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Non-veridical *kaN* in Taiwanese Southern Min

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In the study of kaN (敢 gan3 in Mandarin Chinese written form) in Taiwanese
Southern Min, previous studies have largely focused on the interrogative kám
sentences. This paper, however, shows a comprehensive picture when taking
into consideration of the allomorph kánn in declarative sentences, and the di-
achronic development of kaN. Specifically, we propose that kaN functions as a
non-veridical operator, whose clause type feature needs to be valued in IntP, thus
deriving either a [+Q] (kám) or [-Q] (kánn) sentence. Moreover, various kaN
sentence types are derived contingent on the interface criteria: (i) syntax (clause
type feature valuation), (ii) inquisitive semantics of kaN: the epistemic use of
kánn and sī 'be', and (iii) speaker's intentionality/supposition in the speech
act domain.

1. Introduction

The Chinese word 敢 (pronounced as *gan*[3] in Mandarin Chinese) literally means
dare or *bold*. Its contemporary Taiwanese Southern Min (TSM) form is pronounced
either as *kam*[2] = *kám* or as *kánn*; for ease of discussion we use kaN as a cover term
for these two forms. *Kám* occurs in questions, and is assumed to have developed
from multiple sources involving 敢 – 豈敢 *qi-gan,* 膽敢 *dan-gan* 'how dare, boldly
dare', as well as a fusion from 敢問 *kánn-mn̄g* 'dare-ask' functioning as 'may I dare
ask' (Liu *et al.* 1992; Y. Cheng 2003; Wei 2010, etc.), as in (1), and (2). While the
use of *kám* in questions has attracted much attention, the epistemic modal usage
of *kánn* has been commented on formally much less, which expresses epistemic
meaning of conjecture 'seemly, probably, likely,' as shown in (3) (Tsao 1993; Cheng
2000, 2003; Wei 2010; Lien 2011; Yen 2012; Liu 2013, among many others).[1]

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1. Some speakers of TSM prefer using 敢若 *kánn-ná,* rather than simply *kánn* in epistemic
declarative sentences (Lâu 2020, personal communication). In addition to *kám* and *kánn*, Lien
(2011) has identified the third use of kaN, *kan*[2]. We will not further distinguish this use, but
assume that its meanings are integrated into the two uses of *kám* and *kánn* discussed in the paper.

(1)   a.   你 敢 欲 來?
           Lí   kám   beh   lâi?
           you   KAM   want come
           "Do you want to come?"

      b.   阿輝 敢 有 食 檳榔?
           A-Hui kám   ū   tsiȧh   pin-nńg?
           A-Hui KAM   have eat   betel-nuts
           "Does A-Hui eat betel nuts?"

(2)   明仔載 敢 會/袂 落雨?
      Bîn-á-tsài kám   ē/bē   lȯh-hōo?
      tomorrow   KAM   will/not will   possibly rain
      "Will it/ Will it not rain tomorrow?"

(3)   明仔載 敢 會/袂 落雨。
      Bîn-á-tsài kánn   ē/bē   lȯh-hōo.
      tomorrow   KANN   will/not will   possibly rain
      "Probably it will/will not rain tomorrow."

In general, kaN may appear in three positions. First, it may occur before *v*P predicates or modals, as shown above in (1) and (2); see R. L. Cheng (1997), Y. Cheng (2000, 2003), Hsieh (2001), Lâu (2010a, b), Lien (2011), Wu (2015), L. Huang (2016), Shyu and L. Huang (2018) and among others, and may express neutral question meaning, this often being treated as variants of *zheng-fan* alternative/ disjunctive questions (e.g., in Tang 1999).

   Second, kaN may co-occur with and precede *sī* 'be' and convey speaker's subjective attitude toward the proposition either in declarative sentences (4) (Lien 2011; Yen 2012) or in presumptive questions (5) (Wu 2015). It has been noted that presumptive questions (either with or without *sī*) are more commonly used than neutral questions (Wei 2010), though the latter usage has recently become more prominent among younger generations and in the southern part of Taiwan (Wang and Lien 2001; Yen 2012; Liu 2013).

(4)   你的皮包仔揣遐 久攏揣無，敢是去予人提去矣.   (Yen 2012: 114)
      Lí   ê   phuê-pau-á tshuē hiah kù   lóng tshuē bô,   kánn sī
      your purse seek   very long also find no,   KANN si   to
      'You have looked   for   your purse for   so   long, but you
      khì   hōo   lâng the-khì-ah
      people take.away
      haven't found   it.
      Probably it was taken away by someone.'

(5) 老王敢是開車來e? (Wu 2015)
　　Láu-óng kám　sī khui　tshia lâi-ê?
　　Lauong KAM SI drive car　come SFP
　　'Did Lauong drive car here?'

In addition to the clause-medial position (4), kaN(*sī*) occurs in the pre-subject position as in (6a). Although this is often treated as a subject focus question reading (6a-i) (e.g. Schaffar and Chen 2001; Wu 2015: 147, etc.), as shown in the second conjunct in (6b), it may be intended to illicit addressee's confirmation of the proposition, as shown in (6a-ii) and (6c). We will turn to this point in Section 3.

(6) a.　敢 是 你 欲 來…？
　　　　Kám　sī　lí　　beh　lâi
　　　　KAM　SI　you　want　come
　　　　i.　"Is it you that will come?"
　　　　ii.　"Is it the case that you will come?"
　　b.　….毋是伊欲 來?
　　　　M̄-sī　　i　　beh　lâi
　　　　not-SI　he　want　come
　　　　'…, not he will come?'
　　c.　….毋是伊欲 去?
　　　　M̄-sī　　i　　beh　khì
　　　　not-SI　he　want　go
　　　　"Is it that you will come, not he will go?"

Similarly, when a negative word *m* co-occurs with *sī,* kaN-*m-sī* delivers speaker's strong presumption of the proposition constituent *P*; for example, *that the addressee has a pearl gown*, in (7).[2]

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2. It seems that interrogative *kám-m-sī* in (7) does not have the epistemic declarative *kánn*(*ná*)–*m-sī* counterpart in such a context, as shown in (i). This phenomenon is expected in our account. As to be shown in section three that *sī* functions as an epistemic modal expressing a speaker's evaluation of actuality/truth of the proposition and when the speaker intends to express his/her subjective inquisitive attitude and weaker presumption, the use of *kánn*(*na*)-*sī* already serves this purpose, as shown in (ii); thus it is redundant to use *m-sī* to modify the speaker's presumption of the *P*. Moreover, if the speaker assumes ~*P*, (iii) is used, in which *kánn*(*na*) qualifies the negative main predicate.

(i)　[??]伊 敢 (若) 毋是 有一領珍珠寶衣.
　　I kánn m̄-sī ū tsit-niá tsin-tsu pó-i.
　　you KANN not SI have one-CL pearl precious clothing
　　'[??]It seems that he has a very precious piece of pearl clothing.'

(7) 你敢毋是 有一領珍珠寶衣?   (Lien 2011: 6)
　　Lí　kám　m̄-sī　ū　tsit-niá　tsin-tsu pó-i?
　　you KAM not SI have one-CL pearl precious clothing
　　'Don't you have a very precious piece of pearl clothing?'

Third, both *kám* and *kánn* may further express *fanjie* rhetorical function as shown in (8) and (9) respectively. Such forms may not express genuine open questions, but the speaker's strong presupposition of ~*P*.[3]

(8) 逐工按呢耍電腦，敢考會著上大學?   (Yen 2012: p. 116)
　　Ta̍k-kang　án-ne sńg tiān-náu, kám　khó-ē-tiâu tāi-ha̍k?
　　everyday　so　play computer (game), KAM　take enter university
　　'You play computer games every day. How can you pass the entrance exam?'

(9) 伊做人安怎 大家敢無看見.   (Lien 2011: 4)
　　I　tsò-lâng án-tsuánn, ta̍k-ke　kánn　bô khuànn-kìnn.
　　he act-man how　people KANN not see
　　'How come people don't see how he treats others!'

Several issues are raised in the study of kaN. While the grammaticalization processes of kaN have been addressed in the typological/functional camp, the extent that contemporary kaN sentence structures related to its grammaticalization path has rarely been delved into. In addition, in the syntactic literature, focus has largely been placed on the interrogative *kám,* which is often categorized as a variant of Chinese A-not-A questions, either on a par with wh-interrogatives (C.-T. Huang 1988, 1991; Huang *et al.* 2009; echoed in Hsiao and Her 2019), or as polar, yes-no questions (R. L. Cheng 1997: 231; T.-C. Tang 1999; Wang and Lien 2001; and Hsieh 2001), or as a polarity marker (Wu 2015; R. Huang 2014). The debates result from the indeterminate functions of *kám* and its syntactic representations. In order to better understand the whole picture of kaN, we suggest that both *kám* and *kánn* be taken into consideration, as a single morpheme referred to here as kaN. The paper

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(ii)　伊 敢 (若) 是 有 一領珍珠寶衣.
　　　I kánn (na) sī ū tsit-niá tsin-tsu pó-i.
　　　he KANN(NA) SI have one-CL pearl precious clothes
　　　'It seems that he has a very precious piece of pearl clothing.'
(iii)　伊 敢 (若) 無 一領珍珠寶衣.
　　　I kánn (na) bô tsit-niá tsin-tsu pó-i.
　　　he KANN(NA) not.have one-CL pearl precious clothes
　　　'It seems that he doesn't have a very precious piece of pearl clothing.'

3. Due to limits of space, we will not list all *kám*'s counterparts, declarative *kánn*(*–na*) sentences. We assume that they have similar syntactic behaviors to interrogative sentences with *kám*.

proposes that kaN is a non-veridical operator, which pertains to the *inquisitive* meaning recently developed in Giannakidou (2013) and Giannakidou and Mari (2018), etc. (credited to Ciardelli, Groenendijk, and Roelofsen 2013, 2018). It is further proposed that *sī* functions as an epistemic modal (cf. MC *shi* in Huang 1988), and the various functions of kaN can be derived at the syntax-pragmatics interface. Eventually the full range of kaN sentences cannot be modeled successfully without reference to the interface of syntax and speech act domains.

2. KaN

KaN is treated as an adverb by Cheng (2000, 2003), as a modal in Tsao (1993), and as a raising verb in Chen and Shen (1998)). Cheng's primary reason for considering it an adverb is that it cannot serve as a fragmental answer to a question (10B), in contrast with regular modal verbs, which can occur as fragmental answers (11B). Cheng further states that unlike regular modal verbs that can be negated (12a), kaN cannot be directly negated as in *kám* question (12b) (Cheng 2000), and the declarative *kánn* sentence in (13).

(10) A: 伊 敢 會 來?　　　　　　　　　　　　　　(Cheng 2000, p. 35)
　　　　　I　　kám ē　　lâi?
　　　　　s/he KAM want come
　　　　　"Will s/he come?"

　　　B: *敢/
　　　　　Kám

(11) A: 伊 會/會當 來?
　　　　　I　　ē/ē-tàng lâi
　　　　　s/he will/can　come
　　　　　"Will/Can she/he come?"

　　　B: 會 / 會當。
　　　　　Ē/Ē-tàng.
　　　　　will/can
　　　　　"Yes."

(12) a. 伊無 可能/袂 當來.
　　　　　I　　bô khó-lîng /bē-tàng lâi.
　　　　　s/he not possible/ can　　come
　　　　　"S/He will not possibly/cannot come."

　　　b. *伊 無/毋 敢 可能來?
　　　　　*I　　bô/m̄　　　　kám khó-lîng lâi?
　　　　　s/he not-have/not KAM possibly come
　　　　　"Will s/he not come?"

(13) *伊 無/毋 敢 (若) 可能來.
　　 *I　　bô/m̄　　　kánn(na)　khó-lîng lâi.
　　　s/he not-have/not KANN(NA)　possibly come
　　　"Impossibly s/he will come."

Moreover, kaN has to be higher than modals and the verb of ū 'have' (17).[4]

(14)　明仔載 敢 會/袂 (*敢) 落雨?
　　 Bîn-á-tsài kám　ē/bē　　　lo̍h-hōo?
　　 tomorrow KAM　will/not.will rain
　　 'Will it/ Will it not rain tomorrow?'

(15)　a.　伊 敢 應該／一定 愛 (*敢)來?
　　　　 I　　kám ing-kai/it-tīng ài　　lâi?
　　　　 you KAM should/have.to must come
　　　　 "Should he come? / Does he have to come?"
　　 b.　伊 敢 愛 (*敢)來?
　　　　 I　　kám ài　　lâi?
　　　　 you KAM must come
　　　　 "Does he have to come?"

(16)　伊 敢 拍算欲 (*敢)去台北?
　　 Lí　　kám　phah-sǹg beh　khì Tâi-pak?
　　 you KAM　plan　　　want go　Taipei
　　 "Does s/he plan to go to Taipei?"

(17)　昨昏 敢 (若) 有 (*敢) 落雨。
　　 tsa-hng　kánn(ná) ū　　lo̍h-hōo.
　　 yesterday KANN　　have rain
　　 'It seems that it rained yesterday.'

In addition, kaN occurs before predicate negation, frequency and Infl-adverbs including tiānn-tiānn 'often', hán-tit 'seldom', bô-tiānn-tiānn 'not.often' as shown below.

(18)　伊 敢 無 (*敢) 愛 來?
　　 I　　kám bô (*kám) ài　　lâi?
　　 s/he KAM not-have　want come
　　 "Does s/he not want to come?"

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4. One might question this point by referring to (i), in which KaN precedes a regular verb "graduate." We assume that it is because here KaN selects an AspP, rather than a bare VP, as indicated by the obligatory *ah* as an aspectual marker.

(i)　你 敢 畢業 *(矣)? (TSM)
　　 Lí kám pit-gia̍p–ah?
　　 you KAM graduate Asp
　　 "Have you graduated yet?" (Shen 1997: 9 #(1b))

(19)　伊 敢 定定/罕得/無定定 (*敢) 來?
　　　Lí　kám　tiānn-tiānn/hán-tit/bô-tiānn-tiānn (*kám) lâi?
　　　you KAM　often/seldom/not-often　　　　　come
　　　"Does s/he often/seldom/not often come?"

KaN can occur either before or after temporal/locational adverbials, which may be topicalized in the CP domain when sentence-initial. Note that kaN also has to precede the auxiliary-like verb *ū* 'have' rather than directly preceding the main verb *tsú pn̄g* 'cook rice', as shown in (21).

(20)　伊 (明仔載)敢 (明仔載) 欲 囝仔 去 公園?
　　　I　(bîn-á-tsài) kám　(bîn-á-tsài) beh　tshuā gín-á　khì kong-hn̂g?
　　　she tomorrow　KAM　tomorrow　want take　children go　park
　　　"Will she be taking the children to the park tomorrow?" (Lin, 2015, p. 416)

(21)　阿明[佇 厝] 敢 有 (*敢) [佇 厝] 煮 飯?
　　　A-bîng (tī tshù) kám　ū　　(*kám)　(tī tshù)　tsú　pn̄g?
　　　A-bing (at home) KAM　have　(KAM)　(at home) cook rice
　　　'Does A-bing cook at home?'

Having seen that kaN operates on a predicate-level category, and its distribution as a predicate modifier, we side with Y. Cheng's position in treating it as an adverb.
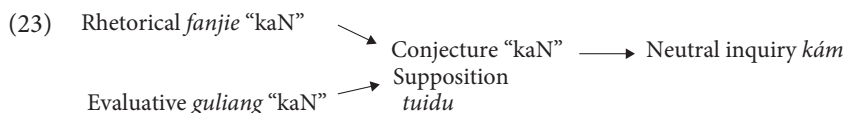
2.1　The development of kaN

KaN's MC written form 敢 *gan* originated from the lexical verb *dare*. In Archaic Chinese, the combination *gan-wen* 'dare-ask' meaning 'boldly ask' frequently occurred (Wei 2010). *Gan-wen* may perform a vocative function (22a) (followed by an interrogative sentence), or function as the matrix predicate selecting either an indirect question (as in (22b)) or a nominal complement, e.g. (22c). The modern MC question particle *gan* has been claimed to be developed from this earlier source (Liu *et al.* 1992: 247; Wei 2010, etc.).

(22)　a.　敢問『薦之於天，而天受之，暴之於民，而民受之。』如何?」
　　　　　(孟子萬章章句上（五）)
　　　　　Gan-wen: "Jian zhi yu tian er tian shou zhi, pu zhi yu min, er min shou zhi. Ruhe?
　　　　　Dare.ask recommend to heaven, heaven receive it, expose (him) to people, people accept him, how? (*Mencius* 4th B.C.)
　　　　　'I presume to/boldly ask: how was it that [Yao] presented him [Shun] to Heaven, and Heaven accepted him; and that he exhibited him to the people, and the people accepted him?"

b. 敢問此何神也 (左傳/昭公)
Gan-wen ci he shen ye (*Zuo Zhuang* 771–476 BC)
dare-ask this what god SFP
'May I boldly ask what this god is?'

c. 敢問明王之治 (莊子/應帝王)
Gan-wen ming wang zhi zhi (*Zhuangzi* 369–286 BC)
dare-ask prudent emperor POSS govern
'May I boldly ask the governing of a prudent emperor?'

Of the various functions of kaN presented above, epistemic *kánn* in declarative sentences, *kám* (neutral and presumptive) questions, and both in rhetorical uses, studies have shown that the rhetorical usage was developed early (Zhang 1990, Wei 2010, Liu 2013 among many others). KaN then later developed epistemic and conjectural meanings (Cheng 2000, 2003; Yen 2012, among many others), typically occurring before the predicate or the modals, as exemplified in (1); see R. L. Cheng (1997), Lâu (2010a, b), Lien (2011), among others. The neutral question use of kaN in modern usage has been gaining more prominence recently (Wang and Lien 2001; Wei 2010; Liu 2013). In her study of various dialects of Southern Min question types, Liu (2013) adopts M. Zhang's (1990) development sequence of the same cognates (*kam, kan, ka^n*) in Xianmen dialect, in which three types have been categorized: (i) rhetorical (*nandao, zenme* 'how come') or evaluative meaning (*perhaps, afraid*)*,* (ii) conjecture/ supposition *tuidu* (*mofei, probably, really?*), and (iii) neutral question use, as schematized below.

(23)   Rhetorical *fanjie* "kaN"
              Conjecture "kaN" ⟶ Neutral inquiry *kám*
              Supposition
              tuidu
       Evaluative *guliang* "kaN"

Following this line of thinking, Liu (2013), in her field study of various dialects of Southern Min, has found that the first two types are used more often in conformity with Wei's (2010) account. However, she has further observed that the *kám*-VP neutral question is growing more common than other question types especially for participants aged from 15~34 (similar results reported in Wang and Lien 2001), and preponderantly used by Tainan accent participants (more than 50% among various questions types: VP-bo/bue, VP-or-not-VP, VP-m/bo-VP, and *kám*-VP).

These typological and functional studies provide us insight to the nature of kaN in TSM. Previous synchronic studies which have simply focused on *kám* questions may fall short of capturing the whole picture of kaN, for example Wu's (2015) analysis of treating *kám* as a polarity particle with [±Pol] feature (cf. Holmberg 2015). By contrast, the current paper proposes that kaN intrinsically is a non-veridical operator, and the question or epistemic readings are derived. In light of Tsao's (1993)

and Y. Cheng's (2000) observations, the morpheme kaN has two allomorphs, *kám* and *kánn,* in complementary distribution. Use of the former conveys the speaker's doubt and inquires about the existence or possibility of the constituent proposition, *P,* expressing this in the form of a question. Use of the latter form indicates that the speaker speculates on the possibility of *P,* in a declarative sentence form. This line of thinking is supported by the examples in (24), which R. L. Cheng (1997) notes is three-ways ambiguous, corresponding to (i) a *kám* question, (ii) an epistemic supposition with *kánn*, and (iii) a rhetorical use.

> (24) 你 敢 袂曉 駛 直直 (R. L. Cheng 1997: 260)
> Lí kaN bē-hiáu sái tit-tit
> he kaN cannot drive straight
> 'Can't you drive straightly?'
> i. The speaker asks the addressee to respond to the speaker's assertion.
> ii. The speaker asserts [speculates] that the addressee should be able to drive straight.
> iii. The speaker claims [presumes] and complains that the addressee is not driving straight.

2.2 KaN as a non-veridical operator

In the previous section, we have seen that kaN can precede epistemic modals (e.g., in (2) and (3)), deontic modals as in (1), existential verbs (21), and the subject as in (6), but cannot occur after these modals or existential verb. In addition, kaN cannot immediately precede the regular verb as in (25). This indicates its position is higher than modals and the existential verb. We further show that *kám* should not be categorized as a type of MC V-not-V question.

> (25) a. *伊 敢 來?
> I kám lâi?
> you KAM want come
> 'Does he come?"
> b. *伊 敢 來.
> I kánn lâi.
> you KANN want come
> 'He probably comes.' (Cheng 2000: 35)

Likening *kám* to MC alternative questions, Huang (1988, 1991), Huang *et al.* (2009: 253) have suggested that TSM *kám* be a type of V-not-V as such question forms are in complementary distribution; for example (26b) is ungrammatical as the V-not-V form and *kám* seem to compete for the same position.

(26)   a.   阿財是毋是醫生?
            A-Tsai si-m-si i-sing
            A-Tsai sɪ-not-sɪ doctor

      b.   *阿財敢是毋是醫生?   (TSM: Shen 1997: 80 #(12))
            *A-Tsai kam si-m-si i-sing?
            A-Tsai ᴋᴀᴍ sɪ-not-sɪ doctor
            "Is A-Tsai a doctor or not?"

However, questions arise as to what extent TSM actually allows V-not-V forms. Hsieh (2001) has noted that there is only a restricted number of verbs that are allowed in this form, limited to *sī* 'be*', *bat* 'know', and modals like *kánn* 'dare', and V-not-V questions are not as productive as those in MC – also see Tang (1999), and Hagstrom (2005). V-not-V forms using other verbs are considered unacceptable in TSM according to our native informants, as shown in (27).

(27)   a.   *你 恨不恨/??愛不愛這個人? (TSM: vs. Huang 1991: 327)
            Lí   hūn-m̄-hūn/ài-m̄-ài   tsit-ê lâng?
            you hate-not-hate/like-not-like this   person
            "Do you hate/like this person?"
      b.   *你 走毋走／行毋行? (TSM)
            *Lí   tsáu-m̄-tsáu / kiânn-m̄-kiânn?
            you run-not-run / walk-not-walk
            'Do you run / walk or not?'

Since V-not-V is not productive in TSM, it is not clear whether the ungrammatical (26b) is due to any allomorphic complementary distribution between *kám* and V-not-V (as Huang suggested) or the prohibition against its co-occurrence with *sī-m-sī*. Thus, it can be concluded that *kám* is not the counterpart of MC V-not-V. Additionally, we follow the view present in other works that *kám* is parallel to TSM *sī-m-sī* and MC *shi-bu-shi* in questions. This has a consequence that *kám*, *sī-m-sī* (*shi-bu-shi*) should be distinguished from and structurally higher than MC V-not-V, cf. Hsieh (2001), vs. Gasde (2004).

   Another reason for not equating *kám* with V-not-V is that while MC V-not-V questions cannot be modified by "predicate-related adverbs" including temporal/ frequency/ manner/ subject-oriented/ reason/ instrument adverbs, etc.), as acknowledged by Ernst (1994) and Law (2006), etc. in (28), *kám* can combine with adverbs such as *tiānn-tiānn* 'often', *hán-tit* 'seldom', *bô-tiānn-tiānn* 'not.often' and precedes these elements. If *kám* were to be parallel to MC V-not-V, TSM examples such as (29) should not have been possible. Note that in (29) kaN cannot appear after these adverbs, repeated from (19).

(28) *Zhangsan changchang/quanshenguanzhudi kan-bu-kan   dianshi? -MC
     Zhangsan often/attentively   watch-not-watch TV
     'Does Zhangsan watch TV often/attentively?'

(29) 伊 敢 定定/罕得/無定定 來? = (19)
     í   kám   tiānn-tiānn/hán-tit/bô-tiānn-tiānn lâi?
     you KAM often/seldom/not-often   come
     "Do you often/seldom/not often come?"

We therefore assume that the kaN particle lexically is an adverb (Cheng 2000, 2003) that merges with a proposition taking projections, such as TP, ModP or *v*P, but not VP.[5] Moreover, it has syntactic non-veridical [? Q] feature, whose positive and negative value is to be checked via covert raising to Int(erogativeP or C(lause)T(ype) in the clause left periphery to be rendered as either a question *kám* or epistemic *kánn* sentences.[6]

(30)   [IntP/CT [±Q] … ^ [TP ^ [ModP … ^ [*v*P …[VP]]]]]
    ("^" indicating the possible positions of kaN)

Thus, our analysis of kaN as a non-veridical operator explains the observation that both question *kám* and epistemic *kánn* do not contribute to the truth condition of the utterance. This is in line with the issues related to nonveridical contexts which may include modality (Beaver and Frazee 2016) and inquisitive sentences (Giannakidou 1998, 2001, 2013; Giannakidou and Mari 2018; and references cited therein), as they do not entail the proposition they combine with, as in (31).

(31) a. Did Paul see a snake? ↛ Paul saw a snake.
     b. Paul may have seen a snake. ↛ Paul saw a snake

                                                     (Giannakidou 2001: 672)

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5. Hsieh (2001) positions *kám* in T, which is argued to be the locus of yes-no question, whereas A-not-A [+Q] (such as in Suzhou) is suggested to be located in the head of QP, lower than T. However, our analysis does not restrict kaN's position to T^0 on account of its pre-predicate distributions on a par with those of modal adverbs.

6. The contrast in (i) indicates that wh-indefinite licensing requires a particular syntactic configuration, e.g., Li (1992), vs. Shaffar and Chen (2001); that is, kaN should be syntactically higher than the subject *siánn-lâng*.

(i) a. 敢 (有)啥人 漏洩 這个 秘密
       kaN ū   siánn-lâng lāu-siȧp tsit-ê pì-bit
       kaN have what-person disclose this-CL secret
       'Did anyone disclose this secret?/Probably someone disclosed this secret.'
    b. *啥人 敢漏洩 這个 秘密
       siánn-lâng kaN lāu-siȧp tsit-ê pì-bit?
       what-person kaN disclose this-CL secret

In addition, as the non-veridical operator can license polarity items (Giannakidou 1998, 2001 among many others), kaN can do so too. *Siánn-mih* 'what thing' is interpreted with a *what*-indefinite reading in *kám* question (32), and *kánn* sentence (33).[7]

(32) 伊 敢 有 講 啥物?
    I   kám   ū   kóng siánn-mih?
    s/he KAM have say   what-thing
    'Did s/he say anything?'

(33) 伊 敢 有 講 啥物.
    I   kánn   ū   kóng siánn-mih.
    s/he KANN have say   what-thing
    'S/He probably said something.'

2.2.1 *Island sensitivity*

Shen (1997) has noted that the occurrence of *kám* in questions is restricted by typical island conditions.[8] Here we further show that the same island sensitivity also occurs with *kánn* cases, as in (34b) through (37b). This indicates that non-veridical kaN needs to raise to CT/IntP to check the clause type feature.

(34) Sentential subject
    a. *[伊 敢 有 來] 較 好? (TSM: Shen 1997: 61 #(48))
        *[I kám ū lâi] khah hó
        he KAM have come more better
    b. *[伊 敢 若 有 來] 較 好.
        *[I kánn-na ū   lâi]   khah hó
        he KANN-NA have come more better
        '*It is better that (it seems to me) he can come.'

(35) Complex DP
    a. *伊佮意 [敢 講 英語] 的 人 (TSM: Shen 1997: 67 #(59))
        *I kah-ì [kám kóng Ing-gí] ê   lâng
        he like   KAM   speak English Comp man
        "*Does he like the person who whether speaks English or not?"

---

7. TSM speakers who do not use epistemic *kánn* do not have intuitions about this example; instead they use *kánn-ná*, which serves the same purpose for the current study. We will use *kánn-ná* to check the island sentences in the following section.

8. Huang (1991) was the first to show the island sensitivity observed in MC V-not-V sentences. Though we have shown that TSM kaN is not parallel to MC V-not-V, the ungrammatical sentences (34) through (37) indicate that kaN operator requires covert raising as well.

b. *伊佮意 [敢 若 講 英語] 的 人.

  *I kah-ì [kánn-ná kóng Ing-gí] ê   lâng

  he like   KANN-NA speak English Comp man

  '?*He likes the person who (it seems to me that) speaks English.'

(36) Adjunct island

a. *這件 代誌 [共 伊 敢 無 來] 無關係? (TSM: L.-S. Huang 2016: 70)

  *Chit-kiāⁿ tāi-chì [ka i kám bô lâi]   bô-koan-hē

  this   matter with he KAM not come not-have-relation

  '*Doesn't it have to do with whether he will not come or not?'

b. *這件 代誌 [共 伊 敢若 無 來] 無關係.

  *Chit-kiāⁿ tāi-chì [kah i   kánn-ná bô lâi]   bô-koan-hē

  this   matter with he KANN-NA not come not-have-relation

  '*This matter has nothing to do with that probably he would not come.'

(37) wh-island

a. *我 知影 [伊 為啥物 敢 自殺] ? (TSM: Shen 1997: 68 #(62))

  *Góa chai-iáⁿ [i ūi-siáⁿ-mih kám chū-sat]?

  I   know he why   KAM commit-suicide

  '*I know why whether he commits suicide.'

b. *我 知影 [伊 為啥物 敢若 自殺].

  *Góa chai-iáⁿ [i ūi-siáⁿ-mih kánn-ná chū-sat]

  I   know he why   KANN-NA commit-suicide

  '*I know why probably he commits suicide."

2.2.2 *Intervention effect*

In this section, we demonstrate that the covert movement of kaN OP is further supported by the occurrence of intervention effects involving focused elements. Following the observation that quantificational and scope bearing elements appear to block covert wh-movement in German, Korean, and Japanese, creating an 'intervention effect' (Beck 1996; Beck and Kim 2006), Yang (2012, 2015) has proposed a "competition effect" in Mandarin Chinese, in which a focus operator/Op (e.g., *shi* 'be', *lian* 'even') competes for the Comp position with the question Op(erator)s binding wh-argument variables (Aoun and Li 1993; Tsai 1994) as illustrated in (39).

(38) a. 是張三吃了甚麼? (MC)

  Shi Zhangsan chi-le   *shenme*?

  SHI Zhangsan eat-ASP what

  'What was x such that it was Zhangsan who ate x?'

b. 連張三都吃了甚麼? (MC)

  Lian Zhangsan dou chi-le   *shenme*?

  LIAN Zhangsan all   eat-ASP   what

  'What did   even Zhangsan eat?'

                                 (Mandarin Chinese: Yang 2015: 156)

(39)

```
        ┌ ─ ─ ─ ─    F-Opi …
     * [CP ↓___    [IP   F-subjectᵢ  ….wh-objectₖ]]        --Competition effect
        ↑                                  Q-Opₖ
        └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
```

<div align="right">(Yang 2012, 2015: 158)</div>

This intervention effect is also observed in kaN sentences. When kaN occurs after a *liân*-phrase (as in (40)) or *kan-na* 'only' (42), the result is ungrammaticality; however, such forms become grammatical when kaN precedes the focused phrase as in (41) and (42).[9]

(40)   a. ?*阿明連飯敢攏毋食? [10] (TSM)
       A-Bîng *liân* pēng lóng kám m̄-tsia̍h?
       A-Bing ʟɪᴀɴ rice   all   ᴋᴀᴍ not eat
       'Is it the case that A- Bîng does not eat even rice?'

---

9. Although the focus intervention effect is also observed in the MC V-not-V and *shi-bu-shi* sentences (Shyu and Huang (2018)), as shown in (i) (*lian-* 'even') and (ii) *zhi-* 'only' sentence respectively, when the focused phrase occurs after *shi-bu-shi*, as in (iii) and (iv), these sentences become grammatical. This contrast further supports the view that kaN's position is higher than MC V-not-V, and parallel to MC *shi-bu-shi*; see (41) and (42).

   (i)   a.   *張三連飯都吃不吃? (MC)
              *Zhangsan lian fan dou chi-bu-chi?
              Zhangsan ʟɪᴀɴ rice all   eat-not-eat
              '*Did Zhangsan eat even rice?'
         b.   ?張三連飯是不是 都不吃? (MC)
              Zhangsan lian fan shi-bu-shi dou bu-chi?
              Zhangsan ʟɪᴀɴ rice ꜱʜɪ-not-ꜱʜɪ all not-eat
   (ii) a.   *張三 只 喜不喜歡 瑪莉? (MC)
              Zhangsan zhi xi-bu-xi huan Mali?
              "Does Zhangsan only like Mary?"   (Hagstrom 2005)
         b.   *張三 只 是不是 喜歡 瑪莉? (MC)
              Zhangsan zhi shi bu shi xi huan Mali?
   (iii) 張三是不是 連飯都不吃? (MC)
         Zhangsan shi-bu-shi lian fan dou bu chi?
         Zhangsan ꜱʜɪ-not-ꜱʜɪ ʟɪᴀɴ rice all   not eat
         'Is it the case that Zhangsan does not eat even rice?'
   (iv) 張三是不是 只吃飯? (MC)
         Zhangsan shi-bu-shi   zhi   chi fan ?
         Zhangsan ꜱʜɪ-not-ꜱʜɪ only eat rice
         'Is it the case that Zhangsan eats only rice?'

10. This sentence, also (ib) in footnote 9, could be acceptable when *liân pēng* 'even rice' is rendered as a base-generated topic element (cf. the clause-internal moved focus vs. based-generated topic *lian*-phrase in MC discussed in Shyu (1995, 2014)), irrelevant to the current discussion.

b. ??阿明 連飯敢 攏毋食。

A-Bîng *liân* pīng kánn lóng m̄-tsiàh.

A-Bing LIAN rice KANN all not eat

'It seems that A-Bing didn't eat even rice.'

(41) a. 阿明敢 (是)連飯攏毋食? (TSM)

A-Bîng kám (sī) *liân* pīng lóng m̄-tsiàh?

A-Bing KAM (SI) LIAN rice all not eat

'Is it the case that A- Bîng does not eat even rice?'

b. 阿明 敢若 (是) 連飯攏毋食。

A-Bîng kánn-ná (sī) *liân* pīng lóng m̄-tsiàh.

A-Bing KANN-NA (SI) LIAN rice all not eat

'It seems that A-Bing didn't eat even rice.'

(42) a. 阿明 敢 干焦 / *干焦 敢 佮意 阿美?

A-Bing kám kan-na/ *kan-na kám kah-ì A-Bi?

A-Bing KAM only/ *only KAM like A-Bi

"Is it the case that A-Bing only likes A-Bi?"

b. 阿明 敢 若 干焦 / *干焦 敢 若 佮意 阿美.

A-Bing kánn-ná kan-na /*kan-na kánn-ná kah-ì A-Bi?

A-Bing KANN-NA only/ *only KANN-NA like A-Bi

"It seems that A-Bing only likes A-Bi."

While Yang (2015: 174) shows that downward entailing/DE quantificational phrases like *meiyouren* 'nobody' or *henshaoren* 'few people' intervene the covert movement of the V-not-V operator in MC (43), we further show that kaN also observes the intervention effects (45), presumably same with MC *shi-bu-shi* (44).

(43) *很少人/沒有人修不修車? (MC: Yang 2015: 174)

*Henshaoren/ Meiyouren xiu-bu-xiu che ?

few.people/ nobody fix-not-fix car

'Do(es) few people/nobody fix cars or not?'

(44) *很少人/沒有人是不是修車?

*Henshaoren/ Meiyouren shi-bu-shi xiu che ?

few.people/ nobody SHI-not-SHI fix car

'Do(es) few people/nobody fix cars or not?'

(45) *無 講 蓋 濟 人/ *無 人敢 是 會曉 修理 車?

*Bô kóng kài tsē lâng / *Bô lâng kám sī ē-hiáu siu-lí tshia?

not-have.say very many people/ not-have people KAM SI can fix car

(46) a. 敢是無講蓋濟人/ 無人會曉修理車?
　　　　 Kám sī bô　　　 kóng kài tsē　 lâng/　 bô　　 lâng　 ē-hiáu
　　　　 KAM SI not-have say　 very many people/ non-have people can
　　　　 siu-lí tshia?
　　　　 fix　 car
　　　　 'Is it that few people/nobody can fix the car?'

　　　 b. 敢若是無講蓋濟人 / 敢若是無人會曉修理車.
　　　　 Kánn-ná sī bô kóng kài　 tsē lâng/　 Kánn-ná bô　　　 lâng
　　　　 KANN-NA SI not very many　　 people/ KANN-NA non-have people
　　　　 ē-hiáu siu-lí tshia
　　　　 can　 fix　 car
　　　　 'It seems that few people/nobody can fix the car.'

In (45a), *kám* cannot follow downward entailing subject quantifiers like *bô kóng kài tsē lâng* 'not so many people' or *bô lâng* 'nobody'. We can attribute the ungrammaticality of TSM in (45a) to two reasons. First, topicalization of the DE quantifier tends to be less acceptable in the first place. Second, the DE quantifier phrase can be suggested to intervene covert movement of the kaN OP to a higher Int(errogative) P, as illustrated in (47). By contrast, when the DE subject quantifier remains in its subject position without being topicalized, sentence (46) is grammatical.

(47) *[IntP kaN OP< Q >　　 …[TopP bô lângi]　　 [TP…ti..]]　　　 --at LF

Additionally, non-DE quantifiers in TSM like *ta̍k ê lâng* 'everyone' seem to create a similar intervention effect as well, as shown in the contrast between (48a) and (48b), although the intervention effect seems to be milder to some extent, for reasons that await future study.

(48) a. ʾ濟濟 人/ ?逐 个 人敢 是 攏 會曉 修理 車? (TSM)
　　　　 *Tsē-tsē lâng/?Ta̍k ê　 lâng kám　 sī　　 lâng lóng ē-hiáu
　　　　 many　 person/every CL　 person KAM SI　 all　 can
　　　　 siu-lí tshia?
　　　　 fix　 car
　　　　 'Can many people/ everyone fix cars or not?'

　　　 b. 敢 是 濟濟 人/逐 个 人攏 會曉 修理 車?
　　　　 Kám sī tsē-tsē lâng　 / ta̍k　 ê　　 lâng lóng ē-hiáu siu-lí tshia?
　　　　 KAM SI many person / every person all　 can fix　　 car
　　　　 'Is it many people / everyone or not that can fix cars?'

Having seen the intervention effects observed in kaN sentences, in the following section, we discuss the nature of *sī* 'be' and its co-occurrence with kaN.

3.   A modal analysis of *sī*

As mentioned earlier, kaN often co-occurs with *sī*, and such sentences usually en-code a stronger speaker's supposition toward the proposition constituent. To better understand kaN-*sī*, we need to first consider the nature of *sī*. Among multiple functions of *sī*, Lien (2009) identifies two main types: copula and focus marker. As for *kám-sī* questions, it is tempting to treat *sī* as a focus marker. This is indeed the position taken by Lâu (2010b), and Wu (2015), the latter of whom positions *sī* or the negative *m-sī*, the focus marker (ғм), as the head of FocP above TP, and *kám* bears the [±Pol] feature of the proposition that must "combine with the ғм [focus marker] *sī* or Neg-ғм *mi-sī*" as in (49) (p. 152). According to her, this FocP is further responsible for the answer particle *sī a* 'yes" or *m-sī* 'no.'

(49)   敢是老王有去台北？
      kám sī Láu-óng ū   khì Tâi-pak?
      ᴋᴀᴍ sɪ Lauong have go Taipei
      'Is it the case that Lauong went to Taipei?'

We cannot discuss question-answer patterns with *kám* sentences here due to limits of space. However, treating *sī* in Foc leaves problems unexplained. First, sentence (6a), repeated below in (50), conveys speaker's supposition of the probability of *P*: you (the hearer) want to come, and the speaker's intention to confirm his/her sup-position. Now consider (51) with negative *m-sī*, which however does not differ from affirmative (50): the speaker in both sentences conveys his/her strong supposition toward *P*: you, the hearer, want to come. In other words, the negation here does not operate on the clause proposition. By contrast, this is not expected for regular negation operating on focus. In (52b), the negation negates the focused phrase *kan-na* DP 'only' rendering *m-nā/ m-sī kan-na* 'not only' DP.

(50/6a)   敢 是 你 欲 來…？
        Kám sī lí beh lâi
        ᴋᴀᴍ sɪ you want come
        i.   "Is it you that will come?"
        ii.   "Is it the case that you will come?"

(51)   敢 毋是 你 欲 來…？
      Kám m-sī lí   beh lâi
      ᴋᴀᴍ not-sɪ you want come
      'Isn't it the case that you want to come?'

(52)   a.   干焦 阿明 有 來(爾／爾爾)。
          Kan-na A-bîng ū   lâi (niâ / niā-niā)
          only   A-   bîng have come
          'Only A-bîng came.'

b. 毋但／毋是干焦 阿明 有 來，其他 的 人 嘛 有 來。

    M̄-nā /m-sī kan-na A-bîng ū   lâi, kî-tha(nn) ê   lâng
   not   only/ not-sɪ only A-bîng have come,   other people
   mā ū   lâi
   also have come
   'Not only A-bîng came, but also others came.'

One might suggest that *m-sī* in (51), which does not negate the main proposition, differs from clause-internal predicate negation. However, this point cannot be held either. Although (7), repeated below, contains a clause-internal *kám-m-sī,* it does not differ from the use of *kám-sī* in term of having the same presumption, i.e. *P,* the addressee having pearl clothes. Thus, the clause-internal *m-sī* here does not negate the main predicate either.[11]

(7)   你敢毋是 有一領珍珠寶衣? (Lien 2011: 6)
    Lí   kám m̄-sī ū tsit-niá tsin-tsu pó-i ?
    you ᴋᴀᴍ not-sɪ have   one-ᴄʟ pearl precious clothes
    'Don't you have a very precious pearl clothes?'

We will show later that the negation actually operates on speaker's evaluation of his/her presupposition, coupled with the non-veridical kaN to raise uncertainty about *P*. Consequently, the interface between syntax and discourse is called for. We will come to this in turn.

3.1   Assertion of a proposition vs. assertion of a proposition's truth

We have shown that kaN-*sī* contributes speaker's presumption of the proposition and its negative kaN-*m-sī* does not negate the main proposition. This leads us to reconsider the widely held view of *sī* as being a focus marker or a marker asserting the propositional constituent; cf. rich literature on Mandarin *shi*. Moreover, previous studies on Mandarin *shi* (presumably same as TSM *sī*) have largely assumed that the *shi* sentence does not differ from the non-*shi* sentence in that they both assert the proposition as there is no difference in the truth-condition of the sentences. It

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11. This point can be further supported by the answers to these questions. *Tiȯh–ah, hènn – ah* confirms speaker's presupposition, rather than *sī – ah* in answering (50), especially for native speakers who are less influenced by Taiwan MC.

(i) A. 著–啊／嘿–啊／*是–啊，伊 欲 來。
        Tiȯh–ah / Henn–ah / *Sī–ah, i beh lâi.
        right–sғᴘ / yes–sғᴘ / *yes–sғᴘ, he want come
        "Yes, he wants to come."

is beyond the scope of the current study to delve into the distinctions of *sī/shi* and non-*sī/shi* sentences, which will be left for future work.[12] Nevertheless, we suggest that *sī* be better treated as a modal category (cf. Huang's (1988) modal analysis of MC *shi*) on account that modality refers to "any kind of speaker modification of a state of affairs," or "qualifications of states of affairs" (Nuyts 2006: 1). Specifically, we aver that *sī* is used to express speaker's full commitment to the actuality of the states of affairs or the *truth* of the proposition. In other words, we suggest that cononical sentences (without *sī/shi*) are used to assert the proposition content, whereas *sī/shi* sentences are uttered by the speaker to assert the actuality, truth of the propositional content.

This line of thinking calls for a finer distinction between the "assertion of a proposition" (in the assertoric sentence) and the "assertion of the proposition's truth" (cf. Sher and Wright 2007).[13] When a speaker utters a non-modal statement of fact (assertion), he/she is committing himself/herself to the truth of what is asserted (on account of the felicity condition in the context). By contrast, the speakers' commitment to the truth of the proposition constituent may be qualified by the use of modal terms to express his/her judgment of the possibility or necessity toward the proposition content. In the literature, 'propositional modality' is concerned with "the speaker's attitude to the truth-value or factual status of the proposition;" and "with epistemic modality speakers make judgments about the factual status of the proposition" (Palmer 2001: 24).

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12. It is beyond the scope of this paper to compare TSM *sī* and the so-called VERUM focus (cf. Höhle 1992), particularly with regard to the VERUM focus properties discussed in Gutzmann and Castroviejo Miró (2011). We will leave this for future research.

13. In their discussion of the concept of "truth," Sher and Wright (2007) combine Kant's analysis of truth as a modality of judgment and Frege's analysis of truth as a norm, and then formulate their Immanence Thesis "as the view that truth lies at the juncture of three basic modes of thought" (p. 295). Their first *immanent mode* as the mode of "attributive thinking" ("Pegasus is a flying horse"), a domain of "potential truth-bearers". Their second *transcendent mode* questions about the immanent thought: "Are things as ψ (immanent mode) says they are?". Then the third *normative* or *critical mode*: "a normative conception is created and an alethic property identified" (p. 298).

Sher and Wright further emphasize the role of truth plays in the "context of synthesizing cognitive states into judgments in the alethic mode, ultimately leading to the possibility of knowledge" (p. 300), which motivates the account of the cognitive and epistemic nature of truth. They address the need of distinguishing *alethic* and epistemic uses of modals on account of the mode of actuality that is often reduced to possibility mode of knowledge. Their study addressing the distinction between asserting the proposition content (truth-judgment in the "basic modes of thought") and asserting the actuality/possibility/necessity of the truth of the proposition is illuminating. Further research is needed to articulate how MC *shi* and TSM *sī* can be better explained on account of the two levels of evaluation of truth.

If we are on the right track of treating *sī* as an epistemic modal, its translated expressions, *it is true, indeed,* indicate its function of making evaluation/judgment of the *actuality/factuality* or truth of the status of the proposition. This then follows from the fact that *shi/sī* sentences are not uttered out of the blue, unlike non-*shi/ sī* counterparts. Moreover, the speaker's judgment can be qualified by being preceded by evaluative adverbs, such as *tik-khak* 'indeed' or the possibility modal like *khó-lîng* and *kann* in (53b).[14]

(53) a. 阿明 是 有 來.
          A-bîng *sī* ū   lâi
          A-bîng sɪ have come
          'It is true that A-bîng came.'

      b. 阿明 的確 是/可能 是/ 敢是 有 來.
          A-bîng tik-khak sī/ khó-lîng sī/kann sī ū   lâi
          A-bîng indeed sɪ/ possible   sɪ have come
          'Indeed/Possibly A-bîng came.'

Consequently, our proposal naturally explains why *sī*, as the basic type of the notion of truth (cf. Portner 2009: 10), can be collocated with other (extended) epistemic modals, such as *it-tīng sī* 'definitely,' *tik-khak sī* 'truly,' *khó-lîng sī* 'possibly' (cf. the study of TSM modals in Hsin and Tang 2004) as in (53) and (54), rather than with deontic modals conveying permission 'can' *ē-sái*, or ability *ē-hiáu* in (55).

(54) 伊一定(是)/的確(是)/可能 (是)去看電影了
      i   it-tīng   (sī)/   tik-khak(sī)/ khó-lîng sī khì khuànn tiān-iánn-ah.
      he definitely sɪ/truly sɪ/   possibly sɪ go see   movie   sfp
      'He surely/definitely/possibly went to see a movie.'

(55) a. 我會使 (*是)去看電影了
          Guá ē-sái (*sī) khì khuànn tiān-iánn-ah.
          I   may sɪ go see   movie   sfp
          'I can go to see a movie.'

      b. 這條歌你會曉 (*是)唱袂?
          Tsit tiâu kua lí ē-hiáu (*sī) tshiùnn-bē?
          This-cl song you able sing not

The proposed modal analysis of *sī* further solves the long-standing puzzle of the impossibility of the "clefted object focus" in *sī* sentences. Like other pre-predicate modals, *sī* naturally has to precede the predicate. It has been widely noted that TSM

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14. The co-occurrence of *sī* and epistemic modals is reminiscent of the "modal spread" phenomenon discussed in Giannakidou and Mari (2018), in the sense that two modal terms are interpreted as a single modality.

sī (and MC *shi*) cannot occur after the main verb and immediately precede the object; see Shyu's (2016) review of MC *shi*. Previous cleft analyses of TSM *sī* (MC *shi* as well) cannot explain why *sī* can immediately precede the subject (rendering "subject focus") and the main predicate, but cannot immediately precede the object for the intended "object focus", a phenomenon not attested in English and many Indo-European languages.

(56) 是伊打破. (Lien 2009: 748)
  sī i phah phoa.
  sī he phah-phuà.
  'HE broke it.'

(57) 我是罵 (*是)益春，不敢罵你. (Lien 2009: 751)
  Guá sī mā (*sī) Ik-tshun, m̄ kánn mā lí
  I sɪ scold Yichuan not dare scold you
  'I scolded Yichun, not you.'

Like other epistemic modals functioning as raising predicates, these elements may precede the subject as well, echoing Huang's (1988) analysis of categorizing MC *shi* into a raising predicate.

(58) 一定(是)/的確(是)/可能 (是) 伊去看電影了
  it-tīng (sī)/ tik-khak(sī)/ khó-lîng (sī) i khì khuànn tiān-iánn-ah.
  must sɪ/ definitely sɪ/ possibly sɪ go see movie sғᴘ
  'He surely/definitely/possibly went to see a movie.'

Finally, our epistemic modal analysis of *sī* predicts that the hearer's answers to *kám-sī* questions evaluate the possibility of *P*. This applies to cases where *kám* co-occurs with other epistemic modals such as *ū-khó-lîng* 'possibly.' The answers to (59Q) question express the degree of the possiblity of *P*, rather than the truth-condition of the clause proposition.

(59) Q: 阿明 敢 有可能 咧 挵門?
   A-bîng kám ū-khó-lîng leh lòng-mɯ̂ng?
   A-bîng ᴋᴀᴍ possibly Progressive knock door
   'Is it possible that A-bing is knocking on the door?'
  A1: 有可能 / *著 / *嘿 / *是。
   Ū-khó-lîng / *Tiỏh / *Hennh / *Sī.
   Possible/ *Right/ *Yeah/ *Yes.
  A2: 無可能 / *毋著 / *毋是。
   Bô-khó-lîng / *M̄-tiỏh / *M̄-sī.
   Not-possible/ *Not-right/ *No

3.2   Nonveridical equilibrium

Our claim that kaN is a non-veridical operator categorizes the epistemic *kann* declarative sentence and the *kám* question as a natural group of expressing the inquisitive meaning. This approach lends further support to the identification of a natural class of inquisitive sentences, which convey epistemic states that allow *p* and *~p*, including modal verbs, questions and disjunctions (Giannakidou 2013; Giannakidou and Mari 2018) in light of the inquisitive semantics developed by Ciardelli, Groenendijk and Roelofsen (2013, 2018). This type of sentences expresses an anchor's (i.e., the speaker in the non-embedded sentences) conjecture on the propositional content. One of the issues concerns whether questions and assertions are necessarily dichotomous and categorical as traditionally thought. Giannakidou (2013) and her subsequent works argue that the inquisitive sentences as a natural class do convey non-trivial informative content, and the inquisitive meaning is "semantically non-dichotomous" (p. 117). Our study shows that traditional dichotomous question and assertion categories cannot provide a full account for TSM kaN sentences, thus in support of this non-dichotomous view.

This analysis does not only pertain to the recently developed inquisitiveness, but also receives cross-linguistic support. Kang and Yoon (2020) have shown that the modalized questions like (60) and (61) are not used for requesting information but for enhancing a speaker's epistemic uncertainty. To convey the speaker' question about the possibility of the propositional contents, they may be self-addressed questions and do not necessarily obligate the hearer to respond. On account of Korean *-nka*, an inquisitive disjunction morpheme, they further claim that "three distinct notions of disjunction, questions, and possibility modality can be unified under the framework of *nonveridical equilibrium*" developed by Giannakidou 2013; Giannakidou and Mari 2018).

(60) Japanese
    a.   John-ga   kuru darou.
           John-NOM come DAROU
           'John is coming, I bet. ≈ Probably, John is coming.'
    b.   John-ga   kuru ka?
           John-NOM come Q
           'Is John coming?'
    c.   Yurie-wa wain-o   nomu **darou-ka**.
           Yurie-TOP wine-ACC drink DAROU-Q
           'I wonder if Yurie drinks wine.'
                                (Hara and Davis 2013: Examples (1),(2),(7))

(61) Korean   (Kang and Yoon 2020: 210)
      Con-i   wusungca-i-**nka**?
      John-NOM winner-be-NKA
      'Maybe John is the winner, maybe not?'

As it is beyond the scope of this paper to elaborate on the comparisons of the inquisitive sentences among these languages, we will leave the study for future research. In the next section we further show how various kaN and kaN-*sī* sentences are derived at syntax-pragmatic interfaces.

4. Syntax-pragmatics interface

Having described the properties of *kám* and *sī,* in this section we discuss the derivations which render their interpretations. In light of the cartography of finer structure of CP in Rizzi (1997, 2004), Cinque (1999), among many others, significant advances have been made in representing the finer syntactic structure of the speech act domain, which has been traditionally considered to be peripheral to syntactic domain of grammar, e.g., the Speech Act Phrase (SAP) in Speas and Tenny (2003) configuring the pragmatically related "thematic" roles of the SPEAKER (agent of the speech act), the UTTERANCE CONTENT (its theme), and the HEARER (its goal). Additionally, finer syntactic structures encoding discourse functions have been proposed to further elaborate on Rizzi's ForceP in the illocutionary (ILL) domain, including not only sentential but also clause-initial particles/adverbs (Hill 2007; Haegeman 1984, 1993; Haegeman and Hill 2013; Coniglio and Zegrean 2012, and Mandarin Chinese in Pan 2015; Paul 2015, etc.).[15]

One of the motivations for assuming syntactic projections of discourse particles/words in the left periphery is that these may not affect the truth-condition of the clause, but they may modify the illocutionary force[16] of the utterance in accordance with the speaker's intentions (Coniglio and Zegrean (2012)). Another reason is that a clause type may not strictly match the intended speech act. It has been

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15. Not only sentence-initial but also clause-medial or IP discourse particles have been studied: Romanian *sigur* in Hill (2007); West Flemish interjections in Haegeman (1984, 1993), vocatives in Romanian and West Flemish in Haegeman and Hill (2013), Haegeman and Weir (2015), German and Italian particles in Coniglio and Zegrean (2012), and references cited therein.

16. "Speech acts are those acts that can (though need not) be performed by saying that one is doing so" (Green 2020), later termed by Austin (1962) as 'illocutionary force' to refer to a dimension of communicative acts. Searle (1965) later revised Austin's speech acts and identified five main categories: (i) assertives, (ii) directives, (iii) commissives, (iv) expressives, and (v) declarations.

well known that sentences[17] are intended/uttered to perform speech acts (Austin (1962), and Searle (1965)); e.g., an imperative sentence being intended to perform a directive speech act. However, these two are not always in one-to-one match (Green 2020). A yes/no question may be uttered, but actually intended to perform a directive speech act, such as "*could you pass me the salt*?".

To syntactically represent particles and their relation with the discourse/pragmatic field, Coniglio and Zegrean (2012) split up the CP layer to ILL(ocutionary Force) and C(lause) T(ype), the former of which (encoding the speaker's intention) has an uninterpretable feature related to the clause type [*u* type] and an uninterpretable feature related to intentionality [*u* intent]. The CT has an interpretable clause type feature [*i* type], ensuring "the realization of syntactic operations proper of each clause type are present" (p. 17). The discourse particle has interpretable intentionality and clause type features [*i* type; *i* intent]: one "which refers to the speaker encoded in ILL and one which ensures syntactic compatibility with CT" (p. 18). ILL probes the matching goals in its domain via Multiple AGREE (valuing features with those in CT and the particle).

Turning back to our kaN sentences, we have argued that kaN has grammaticalized as a syntactic adverb and functions as a non-veridical operator that operates on/modifies modals, or *v*P, but not bare VP. It occurs in positions higher than modals and *v*P. We further postulate an epistemic modal function for *sī*. Like other epistemic elements as raising predicates, *sī* may surface either in a pre-subject position or post-subject position due to subject raising/topicalization. It is further assumed that while kaN sentences are of inquisitive sentences semantically, they have to value their syntactic clause typing feature. Specifically, the kaN OP needs to covertly raise to IntP to value either [+Q] or [-Q] syntactic feature. Table 1 summarizes the possible derivations.

Table 1. A summary of the derivations of kaN sentences

Sentence sense	SAP (speaker's) supposition	CT	
(i) *kám* neutral Q		+Q	kaN *kám* (24-i)
(ii) *kánn* declarative		- Q	kaN *kánn*(*–na*) (24-ii)
(iii) *kám* presumed Q	supposition *P*	+Q	kaN *sī kám-sī* (62) (63)
(iv) *kánn* declarative	supposition *P*	-Q	kaN *sī kánn*(*–na*)-*sī* (4)
(v) Rhetorical *kám* Q	supposition *~P*	+Q	kaN (*sī*) *kám-sī* (8)
(vi) Rhetorical *kánn*	supposition *~P*	-Q	kaN (*sī*) *kánn*(*–na*)-*sī* (9)

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17. Sentence types are identified as (i) declarative, (ii) interrogative, (iii) imperative (König and Siemund 2007), and other types like optatives, exclamatives and *wh* exclamatives; cited in Coniglio and Zegrean (2012).

When kaN is valued as [+Q], the clause is typed (e.g. L. Cheng 1991) as an interrogative clause *kám* question, type (i) in Table 1, and when it is [-Q], it renders epistemic declarative *kánn*(*–na*) sentence, type (ii).[18]

As mentioned in section three, *sī* expresses the speaker's assertion of the actuality of the propositional content. When it co-occurs with kaN, the strong attitude is modified, turning to a weaker presupposition, thus conveying speaker's conjecture of the probability of the proposition, types (iii) and (iv), as in (62). For example, judging from the addressee's sly smile in (63), the speaker has reasons to assume that the addressee is lying (*P*), and aims to further elicit affirmation of his/her assumption.

(62)   啊阮我小弟敢 是 無轉來? 安怎?   (Lien 2011: 6)
     A   gun   sio-ti   kám si bo tng lai an-choann?
     Áh gún   sió-tī   kám sī bô tńg-lâi? Án-tsuánn?
     Prt 1st.sg brother KAM SI not return how
     'Is it that my brother didn't come back? What's wrong?'

(63)   我看汝笑，敢 是騙阮? (41.401 荔枝記，光緒)   (Yen 2012: 103)
     guá khuànn lí   tshiò kám sī phiàn guán?
     I   see   you laugh KAM SI lie   us
     'I saw you laugh. Did you lie to me?'

As for the speech act domain, when the speaker's supposition is *not P*, the intentionality of the speech act level is valued with the subjective use of kaN-*sī*, giving rise to rhetorical use, as in types (v) and (vi).

We have demonstrated that the proposed holistic view toward kaN and the modality nature of *sī* provide a natural account for the various functions of kaN sentences. It also lends further support to the fine structure in the left periphery, and highlights the interface effects of syntax, semantics, and pragmatics.

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18. As *kánn* expresses speaker's evaluations, it displays main clause phenomena. Sentence (i), in which *kánn*(*–na*) co-occurs with the regular epistemic modal *khó-lîng* 'possible,' is possible. *Kánn*(*–na*) denotes the speaker's subject evaluation, possibly based on contextual evidence. The modal *khó-lînge* expresses the possibility of the raining.

(i)   敢 (若) 明仔載 可能 會 落雨。
     Kánn(-na) bîn-á-tsài khó-lîng ē   e   lòh-hōo.
     KANN(NA) tomorrow possibly will rain
     "It seems to me that it will probably rain tomorrow."

5.   Summary

The analysis of kaN and its multiple functions which has been developed in the paper can be said to have several advantages. First, our analysis provides a holistic view of kaN – not only considering the better known *kám* questions, but also including its close kin *kánn(–na)* in epistemic declarative sentences, noting that the conjectural use of kaN (*kánn*) has a longer history of use than the more often studied *kám* in neutral questions. The line of analysis pursued in the paper has opened up a new perspective on the non-veridicality of kaN: *kám* and *kánn* are related lexical elements, and it provides further insight to the nature of inquisitiveness developed in Ciardelli *et al.*, and Giannakidou *et al.* This connection is further supported by the diachronic development of this lexeme, related to speaker's supposition, conjecture, and epistemic attitude. Second, our analysis lends further support to insights made in certain previous studies; for example our claim that kaN as a non-veridical OP undergoes covert raising to check clause type [+Q] or [-Q] features echoes Huang's (1988, 1991) seminal work on MC A-not-A questions, and subsequent studies on this topic. Additionally, we have articulated the derivations of various sentence types coupled with their pragmatic intentionality as in Table 1. These are related to the non-veridicality of kaN, the epistemic modality of *sī*, and the speaker's presumption toward the clause proposition (either *P*, or ~*P*). The results of this paper thus shed new light on the inquisitive nature of kaN and its role in the syntax-semantics-pragmatics interface.

Acknowledgments

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