕ-feature targeting the addressee, which can be seen as a sort of second-person agreement feature that must ultimately be valued in the speech-act domain.

Just like our *luai-k^{h}ə*, a central challenge in the analysis of *-mas* is the apparent mismatch between form and interpretation: although *-mas* surfaces in a relatively low position in the verbal complex, its interpretation is clearly discourse-oriented and sensitive to the hearer's social status, suggesting that it must ultimately be interpreted in a structurally high domain associated with discourse participants. To resolve this mismatch, Miyagawa proposes a feature-raising analysis in which the allocutive feature carried by *-mas* undergoes successive-cyclic head movement from its low base position toward the left periphery, in accordance with the Head Movement Constraint (Travis 1984).

Importantly, Miyagawa argues that this movement process is morphologically visible in Japanese. As the feature moves through the functional spine, it leaves copies at intermediate heads, which are realized morphologically in different environments. For example, when the feature combines with NegP, it surfaces as the special negative form *-en*; when it combines with past T, it is realized as *-desita*. This is illustrated in (50), adapted from Miyagawa (2022: 53):

(50) *Hanako-wa iki-mas-en desita.*
Hanako-TOP go-MAS-NEG COP PST
'Hanako didn't go.'

Miyagawa further argues that the movement cannot terminate at T. Additional evidence comes from so-called "double politeness" forms such as … *mas* … *desyoo*, in which *desyoo* appears higher than TP. As illustrated in (51), *desyoo* occurs to the right of *desita*, the polite past copular form functioning as *do*-support, suggesting that the allocutive feature must move beyond T into the C-domain (Miyagawa 2022: 56).

(51) *Nimoutu-wa todoki-mas-en-desita desyoo ka?*
package-TOP arrive-MAS-NEG-COP PST DESYOO Q
'Didn't the package arrive?"

Considering the MCP manifestation of *-mas*, Miyagawa argues that the allocutive agreement ϕ-feature ultimately needs to be raised to the AddrP head, where it is given valuation above the AddrP. Under this approach, the morphology associated with *-mas* provides evidence for the successive movement of the allocutive feature through multiple functional heads. In this way, the analysis captures both the low surface position of *-mas* and its high discourse-oriented interpretation. The proposal, therefore, offers a concrete syntactic implementation of how discourse-participant agreement may be encoded in the clause structure.

While this feature-raising approach is well motivated for languages with rich and transparent morphological reflexes of movement, it is considerably less compelling for YLG: *luai-k^{h}ə* does not show comparable morphological decomposition, nor is there independent evidence that it undergoes covert head movement. More generally, Sinitic languages are well known for cases in which an element surfaces low but is interpreted high, without invoking syntactic movement.

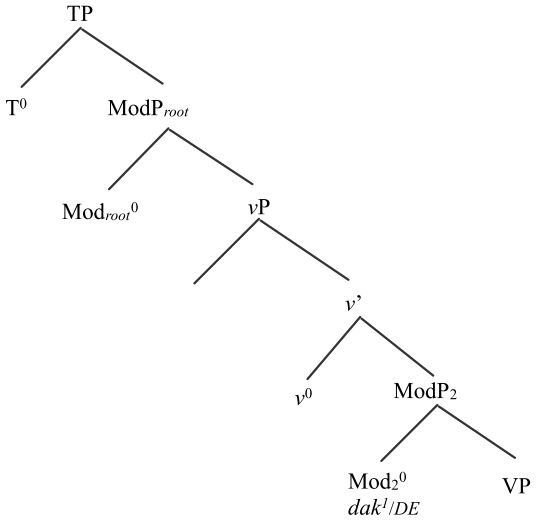
A canonical example would be the root modal *de* (得) in Mandarin and its Cantonese counterpart *dak*^{1}. These elements surface in a postverbal position but are interpreted as expressing root-level modality (Cheng and Sybesma 2004):

(52) a. tā (néng) ná-de-qǐ zhè-xiāng shū.
3SG can take-can-up this-box book
'S/he can lift this box of books.' (Mandarin)

b. keoi^{5} lo^{2}-dak^{1}-hei^{2} li^{1} seung^{1} syu^{1}.
3SG take-can-up this box book
'S/he can lift this box of books.' (Cantonese)

To account for this paradox, Cheng and Sybesma propose a movement-free approach: the modal semantics is interpreted in a high root modal projection, even though the modal is spelt out in a lower position at PF, that is, the ModP_2, as shown in (53) (cf. Cheng 2019: 251).

(53)



To them, these low/high pairs seem to form an interpretive chain. Regardless of where pronunciation occurs, interpretation consistently comes from the high position. Evidence for such chains comes from modal doubling, as shown in (50a), where either one of the high and low positions (or both at the same time) may be overtly realized, yet interpretation consistently targets the highest position. Cheng (2019) also applies this account to perfective aspect *-le*, which is spelt out below the verb, in the inner aspectual domain, and yet is interpreted in a high position as an outer aspect.[9]

We propose that *luai-k^{h}ə* in JYG gets interpreted via the same kind of interpretive chain. Its surface position at the VP or *v*P edge corresponds to a lower link in a chain whose highest interpretive position lies in the SAP domain. Crucially, interpretation is fixed at this highest position, regardless of whether any material is overtly realized there.

[9]We thank one anonymous reviewer for pointing out that related ideas have been proposed in earlier work on Chinese. In particular, Progovac (1992, 1993), in her discussion of long-distance reflexives in Chinese, argues for a form of anaphoric agreement without overt movement. Although the empirical domain and theoretical implementation differ from the present proposal, her analysis likewise suggests that Chinese may permit discourse- or reference-sensitive agreement relations without rich morphological reflexes.

Interestingly, YLG provides independent support for this view. As Cheng and Sybesma (2003, 2004, cf. Sybesma 1992; Sybesma and Shen 2006) suggest, root modality in Chinese involves a low modal position below *v*P, which hosts postverbal *DE*. If *luai-k*^{h}ə is treated as one of the root modals with a bouletic flavor, we would likewise expect it to have access to such a lower structural position. In other words, from a theoretical perspective, it should be possible for *luai-k*^{h}ə to surface even lower in the clause, plausibly in a position comparable to where potential *DE* is pronounced or a bit lower. This prediction is borne out. As shown in (54=33), *luai-k*^{h}ə can indeed occur in a postverbal position within the periphery of the directive complement introduced by *t*ɛ^{55} (得).

(54) hen^{324} luai^{213}-k^{h}ə^{33} pa^{51} nɛn^{55} p^{h}en$^{324\text{-}24}$nə^{55} t^{h}ia^{213} tɛ^{55} (luai^{213}-k^{h}ə^{33})
2SG COME-GO DISP this bottle take PRT COME-GO
muai^{324}-kiɛ^{55} kə^{324}.
sell-COMPL 3SG
'You (=let's) take these bottles to sell them.'

Importantly, *luai-k*^{h}ə may surface either at the *v*P edge or within the lower VP/*DE*-domain, and it may also appear simultaneously in both positions within the same clause. Crucially, however, the interpretive outcome remains constant: regardless of its surface position, *luai-k*^{h}ə receives the same discourse-oriented interpretation. This positional flexibility, coupled with interpretive uniformity, strongly suggests that *luai-k*^{h}ə participates in an interpretive chain with at least three positions.

(55) The interpretive chain of *luai-k*^{h}ə
(*luai-k*^{h}ə$_1$) (SAP-domain) … *luai* − *k*^{h}ə$_2$ (*v*P-domain) … *luai-k*^{h}ə$_3$ (VP-domain)

Only the lower copies may be phonologically realized: *luai-k*^{h}ə$_2$ occupies the position adjacent to ModP_{root} in (53), and *luai-k*^{h}ə$_3$ occupies the position next to ModP_2, the highest copy in the SAP remains silent. Nevertheless, interpretation invariably targets the SAP-level position.

Note that the chain in our proposal does not relate SAP, *v*P, and VP themselves. Rather, it links three possible occurrences of the same modal element, *luai-k*^{h}ə, which occupies different structural positions while maintaining the same semantic feature bundle (i.e., [+Spk], [+Addr]). In this sense, our proposal extends the logic of Cheng and Sybesma's interpretive-chain approach into the SAP domain in order to capture the discourse-participant interpretation associated with *luai-k*^{h}ə.

One reviewer further asks why the highest SAP-level occurrence of *luai-k*^{h}ə is not phonetically realized, while the lower occurrences may surface overtly. At present, we do not have a principled explanation for this asymmetry. However, similar patterns have been observed in other Chinese interpretive-chain phenomena. As discussed by Cheng (2019), Cantonese often realizes the lower member of a modal chain, while Mandarin may additionally allow realization of a higher modal occurrence. Likewise, aspectual *-le* is argued to receive interpretation in a high outer-aspect position despite being overtly realized low in the clause. We therefore tentatively suggest that Chinese languages may generally favor the pronunciation of lower members of interpretive chains, while higher interpretive occurrences remain silent. This may be connected to

the morphosyntactic status of these elements, as well as to the relatively impoverished overt inflectional morphology found in Chinese languages.

4.4.2 Anchoring to discourse participants

This interpretive chain account resolves the form-function mismatch, but it leaves open a further question: why is *luai-k^hə* restricted to configurations in which both discourse participants are active? As discussed in Sects. 3.1 and 3.2, *luai-k^hə* is degraded when the speaker is not an event participant in directives, and when no hearer is structurally involved in commissives (e.g., purely *I*-centered self-talk).

We propose that *luai-k^hə* is lexically specified to require anchoring to both discourse roles. We can also say that *luai-k^hə* carries a bundled set of semantic features, targeting both discourse participants: [+Spk], corresponding to the speaker role (P1); [+Addr], corresponding to the addressee role (P2). This dual-feature specification is plausibly motivated by its diachronic and semantic composition: across Chinese languages, come is canonically speaker-oriented in commissives, while go is typically addressee-oriented in imperatives. Similar bundling of speaker- and addressee-related properties has been proposed for other languages, for instance for the Korean exhortative particle *-ca* (Pak 2006).

Crucially, *luai-k^hə* does not need to be raised to SAP, due to the interpretive chain illustrated in (53). Rather, its discourse interpretation depends on whether both roles are structurally available for anchoring. In root clauses, the full speech-act domain, including SAP, is projected, allowing *luai-k^hə* anchoring to both discourse roles. In embedded clauses, by contrast, SAP is typically absent or truncated. Even when a reduced speech-act layer (e.g., SenP) is available, only one discourse role may be accessible, leaving one part of *luai-k^hə*'s anchoring requirement unmet and resulting in semantic incompatibility.

The proposed configuration is schematically represented in (56):

(56) **The interpretive chain of *luai-k^hə* and its discourse anchoring**
$[_{SAP}$ (P1/ P2) $[< luai\text{-}k^h ə >_1{}^{[+Spk,+Addr]}$ $[_{SenP}$ Pi $[Sen^0$ $[CP$ $[TP$ $[_{ModP1} < luai\text{-}k^h ə >_2{}^{[+Spk,+Addr]}$ $[vP$ $[_{ModP2} < luai\text{-}k^h ə >_3{}^{[+Spk,+Addr]}$ $[VP]]]]]]]]]]

Note: < > indicates chain occurrences/copies. The highest SAP-level occurrence $<luai\text{-}k^h ə>_1$ remains silent but determines interpretation. Either $< luai\text{-}k^h ə >_2$ or $< luai\text{-}k^h ə >_3$, or both may be phonetically realized.

As shown in (56), in a hearer-oriented directive, the pragmatic index Pi in SenP corresponds to the addressee (i = 2), yielding a hearer-oriented illocutionary force. The [+Addr] feature of *luai-k^hə* is therefore anchored through the addressee-oriented SenP layer. At the same time, the remaining [+Spk] feature is anchored to the speaker role represented in SAP, thereby activating the speaker as an additional event participant. The simultaneous anchoring of both discourse-participant features gives rise to the characteristic joint-participation interpretation associated with directives containing *luai-k^hə*.

In a speaker-oriented commissive, by contrast, Pi in SenP corresponds to the speaker (i = 1), licensing a speaker-oriented commitment reading. In this configuration, the [+Spk] feature of *luai-k^hə* is anchored through the speaker-oriented SenP

layer, while the remaining [+Addr] feature is anchored to the addressee role represented in SAP. As a result, the hearer becomes discourse-active, yielding the observed attention-directing, consultative, or negotiation-related effect.

It should be noted that the precise involvement of the speaker or hearer in the event is not determined by syntax alone, but also depends on contextual and pragmatic factors associated with different speech acts. The use of *luai-k*^{h}ə does not alter the underlying speech-act category: a directive remains a directive, and a commissive remains a commissive. As proposed above, *luai-k*^{h}ə has two core functions. Syntactically, it requires the activation of both discourse-participant roles in the SAP domain, namely the speaker role (P1) and the hearer role (P2). Pragmatically, it functions as a politeness-oriented discourse device, making the utterance less unilateral and more interactionally sensitive. The observed interpretations therefore arise from the interaction between these two dimensions.

As one reviewer points out, directives and commissives differ in how the additional discourse participant introduced by *luai-k*^{h}ə is interpreted. Directives are inherently hearer-oriented, since the addressee is the intended performer of the action, so activating the speaker role naturally yields a joint-participation reading and mitigates the impositive force of the directive. Commissives, by contrast, are inherently speaker-oriented. When *luai-k*^{h}ə activates the hearer role, the hearer is typically not interpreted as a coagent, but rather as an interlocutor whose acknowledgment or response is foregrounded, producing the observed negotiation effect. Politeness here arises not from inviting the hearer to participate directly in the event itself, but from presenting the speaker's commitment as responsive to the hearer's stance rather than as a unilateral decision.

We agree with the reviewer that, in principle, the hearer could also be construed as a core participant in a commissive context. In such cases, however, the speech act tends to shift away from a canonical commissive toward an invitation, proposal, or adhortative interpretation, which is more directive-like in nature. Under those circumstances, the subject is typically expressed as either second person or inclusive first-person plural. We therefore take the asymmetry between directives and commissives to arise not from syntax alone, but from the interaction between discourse-role activation and the default participant structure associated with different speech-act types. This pattern closely resembles the politeness effects associated with discourse-sensitive elements in languages such as Souletin Basque, Jingpo, and Japanese.

5 Conclusion

This paper contributes to the growing literature of the syntactic treetops by investigating the use of a lexicalized expression formed from two motion verbs, *luai* and *k*^{h}ə, in a Gan Chinese variety. We have demonstrated how this expression gains extended functions beyond motion, serving modal functions to express intention, and ultimately expressing speech acts such as commissive or directives. Crucially, across these uses, *luai-k*^{h}ə systematically invokes the participation of discourse participants, or pragmatic roles (P-roles), namely the speaker and the hearer.

In a speaker-directed commissive, the use of *luai-k*^{h}ə introduces the hearer role, often serving pragmatically as an attention-getter or conveying a negotiating tone. In a

hearer-oriented directive, its use inevitably introduces the participation of the speaker, leading to the inclusive imperative meaning, akin to English adhortative *let's*. In both cases, the presence of *luai-k^{h}ə* forces the activation of both discourse participants, even when one of them is not otherwise required by the propositional content.

Building on this observation, we demonstrate that *luai-k^{h}ə*, like discourse-participant-sensitive agreement elements in Souletin, Jingpo, and Japanese, is confined to root environments. This restriction follows naturally if such constructions require access to a full speech-act domain, associated with the presence of the SAP (Miyagawa 2022). Although *luai-k^{h}ə* surfaces in a relatively low modal position, its interpretation is necessarily anchored high in the clausal structure, at the level where discourse participants are structurally represented.

To resolve this paradox, following Cheng and Sybesma (2003, 2004) and Cheng (2019) on similar phenomena, we argue that the various surface occurrences of *luai-k^{h}ə* form a single interpretive chain, such that a low realization can still be interpreted with respect to the highest relevant functional domain. Furthermore, we propose that *luai-k^{h}ə* carries a bundled feature complex with two discourse-participant-relevant features, one targeting the speaker and the other the hearer. Successful licensing of *luai-k^{h}ə*, therefore, requires a root configuration in which both P-roles are structurally available and so that both discourse features of *luai-k^{h}ə* can be anchored in the SAP. When only a reduced speech-act structure is available, such as contexts lacking a genuine speaker or hearer role, these features cannot be properly anchored, resulting in semantic incompatibility and the degradation of *luai-k^{h}ə*.

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Declarations

Competing Interests The authors have no competing interests to declare that are relevant to the content of this article

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