The Isomorphism between Negative and Interrogative: A case in Rgyalrong*

LIN You-Jing

Peking University

Summary

Based on related data as observed in Rgyalrong, this paper examines a phenomenon Watters (2004) and Prins (2016) noticed earlier in the Sino-Tibetan/Trans-Himalayan languages they investigate—that the negative and interrogative prefixes share the same form. After describing in detail the forms and functions of negative and interrogative prefixes in the Cogtse dialect, this paper argues that in Rgyalrong, the negative and interrogative prefixes are in isomorphism. Such an isomorphic relation between negators and interrogative markers is detected not only in Rgyalrong, but also in other Sino-Tibetan languages, including Chinese. Based on related evidence gleaned from Rgyalrong, the present study proposes possible contexts and mechanisms that could have caused negators to develop to interrogative markers. While alternative questions have been suggested by Watters (2004) to be the context from which the negative-interrogative isomorphism has arisen; it is equally possible, and more cross-linguistically evidenced, that the evolution could have started from toned-down polar questions formed with a negator and some sentence-final modal (i.e. yes-no question) particle.

Key words: negative, interrogative, isomorphism, negative-interrogative, Rgyalrong

關鍵詞：漢藏語、四土嘉戎語、卓克基話、否定前綴、疑問辭

1.   Introduction

In 2004, David Watters establishes convincingly a case in which one single form, *ma-*, can be used either as a negator or an interrogative marker in Kham. After more than a decade, Prins (2016: 592–595) detects a similar case in another Sino-Tibetan language, the Kyom-kyo dialect of Situ Rgyalrong. This paper aims to undertake a further and deeper investigation of such phenomena by examining in detail a similar case in the Cogtse (also known as Zhuōkèjī 卓克基) dialect of Situ Rgyalrong (henceforth Cogtse). Possible developmental pathway is proposed for the case in Cogtse using related synchronic and diachronic facts discovered cross-linguistically.

This paper is organized as follows. After provding the background information of the target language in Section 2, I will lay out the forms and functions of the negative and interrogative prefixes as observed in this language in Section 3, and constructions that could cause confusion between negative and interrogative interpretations are also discussed here (in Section 3.3). Sections 4 and 5 further attest the isomorphism between the negative and interrogative markers by drawing on evidence from the other Rgyalrong languages and a couple of non-Rgyalrongic languages, including Chinese. Section 6 establishes the developmental pathway from negative to interrogative for Cogtse, and proposes two possible scenarios where such a development could have arisen from. Section 7 concludes the paper by summarizing the main findings of this study.

2.   The target language

The Cogtse dialect of Situ Rgyalrong is affiliated to the Rgyalrongic subgroup of the Sino-Tibetan/Trans-Himalayan family. Rgyalrongic languages are mainly spoken in the Prefectures of Rngaba (ཨ་ང Ābà 阿坝) and Ngkarmdzos (དཀར་མཛོས Gānzī 甘孜) in Sichuan, China, though according to Suzuki and Tashi Nyima 2016 and Zhao 2018, some Rgyalrongic speech forms could also be spoken in Tibet. Based on Lai (2017) and Lai et al. (2020), the Rgyalrongic cluster constitutes two major clusters:[1] Rgyalrong and Khroskyabs-Stau (also known as "Western Rgyalrongic," which also subsumes Tangut). The Rgyalrong group is consisted of four closely related but mutually unintelligible languages: Situ (四土), Japhug (or Chápù 茶堡), Tshobdun (or Cǎodēng 草登), and Showu (used primarily in the Township of Rìbù 日部) (Jacques 2014; Sun 2015: 731).

Figure 1 is a Stammbaum for the Rgyalrongic cluster based on Lai (2017), Jacques (2014) and Sun (2015).

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[1] Sun and Bstan'dzin Blogros (2019), on the other hand, proposes a tripartite subclassification of the Rgyalrongic cluster: Rgyalrong, Horpa, and Khroskyabs.
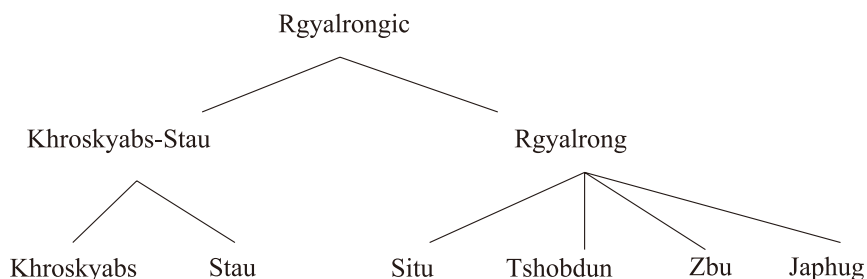
Figure 1   Stammbaum of the Rgyalrongic group

3.   The Negatives and Interrogative in Cogtse

Cogtse has two negative prefixes and one interrogative prefix. Section 3.1 analyzes the functional distribution of the two negators *mə-* and *ma-~mɐ-*; while section 3.2 discusses how the interrogative prefix *mə-* is used to construct interrogative verb forms. Section 3.3 is then dedicated to situations of confusion between the negative and interrogative constructions.

3.1   Negators *mə-* and *ma-~mɐ-*

There are two negative verbal prefixes in Cogtse: *mɐ-~ma-* and *mə-*.[2] According to the contexts they appear, the two negators are in complementary distribution.

3.1.1   Non-past negator *ma-~mɐ-*

The negative prefix *ma-~mɐ-* is used only in non-past situations, including non-past generic fact, future, hortative, and present imperfective.

   This negator is realized either as *ma-* or *mɐ-*, depending on which verb stem it is attached to. In many cases, if the stem is formed with the vowels *ə-* or *ɐ-*, the non-past negator is realized as *mɐ-* instead of *ma-*, which in principle could be analyzed as an alternation caused by vowel harmony. However, there are also situations where the occurrence of *ma-* or *mɐ-* is not predictable, thus it is necessary to represent the prefix using either of its surface forms.

   Sections 3.1.1.1–3.1.1.4 will lay out each of the non-past functions the negator serves.

3.1.1.1   Non-past generic

Generic sentences depict the typical characteristics of a species, a kind or an individual

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[2] In X. Lin (1993: 312–313), the negators are analyzed as adverbials, but in fact *mɐ-~ma-* and *mə-* are prefixes, as they are attached to verb stems, and no independent words can be inserted between the negators and the stems they are attached to.

(Dahl 1985: 99). In example (1), the subject is Muslim, so it is characteristic of the subject to not to eat pork.

(1) (Elicited)

    ŋa   *ʃɐrwɛ̂*   *ŋôs-ŋ,*
    1SG   Muslim   COP-1SG

    pakʃâ   **mɐ-zɐ-ŋ**
    pork   **NEG:NPST-eat1-1SG**

    'I am Muslim, I don't eat pork.'

The prefix can also be used to describe a non-past state, as shown in example (2).

(2) (*300+ Cogtse Conversation Phrases*)

    o   *tə-mpʰjas*   *kə-do,*
    DM   N-disappointment   NMLZ-there.be1

    wəjo *pi*   *tʃim-ŋgu=j*   **ma-ɲî**   *o*
    3SG   now   house-inside=LOC   **NEG:NPST-there.be1**   DM

    'Oh, I am sorry, he's not home right now.'

3.1.1.2 Future

Attached to a bare stem, the prefix *ma-~mɐ-* can denote not only non-past, but also future situations:

(3) (*300+ Cogtse Conversation Phrases*)

    wəti *ndzəmbô* *sɐ-pɛ̂*   *maŋdzâ*   *kə-natsa*   *ŋôs*
    there touring(n.) NMLZ:OBL-do2 especially NMLZ-suit1 COP1

    'It's a tourist attraction.'

    no   **ma-tə-nkʰôs**
    2SG   **NEG:NPST-2-regret1**

    'You won't regret it.'

3.1.1.3 Hortative

The non-past negator is also used to negate a hortative verb form, which is meant for encouraging or discouraging an action undetaken by multiple actors that include the

speaker themselves. Consider example (4).

(4) (Elicited)

jo	*kərguʃâ*	***mɐ-zɐ-j***	*lû*
1PL	beef	**NEG:NPST-**eat1-1PL	DM

'Let's not eat beef.'

3.1.1.4   With Present Imperfective prefix *ŋa-*

The inventory of TAME (tense-aspect-modality-evidential) markers the non-past negator can occur with is very limited. Related data show that the negator only occurs in verb forms prefixed with *ŋa-*, the present imperfective heterophoric prefix, as shown in example (5).

(5) (Elicited)

pi=tə	*ma-ŋa-mot*
now=TOP	NEG:NPST-IMPFV:PRES:HET-smoke

'He is not smoking (any more).'

The structure of verb forms involving the non-past negator is as follows:

NEG *ma-* ⎡——— (2 person)——VERB STEM1——PERSON.NUMBER/TR
          ⎣——IMPFV *ŋa-*

3.1.2   The negator *mə-*

The negative prefix *mə-* occurs in contexts where the non-past negator *ma-~mɐ-* does not occur. It serves a much wider range of functions, thus can be reckoned as the more general and basic negator, which may have emerged in Cogtse earlier than *ma-~mɐ-*.[3] The contexts *mə-* occurs include past, prohibitive, and with a wider range of TAME markers except the heterophoric present imperfective *ŋa-*.

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[3] Note that according to Matisoff, the Proto-Tibeto-Burman negator is **ma-* (see especially Matisoff 2003: 601), but in various Rgyalrongic languages the "elsewhere" (i.e. the basic) negative prefix is *mə-* (see Table 1 in this article). If the negator *mə-* in the Rgyalrongic family has been derived from PTB **ma-*, but has gone through vowel reduction, tone-assignment patterns could possibly have been the factor that caused the reduction. That is, the negator mostly occurs in word-initial position, but in many Rgyalrongic languages word-initial syllables are mostly produced with L tone (with H tone usually assigned to non-initial syllables). Further research is required to determine if this is really the case. I thank Prof. Matisoff for his input in the related discussion during the 2019 STLS in Tianjin.

3.1.2.1 Past

When attached to bare verb stem2 (the stem used primarily to construct verb forms involving past situations), the negator *mə-* can negate an event or a state in the past. Examples (6) and (7) shows that the negators *ma-~mɐ-* and *mə-* contrast in tense. The prefix *ma-~mɐ-* is used for a present state (6), while *mə-* is used for the same state in the past (7).

(6) (Elicited)

ŋa   ŋa-pu   **mɐ-***mʃôr*
1SG   1SG:POSS-child **NEG:NPST**-be.pretty1

‘My child isn't good looking.’ (Present)

(7) (Elicited)

ŋə-mi   *kə-tsi=ti*   **mə-***mʃor*
1SG:POSS-daughter NMLZ-be.small1=TOP:OBL   **NEG**-be.pretty2

‘My daughter was not good looking when she was small.’(PAST)

Cogtse verb forms distinguishes the aspectual categories of Perfective and Imperfective, especially in past situations;[4] however, when *mə-* is used as a past negator attached to bare stem2, the two aspects are neutralized. Examples (8) and (9) show that the the verb forms composed of [*mə-*+ STEM2] can be used to encode a perfective event (8) and an imperfective situation (9) in the past.

(8) (*300+ Cogtse Conversation Phrases*)

mɐj   *te*   *to-spôk*   *zə*
more   one   IMP-start.over1   PART

məʃkʰâ   *kə-tə-tsôs-n=tə*   *ŋa*   *kə-rô*   **mə-***msâm*
just.now   NMLZ-2-say1-2SG=TOP   1SG   NMLZ-be.sufficient1   **NEG**-hear2

‘Say that again, I didn't hear what you said just now clearly.’

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[4] Cf. Y. Lin 2003 for details.

(9) (Elicited)

məʃêr   ŋɐ-pê̂   tə-tʃìm   jə-mdu=ti,
yesterday   1SG:POSS-father   N-home   PFV-arrive2=TOP:OBL

*ŋa   ta-ma **mə-pê̂-ŋ,**   ŋə-tʃê̂   ʒi   tətʰâ **mə-pê̂-w,***
1SG   N-labor **NEG-**do2-1SG   1SG:POSS-younger.brother   also   book   **NEG-**do2-TR

nɐ-nə-mbrə-tʃ
IMPFV:PST-SPON-play2-1DU

'When Father came home yesterday, I wasn't working, and my brother wasn't studying either, we were playing.'

The structure of the (modally unmarked) Negative Past verb form is as follows:

NEG *mə-* ——— (2 person)———VERB STEM2——PERSON.NUMBER/TR

3.1.2.2 Prohibitives
In Cogtse there are three types of prohibitives, relating respectively to Imperatives, Distal Imperatives, and Jussive. All these prohibitives employ the negator *mə-*.

The first type of prohibitives, the Negative Imperative, has the verb strcuture as shown below:

NEG *mə-* —2 person *tə-* —VERB STEM1—TR/2DU/2PL

Note that this verb form is used to tell the addressee not to do something, and the second-preson prefix *tə-* is required in the construction of this verb form. Consider example (10):

(10) (*300+ Cogtse Conversation Phrases*)

*ta-ma=ɲê   **mə-**tə-narko-w,   nə-skru   to-nətʰam*
N-labor=PL **NEG-**2-push.too.hard1-TR   2SG:POSS-body   IMP-take.care1

'Don't work too hard. Take care of your health.'

Negative Distal Imperatives constitute the irrealis prefix *a-*, the negator *mə-*, and second-person prefix *tə-* plus verb stem1:

IRR *a-* —NEG *mə-* —2 person *tə-* —VERB STEM1—TR/2DU/2PL

Distal Imperatives are used when the commanded action does not have to be actualized right away. Consider example (11).

(11) (*300+ Cogtse Conversation Phrases*)

    wəŋkʰuj   *a-**mə**-tə-nəʃtêr-ɲ*
    afterwards   IRR-**NEG**-2-be.shy.of1-2/3PL

    'In the future (if you come again), don't be shy.'

Jussive sentences indicate that 'the speaker allows an event' (Chung and Timberlake 1985: 247). It is intrinsically "third person imperative," as it is the non-locutor who should perform the action (Palmer 1986: 109). In Cogtse Jussive also employs the irrealis prefix *a-*, and it is the third-person, not second-person, indexation that is involved:

The structure of the Negative Jussive verb form

IRR *a-* ⸺ NEG *mə-* ⸺VERB STEM1⸺PERSON.NUMBER/TR

Compare the positive and negative jussive sentences in (12) and (13).

(12) (Elicited)

    wəjo   *tə-rmi*   *ɲə-zɐ*   *a-to-zɐ-w*
    3SG   N-person 2/3PL:POSS-food   IRR-PFV-eat1-TR

    'Let him eat others' food.'

(13) (Elicited)

    wəjo(=kə)   *tə-rmi*   *ɲə-zɐ*   *a-**mə**-zɐ-w*
    3SG(=ERG)   N-person 2/3PL:POSS-food IRR-**NEG**-eat1-TR

    'Don't let him eat others' food.'

3.1.2.3 With TAME markers

As mentioned earlier, the negator *mə-* can occur with a wider range of TAME markers. While the aspectual distinction between perfective and imperfective is neurtralized in modally-unmarked past situations, with the past meaning conveyed by the negator *mə-* plus verb stem2; the negator is observed to occur with egophoric present imperfective prefix *ko-*, the sensory prefix *na-*, indirect evidential prefix *ŋa-*, and indirect-evidential perfectivizers.

The negator can occur with the egophoric present imperfective prefix *ko-*, which is

always attached to verb stem2. The situation depicted in (14) has been on-going for a while before this sentence is uttered.

(14) (Elicited)

ŋa	*kəmamô*	*tə-psotok*	***mə-ko-rmê̂-ŋ***
1SG	mostly	N-whole.night	**NEG**-IMPFV:EGO-sleep2-1SG

'I've been staying up most of the night. (Lit. I've been not sleeping most of the night)'

The negative prefix can also be attached to verb stems prefixed with the sensory prefix *na-*. In example (15), that the rate is not low is not a known fact to the speaker; the application of the sensory *na-* indicates that the situation has been observed or figured out by the speaker.

(15) (*300+ Cogtse Conversation Phrases*)

A: This room is not as large as the one we stayed.

B: *nə-ŋos,*	*korə*	*wə-koŋ*	***mə-na-kətsi***
SEN-COP1	but	3SG:POSS-price	**NEG**-SEN-small1

'No, but the rate is not low (Lit. The rate is not small)'

When used with the indirect evidential prefix *ŋa-*, the prefix *mə-* negates past situations that the speaker has done involuntarily/unconsciously, or has learned as second-hand or inferential information. Examples (16) and (17) are adopted from two folklore stories, and they demonstrate respectively an action and a state of indirect evidentiality in the past.

(16) (*Three Sons and a Bird Named Shakalapongka*)

wa-rkʰam=te	*ʃpʰəʃpʰəʃpʰək*	*ta-â-tsə-tsəs*
3SG:POSS-wing=PART	ONOM	EVI:PFV:upward-EVI-CAUS-say1

mə̂-ŋa-lɐt	*nə-ŋos*
NEG-EVI-release1	SEN-COP1

'(The bird) made the wings sound *shpashpasphak* (by flapping the wings), it didn't speak.'

(17) (*A Lost Man and Ghosts*)

> *ptʂêrə*   *wətə=te*   ***mə̂-ŋa-kə-cʰa***
> then   that=one   NEG-EVI-3PL:INTR-be.able.to1

'They were not able to do that (i.e. to kill the Lama).'

While the negative prefix *mə-* plus verb STEM2 signal simple past situations, the negator can also occur with indirect-evidential perfective prefixes. We are able to discorver a small number of clear examples in the discourse data. These examples suggest that the use of this type of negative indirect-evidential verb forms is restricted to stative verbs, and it signals a change of state. Consider examples (18) and (19).

(18) (*300+ Cogtse Conversation Phrases*)

> *o*   *ʒɐk*   ***mə̂-ta-a-tso,***
> oh   time   NEG-EVI:PFV-EVI-there.be(time)1

'Oh it's running late (Lit. Time has run out (I just found it),

> *ŋa*   *ka-tʃʰê*   *ta-â-mdɐk*
> 1SG   NMLZ:INF-go1   EVI:PFV-EVI-be.time.to1

it's time for me to go.'

(19) (*A Giant and His Parents*)

> *tə-rzək*   *zə*   ***mə̂-ta-a-ʃpɐ-ŋ***   *ŋôs*
> one-section   (no)more   NEG-EVI:PFV-EVI-be.capable.of   COP1

'I can only tell a part (of the story) (Literally: After a part (of it) I became not capable of more.).'

Below are the structures of the negative verb forms with the TAME prefixes as described above:

NEG *mə-*
  —SEN *na-* —(2 person)—STEM1—PERSON.NUMBER/TR   (Sensory)
  —EVI *ŋa-*   (Indirect Evidential: Past)
  —EVI perfectivizers   (Indirect Evidential: Perfective)
  —IMPFV.EGO *ko-* —STEM2—1SG/1DU/1PL   (Egophoric Pres. Impfv.)

And these structures can be collapsed into:

NEG *mə-* ——TAME——(2 person)——STEM1/2———PERSON.NUMBER/TR

3.2 Interrogative (Polar question) markers

There are two primary interrogative prefixes in Cogtse. The one that is used more commonly is *mə-*. The other interrogative prefix, *mo-*, according to X. Lin (1993: 245–246), differs from *mə-* in that the former is used in non-past contexts while the latter is restricted to the past, in second and third persons. However, further investigation shows that this is not necessarily the case. Example (20) is a question about a non-past (generic) event, and either of the prefixes *mo-* and *mə-* can be used without changing the intended meaning.

(20) (Elicited)

> *no*　　*tɕkʰə̂*　　***mo-/mə-**tə-môt?*
> 2SG　　cigarette　　**Q-/Q**-2-smoke1

'Do you smoke?'

In fact, in the discourse data collected so far, questions about non-past generic event employ only *mə-*, as illustrated in (21):

(21) (*A Lost Man and Ghosts*)

> *"nɐ-jɛ̂*　　***mə-**ndo"*　　*to-ka-tsis*
> 2SG:POSS-oath　　**Q**-there.be　　PFV-NMLZ:PL:HON-say2

'Do you have an oath (somewhere)?' he asked.

By the same token, in a question about an event in the past, *mo-* and *mə-* can also be used interchangeably, as shown in example (22).

(22) (Elicited)

> *tɕkʰə̂*　　***mo-/mə-**to-tə-mot?*
> cigarette　　**Q-/Q**-PFV-2-smoke2

'Did you smoke (yet)?'

X. Lin claims that *mo-* is reserved to construct questions that are in effect suggesting an element of permission in the first person (2003: 249–250). We do observe an example as such in the dicourse data:

(23) (*The Rich and the Poor*)

jɐ-pê̂=kə		*"ndʒo*	*ʒi*	*sɐgɐs*	*te*	**mo-**pɐ-tʃ"**
1PL:POSS-father=ERG		1DU	also	feast	one	**Q-**do1-1DU

to-kə-tsis	*nə-ŋos*
PFV-NMLZ-say2	SEN-COP1

'The father said "Shall we also throw a feast?"'

Nonetheless, the same usage can be achieved using *mə-*, as demonstrated in another example from Cogtse discourse:

(24) (*Three Sons and Their Pilgrimages to Lhasa*)

mɐju	*kə,*	*tə-tsa*	*kəsâm*	*na-kə-ndô-ɲ*
more	PART	N-son	three	IMPFV:PST-NMLZ-there.be2-2/3PL

te	**mə-**nɐ-pɐ-ŋ?**
one	**Q-**SEN-do1-1SG

'More (story), shall I tell one about three sons? (Lit. shall I tell one that has three sons?)'

Overall, related data show that *mə-* could be the less restricted interrogative prefix. In discourse, it is used more frequently, and so far it is the only interrogaive prefix observed to occur with TAME markers in the discourse data (although elicited data show that *mo-* also occurs with TAME markers). Consider example (24) above and example (25) below.

(25) (*Three Sons and Their Pilgrimages to Lhasa*)

a,	*təthâ*	**mə-**na-tə-sjôk?**
Ah	book	**Q-**PFV-2-finish2

'Ah, are you done with the book?'

The structure of interrogative verb forms employing *mə-* and *mo-* is laid out below:

$$\left[\begin{array}{l} \text{Q } \textit{mə-} \text{ —TAM—(2.person } \textit{tə-}\text{)—VERB STEM1/2—PERSON.NUMBER/TR} \\ \text{Q } \textit{mo-} \end{array}\right.$$

3.3 Confusion btw the negative and interrogative: Isomorphism

Throughout the discussions in the previous subsections, one can easily detect that the more basic negator *mə-* and the less restricted interrogative marker *mə-* are identical in form. In fact, with regard to the grammatical contexts where the two markers are employed, there are two cases of possible confusion between the negative and interrogative constructions. One concerns the interrogative and negative imperative constructions. If a polar question is about a simple past situation (which means that the TAME marking is zero, and STEM1 is employed), and in second person (which means that the second-person prefix *tə-* is required), its surface realization could look exactly the same as the negative imperative construction:

(Interrogative: Non-past, second-person)
Q *mə-* —TAME: Ø—2person *tə-* —VERB STEM1—TR/2DU/2PL

(Negative Imperative)
NEG *mə-* —2person *tə-* —VERB STEM1—TR/2DU/2PL

Consider the interrogative in (26) and the negative imperative in (27). Formally they are identical.

(26) (Elicited)

    tɕkʰə̂   *mə-tə- môt?*
    N-cigarette   Q-2-smoke1

    'Do you smoke?'

(27) (Elicited)

    tɕkʰə̂   *mə-tə-môt?*
    N-cigarette   NEG:IMP-2-smoke1

    'Don't smoke.'

For related situations detected in the Kyomkyo dialect of Situ Rgyalrong, Prins suggests that distinct stress patterns can be employed to distinguish interrogative and negative constructions that are identical in form (2016: 592). In Cogtse, however, none of these constructions has to be produced mandatorily with any specific prosodic pattern. It is possible that the polar question could be uttered more frequently (though not always) with elongation of the final syllable, but such a prosodic strategy is not restricted to interrogation. Whenever the speaker would like to appeal to the addressee, this prosodic strategy could

be employed. In other words, if one is asked to distinguish negative imperatives from interrogatives that are formally identical, prosodic strategies (final lengthening, intonation and so on) could be employed, but it is also true that the two structures can be produced with identical intonation contours.

The other case of confusion occurs between the interrogative and the negative verb form with TAME markers. Possible confusion is conceivable when we compare their structures:

(Interrogative)
Q *mə-* —TAME—(2.person *tə-*)—STEM1/2—PERSON.NUMBER

(Negative with TAME)
NEG *mə-* —TAME—(2.person *tə-*)—STEM1/2——PERSON.NUMBER/TR

Examples (28) and (29) are both in second person, and they both concern perfective situations; thus they employ the same second-person prefixes, identical perfective markers, and the same stem (Stem2). The two sentences are identical in form, but one can be interpreted as a question (28), and the other as a negative sentence (29).

(28) (Elicited)

   tɕkʰə̂   *mə-to-tə-mot*
   cigarette   Q-PFV-2-smoke2

   'Did you smoke?'

(29) (Elicited)

   tɕkʰə̂   *mə-to-tə-mô*
   cigarette   NEG-PFV-2-smoke2

   'You didn't smoke.'

The interrogative *mə-* and the negative *mə-* could be in isomorphism (a situation where two grammatical categories are represented by the same form), not only because they are indentical in form, but also because they cannot co-occur in a verb form, which is to say they occupy the same slot in the verb structure scheme. Consequently, negative polar questions cannot be achieved by a verb form comprising a sequence of *mə-mə-* [Q-NEG] plus the verb stem (30).

(30) (Elicited)

a. *wəjo   məʃêr   mbarkʰam=j   *mə-mə-⁵tʰɐl?*
   3SG   yesterday   Ma'erkang:PLN=LOC   **Q-NEG-go2**

   'Didn't he go to Ma'erkang yesterday?'

(Elicited)

b. *wəjo   təskar   *mə-mə-na-rŋo-w?*
   3SG   Tibetan.barley   **Q-NEG-SEN-parch1-TR**

   'Isn't he parching Tibetan barley?'

Instead, two strategies are applicable for such situations. One is the application of a negative verb plus a sentence-final interrogative particle (31a). The other is replace the interrogative *mə-* with another interrogative prefix *wu-*, which, based on related data observed so far, seems to be restricted to the formation of negative questions (31b).

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[5] It should be noted that the sequence of *mə-ma-* [Q-NEG:NPST] is possible, though the verb forms employing them are not used as simple negative questions. In Kyomkyo, a verb form with *mə-ma-* can convey "polite imperative" meanings (Prins 2016: 541). In the Bragbar dialect of Situ Rgyalrong (Zhang 2020), it is analyzed as a sequence of optative-dubitative markers. In Cogtse, while in third person, the verb form converys the meaning "possibly" (1); and while in second person, the verb form is used to ask someone if they are willing to do something (2).

(1) (Elicited)

   wəjo   mbarkʰam=j   mə-ma-tʃʰê   je
   3SG   Ma'erkang:PLN=LOC   **Q-NEG:NPST-go1**   PART

   'He will possibly go to Ma'erkang.'

(2) (Elicited)

   no   sôsni   mbarkʰam=j   mə-ma-tə-tʃʰê-n
   2SG   tomoorrow   Ma'erkang:PLN=LOC   Q-NEG:NPST-go1-2SG

   'Would you go to Ma'erkang tomorrow?'

That the sequence of *mə-ma-* in these cases is really composed of interrogative and negative prefixes can be justified by the Japhug counterpart of the sequence: *u-mɤ*. In Japhug *u* and *mɤ* are respectively interrogative and negative (Jacques, forthcoming: Section 19.7.2). However, since the sequence of these prefixes no longer conveys their compositional meanings, Jacques analyzes *umɤ* as one single morpheme that denotes "possible modality." The same strategy can also be considered for the sequence of *mə-ma-* in the above-mentioned dialects of Situ Rgyalrong.

(31) (Elicited)

a. *wəjo*   *məʃêr*   *mbarkʰam=j*   **mə-di-s**[6]   **mə?**[7]
   3SG   yesterday   Ma'erkang:PLN=LOC   **NEG-go.westward2-PST**   **Q**

‘Didn't he go to Ma'erkang yesterday?’

(Elicited)

b. *wəjo*   *təskar*   **wu-mə-na-rŋo-w?**[8]
   3SG   Tibetan.barley   **Q-NEG-SEN-parch1-TR**

‘Isn't he parching Tibetan barley?’

In fact a *mə-mə-* sequence can be spotted in Cogtse, but they are actually components of the negative conditional construction [COND-NEG-]. Example (32) can also be seen in X. Lin (1993: 246), but the whole conditional clause should be interpreted as a past situation instead.

(32) (Elicited)

   no   *təzê*   **mə-mə-tə-za-w=rə,**   *nə-ktô*   *mo*
   2SG   food   **COND-NEG-2-eat2-TR=TOP**   2SG:POSS-belley   be.hungry

‘If you didn't eat food, you are hungry.’

In other words, the *mə-mə-* [Q-NEG-] sequence is not allowed in Cogtse, while the

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[6] Cogtse has six orientation verbs, which encode both one of the six orientations (up, down, eastwards, westwards, upgradient, and downgradient) and the meaning of ‘to go’ (Y. Lin 2017: Section 4.1). The Stem2 of these orientation verbs seem to only occur in the negative verb form. In this example the verb ‘go westwards’ achieve stem alternation by means of ablaut and tonal variation: *dɔ̂* (Stem1) vs. *di* (Stem2). In positive sentences, the Perfective counterpart of *dɔ̂* would be *nə-tʰɐl* [PFV:westwards-go2].

[7] Two sentence-fianl interrogative particles are observed in Cogtse: *mə* and *mo*. The particle *mo* seems to be used more often in non-past situations, while *mə* is less retricted. The particles are indeed indentical in form with the interrogative prefixes *mə-* and *mo-*, but their developmental histories are not yet clear, so we do not discuss them in this paper.

[8] The interrogative prefix *wu-* can also be used with the negator *ma-~mɐ-* and the sentence final particle *zə* to achieve a toned down manipulative modal function. For example:

(*Runaway Horses*)

wûrtʃʰe   **wu-mɐ-tə-tʃʰê-n**   *zə*
thank.you   **Q-NEG:NPST-2-go1-2SG**   PART

‘Won't you go (get the horse) please? (Lit. ‘Thank you, won't you go (get the horse)?’)’

mə-mə- [COND-NEG-] sequence is. This is because the interrogative *mə-* and negative *mə-* are isomphic, and one single form takes only one slot.

4.   The Negatives and Interrogative in the Rgyalrong group

Table 1 displays the negative and interrogative prefixes as observed in the four languages of the Rgyalrong group. Isomorphism between negatives and interrogatives can be observed in some, but not all, dialects of Situ and Japhug.

Table 1   The negative and interrogative prefixes as observed in the four languages of the Rgyalrong group

	Negatives	Polar Interrogative(s)
Situ: Cogtse	*ma-*: Non-past and negative hortative *mə-*: elsewhere	*mə-*
Situ: Kyomkyo (Prins 2016)	*ma-*: Imperfective *ɲi-*: Perfective *mə-*: Prohibitive	*mə-*
Situ: Bragdbar (Zhang 2016)	*ma-*	*mə-*
Japhug: Tatshi	*ma-*: Non-past *me-*: Sensory (*ma-j*) *maʁ-*: Prohibitive *mə-*: elsewhere	*mi-*: Sensory (*mə-j*) *mə-*: elsewhere
Japhug: Kamnyu (Jacques, forthcoming)	*mɤ-*: Non-finite, non-past etc. *ma-*: Prohibitive *mɯj-*: Sensory *mɯ-*: elsewhere	*ɯ-*
Tshobdun: Kakhyoris (Sun 2017; Sun and Bstan'dzin Blogros 2019)	*mɐ-*: Imperfective *mə-*: PFV and PROH *me-*: (TR.)Cont,HAB,NF	*ə-* or accenting the verb head that already has a prefix
Showu: Zbu (Gong 2018)	*ma-*: Simple Non-past, resultative PASS, PROG (high TR) *mə-*: elsewhere	*ə-*

Figure 2 illustrates the occurrences of such isomorphism from a geographical perspective. The distribution seems to suggest that this is an areal feature; nonetheless, more research is required before we can determine whether the similarities are due to genetic inheritance or areal contact.
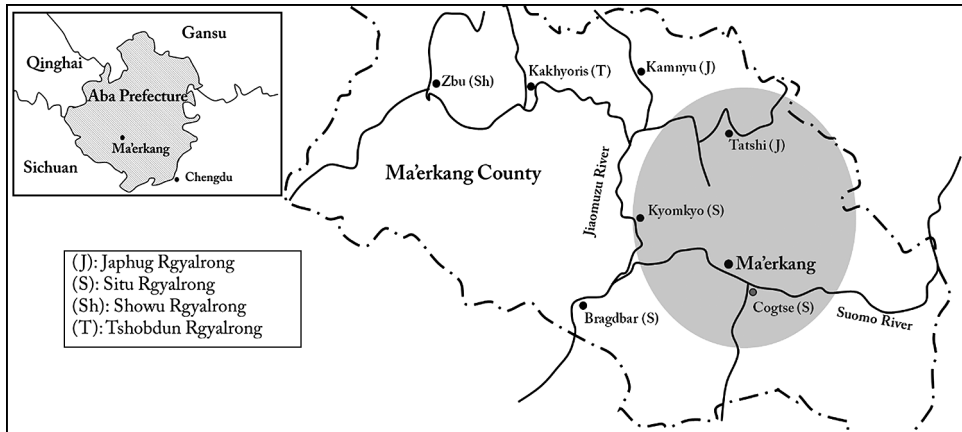

Figure 2   Geographical distribution of negative-interrogative isomorphism within the Rgyalrong family (shaded area)

5.   Negative-interrogative Isomorphism: Non-Ryalrongic languages

The isomorphism between negatives and interrogatives is also observed in two non-Rgyalrongic languages: Kham and Chinese, both of which happen to be Sino-Tibetan languages.

In Kham the interrogative and negative prefixes both come in form of *ma-*; and when occurring with the imperfective marker *ye* or Ø (zero), *ma-* can be interpreted either as an interrogative or a negative. Consider the examples in (33).

(33) **Kham (Watters 2004, adopted from Table 43)**

   a. *ma-dəi-ni-rə*
       NEG-find-2OBJ-3SUBJ

       'They didn't find you'

   b. *ma-dəi-ni-rə*
       Q-find-2OBJ-3SUBJ

       'Did they find you?'

In Chinese, interrogative-negative isomorphism is observed in the development of Mandarin Chinese polar-question marker *mā* 嗎. According to Wang (王力 2004: 523), *mā* 嗎 has derived from the negative existential *mǐua 無 (which in Mondern Mandarin is pronounced as *wú*), which now is still used as a negative existential in more idiomatic constructions, such as *wú míng* 無名 'nameless (no name)' and *wú qíng* 無情 'ruthless (no emotion)'. Example (34) contains two verses from a poem by Juyi Bai 白居易 (AD 618–90), a poet in Táng Dynasty. Note that the second verse ends with *wú* 無, the negative existential, which here serves as an interrogative particle.

(34)

晚	來	天	欲	雪,	能	飲	一	杯	無?
wǎn	*lái*	*tiān*	*yù*	*xuě*	*néng*	*yǐn*	*yī*	*bēi*	***wú***
late	come	sky	want	snow	can	drink	one	vessel	**NEG**

'It's getting late and it's about to snow, could you drink with me?'

6.   The developmental pathway and possible scenarios

The discussion of the development that has led to negative-interrogative isomorphism should start with the question of which function is the source from which the other function has derived. The developmental history of Chinese shows a rather clear pathway through which an interrogative marker has been derived from a negator. That is, the negator 不 *bù* and the existential negator 無 *wú* started out as negative particles in alternative questions, and were eventually reanalyzed as interrogative markers (See Wei (2007: 24), for example.).

In other words, cross-linguistic evidence suggests that the development is uni-directional: the target morpheme started out as a negator, then developed to denote interrogative meanings, but not the other way around. The negative-interrogative isomorphism as observed in Rgyalrong could have also developed in the same direction.

Now the question remains as to whether the Rgyalrong negative-interrogative isomorphism has arisen from alternative questions, the most common context where a negator can evolve to be an interrogative marker (see Dixon 2010 Vol. 3: 391–399). In the Sino-Tibetan family, alternative questions that are used as polar questions can be found in languages outside of the Sinitic subgroup, such as Dhimal (Nepal). According to King (2009), a normal structure of polar questions in this language involves conjoined clauses "X not-X." Consider example (35).

(35) Dhimal (adopted from King 2009: 288)

    taː-hi   *ma-taː-hi?*
    be.tasty-PST   NEG-be.tasty-PST

    'Does it taste good?'

Watters proposes that in Kham, polar questions with the negative/interrogative marker *ma-* could be ellipted forms of "full alternative questions" (2004: 96). However, he also reports that only one full alternative question was found in the hundreds of pages of data he had collected (2004: fn.3). The lack of alternative questions also occurs in Cogtse Rgyalrong. No alternative question is spotted in the discourse data (primarily monologue narratives); only one instance of conjoined alternate clauses was found:

(36) (*The Rich and the Poor*)

    na-kə-nə-pî   *mə-kə-nə-pî*
    PFV-3PL:INTR-SPON-come2   NEG-3PL:INTR-SPON-come2

    te   *jə-pô-ntʃ*   *ts�âs-tʃ*   *wəŋkʰurə*
    once   IMP-come1-2/3DU   say-1DU   CONN

    'Whether they come or not, we say "Come!".'

Of course this finding does not rule out the possibility that in some previous stages of Kham and Rgyalrong, alternative questions were used rather frequently, and they could have been used as regular polar questions, which could have given rise to the negative-interrogative isomorphism. However, if the alternative questions that could have occurred previously in Kham and Rgyalrong could resemble the alternative questions in Dhimal structurally (as illustrated in example (35)), the reanalysis of the negative verb form should require the removal of the positive one. It could be quite a challenge to explain why it was the non-final (positive) element, not the final (negative) element, that was dropped.

Another possible developmental context has nothing to do with tag or alternative questions. It involves questions formed a with negator and some modal marker. Just as Givón noticed, when negation is applied as a "toning-down" device for episdemic and manipulative modalities, it is most commonly used with some irrealis operators including, among others, yes/no-question adverbials (2001: 378). Therefore, "Won't you come in please?" can sound more polite than "Do come in."; and "I suppose he isn't done yet." can be softer than "I wonder if he's done."[9] Following this line of thinking, questions formed with a negator and some modal marker could have been used in Rgyalrong (and maybe Kham as

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[9] These two examples are both adopted from Givón (2001: 378).

well) as a toned-down variant of the regular polar question.

In Cogtse discourse one can find instances of polar questions ending with an optional final particle *zə*, which, based on the related data so far, is used more in content questions. Consider examples (37)–(38):

(37) (*Fish in Burnt Water*)

kətə=s	*kə-tʃʰe*	*zə?*
where=ALL	3PL:INTR-go1	**PART**

'Where will they go?'

(38) (*300+ Cogtse Conversation Phrases*)

məsni	*ʒɐk*	*tʰəstê*	*ko-ŋos*	*zə?*
today	time	how.many	IMPFV:EGO-COP2	**PART**

'What is the date today?'

However, the final particle *zə* is also spotted in various polar-questions, as shown in (39) and (40) (but polar questions without the final particle occur still more frequently).

(39) (*300+ Cogtse Conversation Phrases*)

mədʒê	*ndʒə-sâm*	*ndʒə-ka-səso=tə*
3DU	DU:POSS-mind	DU:POSS-NMLZ:OBJ-think=TOP

mə-ko-nəŋgêj	*zə*
Q-IMPFV:EGO-be.identical	**PART**

'Do they have the same personalities? (Lit. Are their minds and thoughts identical?)'

(40) (*Three Sons and a Bird Named Shakalapongka*)

ŋə-tsa	*kətsî=te*
1SG:POSS-son	small=PART

kɐ-sə-lɐt	*mə-nɐ-tə-cʰa-n*	*zə*
NMLZ:INF-CAUS-release	Q-SEN-2-be.able.to1-2SG	**PART**

'My little son, are you able to make (the bird) do it (i.e. talk)?"

It could be that the final particle *zə* was serving as discourse marker of appeal in a previous stage, then the toned-down question with a negator and the particle *zə* gradually became the more common polar question. Then, when the sentence-final particle was dropped, the negative marker was re-analyzed as an interrogative marker.

The deletion of sentence-final elements is commonly observed cross-linguistically.[10] In Chinese, the structure of [VP NEG] co-occurred with sentence-final interrogative particles (such as *hū* 乎) for quite a while, and together they constituted an alternative question, as shown in (41).

(41) An example from *Mengzi*《孟子》

動	心	否	乎?
dòng	xīn	fǒu	hū
move	heart	NEG	PART

'Would you be tempted or not?'

Afterwards, when the final particle ceased to appear, the negator was reanalyzed as an interrogative marker (particle) for the question (Wei 2007; Lü 1985). In modern Chinese *dòng xīn fǒu* is a polar question, meaning "Would you be tempted?".

It is therefore reasonable to speculate that the interrogative verb form in Rgyalrong could have originated from questions with a negative verb form plus a sentence-final particle (probably *zə*). After the removal of *zə*, and the reanalysis of the negator *mə-*, the verb form with *mə-* now constitutes regular polar questions.

So far, we do not have ample related data to rule out either of the two developmental hypotheses (i.e. either from alternative questions or from negative, tone-down questions). However, the related evolutionary mechanism seems to suggest that the second hypothesis, though never mentioned or proposed in any related literature, seems to be more natural, and could be pragmatically possible.

7.   Conclusion

This paper explores a phenomenon in which the negative and interrogative prefixes share the same form. Such a phenomenon is observed in various Sino-Tibetan languages, including Chinese, as well as Rgyalrong. Based on related evidence gleaned from Rgyalrong, this paper argues that the negative and interrogative prefixes are in isomorphism, and we propose possible contexts and mechanisms that could have caused negators to serve as interrogative markers. While alternative questions have been proposed by Watters (2004) to be

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[10] See also in Dixon (2010, Vol. 3: 399) the cases in which the removal of sentence-final elements caused the remaining elements to be reanalyzed as interrogative markers.

the context from which the negative-interrogative isomorphism has arisen; it is equally possible, and more cross-linguistically evidenced that the development embarked on toned-down polar questions formed with a negator and some sentence-final modal (i.e. yes-no question) particle. When the final particle was removed, the negator (that is, the only marked element in the remainder of the sentence) was reanalyzed as an interrogative marker.

Abbreviation

1	first person		NMLZ	nominalizer
2	second person		NPST	non-past
3	third person		OBJ	object
CAUS	causative		OBL	oblique
COND	conditional		ONOM	onomatopoetic
CONN	connective		PART	particle
COP	copula		PFV	perfective
DM	discourse marker		PL	plural
DU	dual		PLN	place name
ERG	ergative		POSS	possessive
EVI	indirect evidential		PRES	present
HET	heterophoric		PST	past
HON	honorific		Q	interrogative
IMP	imperative		SEN	sensory
IMPFV	(present) imperfective		SG	singular
INF	infinitive		SPON	spontaneous
INTR	intransitive		SUBJ	subject
IRR	irrealis		TOP	topicalizer
LOC	locative		TR	transitive
N	nominal		V1	verb stem 1
NEG	negative		V2	verb stem 2

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