On the interaction between negation and aspects in grammaticalization: a cross-linguistic study of three Chinese varieties

Abstract: This paper presents a quasi-diachronic analysis of the development in negation system of three different Chinese varieties, namely mainland Mandarin, Hong Kong Cantonese, and Gaozhou Cantonese – an unstudied variety spoken in Maoming. I argue that the form and distribution of the negators méi (yǒu), mou⁵, and mau⁵ in these varieties respectively, are strongly connected to the development of the existential predicate yǒu/jau⁵ ‘have’, a key component of Chinese negators. Supported by preliminary typological findings, the development in form of the negator NEG-HAVE concurs with the BE/HAVE auxiliary development as argued in Freeze (1992) and Kayne (2000). Cross-dialectal variation in negator distribution is attributed to the development of the existential predicate along the proposed pathway of existential > possessive > aspect. This analysis can explain the split negation system found in Mandarin and HK Cantonese, where méi (yǒu) and mou⁵ are used specifically for perfective contexts, in the minimalist framework of Agree and incorporation.

Keywords: negative existentials, Gaozhou Cantonese, cyclic incorporation, grammaticalisation, Croft Cycle

1 Introduction

Negation in Chinese has been a subject of investigation for decades. Most existing studies have focused on Mainland Mandarin negators méi (yǒu) and bù, with a general understanding that the former negates perfective predicates while the latter negates non-perfective ones. Besides, little has been done in deconstructing Chinese negators in terms of how it is composed, and how such composition influences its structural distribution. Therefore, in this study, I compare three Chinese varieties from both synchronic and quasi-diachronic points of view. The three varieties concerned are namely, Mainland Mandarin¹, Hong Kong Cantonese (HK Cantonese), and an almost unstudied variety of Cantonese spoken in Gaozhou. The structure of this paper is as follows. Section 2 gives an overview of how negation works in these varieties. In Section 3, I begin my analysis by classifying these three negation systems according to Croft’s (1991) negative-existential cycle, which Chinese seems to fit well into. In light of some important challenges to such classification, I introduce three more grammaticalization processes in Section 4, which together shall form a broader picture to account for the variations observed. Based on the conceptual groundwork hitherto argued for, Section 5 provides a Minimalist account of the grammaticalization process observed, adopting Roberts’ (2010) incorporation theory; before I conclude in Section 6.

2 Three Chinese negation systems

This study centers around three Chinese varieties: Mandarin, Hong Kong Cantonese, and Gaozhou Cantonese which is spoken in Maoming, a southwestern county in Guangdong Province of China. Table 1 gives an overview of how negation works in the three varieties.

¹ Where Mandarin examples are used in the paper, they will be from Mainland Mandarin unless otherwise specified.
<table>
<thead>
<tr>
<th>Negator_A</th>
<th>Negator_B</th>
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<tbody>
<tr>
<td>冇 mau⁵ ‘not’</td>
<td>唔 m⁴ ‘not’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GZ Cantonese</th>
<th>Mandarin</th>
<th>HK Cantonese</th>
</tr>
</thead>
<tbody>
<tr>
<td>没(有) méi ( yöu) ‘not (have)’</td>
<td>不 bù ‘not’</td>
<td>冇 mou⁵ ‘not have’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>perfective predicates;</th>
<th>non-perfective predicates;</th>
</tr>
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<tbody>
<tr>
<td>existential constructions;</td>
<td>copula constructions;</td>
</tr>
<tr>
<td>possessive constructions</td>
<td>A-not-A yes/no questions</td>
</tr>
<tr>
<td>(Mandarin méi as well)</td>
<td></td>
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</tbody>
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Table 1. Negation systems in Chinese (Mandarin, HK Cantonese and GZ Cantonese)

Mandarin has two negators, méi ( yöu) and bù. For ease of exposition, I henceforth term them as Negatorₐ and Negatorₜ. The counterpart for these two negators exists in HK Cantonese as mou⁵ and m⁴. It is generally understood that Negatorₐ occurs in the negation of perfective predicates, while Negatorₜ serves more general purposes other perfectives. Most interestingly, in contrast to the other two varieties, GZ Cantonese only has one sentential negator, mau⁵. This negator is thus responsible for negation of all the constructions shared by Negatorₐ and Negatorₜ in Mandarin and HK Cantonese. Examples (1) to (4) illustrate some of the negation patterns mentioned.

(1) Existential construction
'There aren’t pencils in the classroom’

a. Jiaoshi li méi you qianbi [Mandarin]
   classroom inside NEG have pencil
b. Fosat dou mou (*jau) jyunbat [HK Cantonese]
   classroom place NEG have have pencil
c. Fosat gui mau (jau) jinbat [GZ Cantonese]
   classroom that.place NEG have pencil

(2) Possessive construction
'I don’t have pencils’

a. Wo mei (you) qianbi [Mandarin]
   I NEG have pencil
b. Ngo mou (*jau) jyunbat [HK Cantonese]
   I NEG have have pencil
c. Ngo mau (jau) jinbat [GZ Cantonese]
   I NEG have pencil

(3) Perfective predicate
'I didn’t take your pencil’

a. Wo mei (you) na ni-de qianbi [Mandarin]
   I NEG have take you-GEN pencil
b. Ngo mou (*jau) lo lei zi jyunbat [HK Cantonese]
   I NEG have take your CL pencil
c. Ngo mau (*jau) lo-gwo nei zi jinbat [GZ Cantonese]
   I NEG have take-EXP your CL pencil

(4) A-not-A yes/no question

a. Wo mei (you) na ni-de qianbi [Mandarin]
   I NEG have take you-GEN pencil
b. Ngo mou (*jau) lo lei zi jyunbat [HK Cantonese]
   I NEG have take your CL pencil
c. Ngo mau (*jau) lo-gwo nei zi jinbat [GZ Cantonese]
   I NEG have take-EXP your CL pencil
(4) Copula construction

'(This) is not railway, (it) is highway'

a. Bu shi tielu shi gaosu  [Mandarin]
   NEG be railway be highway

b. M hai titlou hai goucukgunglou  [HK Cantonese]
   NEG be railway be highway

c. Mau hai titlou hai goucuk  [GZ Cantonese]
   NEG be railway be highway

There are three major observations from the examples above. First, there is a distinction between a ‘split’ system of negation and one that is not. A ‘split’ system means, literally, where a variety has more than one sentential negator, and so naturally the task of negation is shared among those negators. Mandarin and HK Cantonese are exemplars of this. GZ Cantonese, on the other hand, has a non-split system of negation with only one sentential negator. This can be seen by contrasting examples (1) to (3) with (4). The second observation is the similarity in negation strategy found in (1) and (2). In negating existential and possessive, the distribution of yǒu/jau\(^5\) ‘have’ are the same within each variety. However, if we compare that to the pattern in (3), we note a potential point of diversion: negation of perfective predicates can involve a different strategy from that of negative existential and negative possessive within a variety. This is seen in GZ Cantonese. Table 2 summarizes these patterns.

<table>
<thead>
<tr>
<th>Negative existential &amp; possessive</th>
<th>Negative [+PFV] predicates</th>
</tr>
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<tbody>
<tr>
<td>GZ Cantonese</td>
<td>optional: not (have) DP</td>
</tr>
<tr>
<td>Mandarin</td>
<td>optional: not (have) DP</td>
</tr>
<tr>
<td>HK Cantonese</td>
<td>inhibited: not (*have) V</td>
</tr>
</tbody>
</table>

Table 2. Distribution of HAVE in different negative constructions in Chinese

For the present discussion, I will focus on the realization (with special attention to the use of yǒu/jau\(^5\) ‘have’) and the distribution of Negator\(_A\) (or the negator) in the three varieties of Chinese only; because where Croft Cycle and related phenomena are concerned, only Negator\(_A\) is relevant, as we shall see in the discussion that follows. Therefore, I begin by examining this class of negators from a Croft Cycle perspective in the next section.

3 A Croft Cycle perspective

Chinese, in general, has the verb 有 ‘have’ as existential predicate. It is phonologically realized differently in different varieties – yǒu in (mainland and Taiwan) Mandarin, and jau\(^5\) in the two Cantonese varieties. Since the existential verb yǒu/jau\(^5\) ‘have’ is a component which makes up the negator in Chinese, Croft’s negative-existential cycle becomes particularly relevant to our discussion. In this section, I will first introduce Croft Cycle, then apply its classification to the three Chinese varieties, and finally evaluate such classification.

3.1 Croft’s negative-existential cycle

Croft (1991) has proposed a negation cycle that is driven by the merge and separation of negation with the existential predicate. The main idea is illustrated in the diagram

Figure 1 shows three main language types (A, B, and C) in terms of how a negative existential is expressed, and three transition types in between (A~B, B~C, and C~A) involving three different processes of language change. As Croft argues by means of “dynamicization of synchronic typologies” (1991:1), these six language types are considered not only as synchronic typological classes, but should also represent stages of a negative cycle where negation in languages that are driven by the grammaticalization of the verbal head would evolve.

In this model, type A languages are at the most compositional and transparent stage, where “the negative existential construction is the positive existential predicate plus the ordinary verbal negator” (Croft 1991:6-7). As the negation of a language evolves, a special form which especially expresses negative existence may gradually emerge. This usually involves contraction or fusion of the general verbal negator and the positive existential predicate. But since it is a gradual process, the two options: NEG EX and NEG.EX, can co-exist as free variants or in different specific contexts, for a period of time during the A~B transition until the system has fully developed into a type B, with NEG.EX as the only way to express negative existential.

As the special negative existential form becomes more and more productive, it would begin to generalise to contexts beyond its original meaning. In other words, it can begin to be used “for ordinary verbal negation” (Croft 1991:10). This is when a type B system approaches type C. A test for whether a language has reached type C is to see if the positive existential is still compatible with NEG in negative existential contexts. If they are not compatible, then this is a type C language. Once the positive existential resumes to being compatible with NEG in even negative existential contexts, possibly creating an emphatic effect at first, it indicates that the NEG which equals to NEG.EX has begun to be “reanalysed as only a negator” by syntactic analogy with a normal verb (Croft 1991:12); hence a C~A change.
3.2 Croft Cycle and the three Chinese varieties: some challenges

To recapitulate how the negative existential and its positive counterpart behave in the three Chinese varieties, example (1), repeated from Section 2, and (9) below are provided as illustrations.

(1) (Negative) existential construction
'\text{There aren’t pencils in the classroom}’
\begin{itemize}
  \item a. Jiaoshi li \text{mei you qianbi} [Mandarin] classroom inside \text{NEG have} pencil
  \item b. Fosat dou \text{mou (\text{"jau}) jyunbat} [HK Cantonese] classroom place \text{NEG have have} pencil
  \item c. Fosat gui \text{mau (\text{jau}) jinbat} [GZ Cantonese] classroom that.place \text{NEG have} pencil
\end{itemize}

(5) (Positive) existential construction
'\text{There are pencils in the classroom}’
\begin{itemize}
  \item a. Jiaoshi li \text{you qianbi} [Mandarin] classroom inside \text{have} pencil
  \item b. Fosat dou \text{jau jyunbat} [HK Cantonese] classroom place \text{have} pencil
  \item c. Fosat gui \text{jau jinbat} [GZ Cantonese] classroom that.place \text{have} pencil
\end{itemize}

Given the above structures for existentials, and following Croft’s (1991) proposal, the three Chinese varieties should be classified as: Mandarin (A–C), HK Cantonese (C), and GZ Cantonese (A–C). Following the Croft Cycle, Mandarin, as well as GZ Cantonese should belong to the transitional type B–C; or more precisely, A–C, with a stage B missing. Croft explains that Mandarin “negative-existential \text{mei} is already beginning to employ the positive existential \text{you} analogically, and moreover is proceeding to use \text{mei} plus \text{you} as a verbal negator in some contexts without any phonological fusion taking place” (1991:23). This ‘skipping through’ stage B is understood as a result of the isolating nature of the language (cf. Law 2014 for counterargument).

The issue of phonological fusion aside, the reason for having Mandarin and GZ Cantonese as type A–C comes from the optionality of the existential verb \text{you/jau}\text{5} ‘have’, which signals a departure from the compositional type A. And since \text{mei} in Mandarin and \text{mau}\text{4} in GZ Cantonese are both sentential negators as well, as shown in table 1, these two negators are developing into general negators with the negative existential internalized in their semantics. Nonetheless, applying the test proposed by Croft, the fact that the existential verb ‘have’ is strictly inhibited in HK Cantonese negation is evidence that HK Cantonese has reached type C. Similarly, the optionality of the existential verb in Mandarin and GZ Cantonese would suggest that these two varieties are approaching a type C but have not reached that stage yet.

So far, the classification presented in (10) looks straightforward, but two empirical facts pose challenge to grouping both Mandarin and GZ Cantonese under A–C. First, from table 1, it is clear that GZ Cantonese differs considerably from Mandarin by having only one sentential negator instead of two. This implies that the
Mandarin negator\textsubscript{M} cannot be seen as a fair equivalent to the GZ Cantonese negator. Hence treating them on a par and consequently classifying the two varieties under the same type of negation system is an over-simplification. In other words, whether a variety has a split negation system or not does and should matter to our typological classification of negation systems. A second challenge concerns the distribution of \text{yōu}/\text{jau}\textsuperscript{5} ‘have’ in the negation of perfective predicates. Table 2 in the previous section shows that in GZ Cantonese \text{jau}\textsuperscript{5} ‘have’ is optional in negative existentials and negative possessives but inhibited in negating perfective predicates; whereas in Mandarin and HK Cantonese, \text{yōu}/\text{jau}\textsuperscript{5} ‘have’ is optional and strictly disallowed respectively in all three contexts. Given such diversions between GZ Cantonese and Mandarin, there is a need to go beyond the classification in (10) so as to account for these empirical findings. Therefore, I shall integrate the findings from the Croft Cycle with three other grammaticalization pathways in the next section.

4 Going beyond the Croft Cycle

At this point, it is important to re-think what a negative-existential cycle should imply. Beyond doubt, a negative-existential cycle is a cycle by which certain negation markers evolve from negative existential markers. Nevertheless, it should also account for how the existential marker becomes involved in a negation cycle. In other words, a negative-existential cycle should also illustrate what makes the existential expression so closely interconnected with negation. To address this question, I look into the Chinese negators from two angles: their realisation and their distribution, especially with regard to that of the existential verb \text{yōu}/\text{jau}\textsuperscript{5} ‘have’. To that end, this section first introduces three other processes that are found relevant to the explanation of the Chinese negation systems discussed here, and bring forth some typological findings in support of the generalization I propose.

4.1 Four interacting diachronic pathways

For ease of exposition, the Croft Cycle and the three processes concerned are summarised below.

(6) Four interacting diachronic pathways

a. Croft’s negative-existential cycle (Croft 1991)

\begin{align*}
\text{NEG EX} & \rightarrow \text{NEG EX} \quad A \rightarrow B \\
\text{NEG EX} & \rightarrow \text{NEG.EX} \quad B \rightarrow C \\
\rightarrow \text{NEG EX} \quad C \rightarrow A
\end{align*}

b. Development of BE/HAVE auxiliaries (Freeze 1992; Kayne 2000)

BE > BE + LOC > HAVE

c. Genitive Schema (Heine 1997)

\begin{align*}
\text{Existence} & \quad > \quad \text{Possession} \\ (Y \text{ exists with} & \quad > \quad \text{‘Nuclear’ existence} \\ \text{reference to} X) & \quad > \quad \text{It has} Y > Y \text{ exists})
\end{align*}

d. Development of Perfective (Heine & Kuteva 2002; Benveniste 1966)

H(ave)-possessive > PERFECT > Perfective; Past
The four processes are connected in the following ways: first, the Croft Cycle provides the fundamental model to deconstruct Chinese negators via the merge and separation of negation with the existential predicate – precisely the components that make up the Chinese negators. On that ground, the BE/HAVE development fleshes out the possible evolutionary pathway that the *realisation* of the existential verb ‘have’ in Chinese could have taken. Furthermore, by proposing that the auxiliary and main verb HAVE develops from BE and a locative, the analyses in Freeze (1992) and Kayne (2000) also link up with the Genitive Schema, in that the possessive meaning develops from existence. This line of development takes us to the emergence of perfective aspect from H(ave)-possessives – a marker of predicative possession typically expressed in English by ‘have’ (Heine and Kuteva 2002) – as in (6d). Thus, the Genitive Schema in (6c) and the grammaticalization of possessives as in (6d) together construct a possible explanation for the *distributional* development of Chinese Negator, and, even more so, the distribution of yǒu/jau ‘have’ in the three Chinese varieties in negative contexts. Indeed, preliminary typological findings support the plausibility of such a network of processes.

4.2 Some typological findings
With a closer scrutiny of the existential predicate in the eighteen languages\(^2\) that Croft has examined in his 1991 paper, plus the two Cantonese varieties in this study, I have conducted a typological survey. The survey looks into existentials from two perspectives: realization and distribution, as aforementioned. Several important tendencies are identified from these twenty samples.

In terms of realization, there are three major forms that are attested for an existential, namely BE, BE+LOC[ative], and HAVE. What is worth noting here is that type A-related languages (a la Croft 1991) – type A, type A~B, and type C~A languages – tend to have a BE-form existential; whereas languages with a HAVE-form existential are all at least of type B. Mapping up the negative-existential cycle with the BE/HAVE auxiliary evolution, we can see the likelihood for languages at an earlier stage of the Croft Cycle to also be at an earlier stage of the BE > BE+LOC > HAVE line of development. Regarding the distribution of existential predicates, there are three other contexts apart from existential construction that an existential predicate can appear in; these include locative, possessive, and aspectual or emphatic contexts.

Correlating the distributional findings with the different realizations of existential, as well as with the Croft Cycle, we have two important discoveries: (i) all languages with a HAVE-form existential have their existential verb expressing possession as well; and (ii) those languages which existential expressions also express aspectual information or carry emphatic function are a proper subset of those which existential expression also expresses possession. Indeed, the typological pattern described is in line with Heine’s (1997) Genitive Schema in (6c), as well as the development of perfective aspect from H-possessives in (6d). Indeed, this development of EXIST > POSSESSIVE > PERFECT is attested in French *avoir* ‘to-have’ and more importantly in Chinese as well.

\(^2\) The eighteen languages include: Lahu (A), Tzutujil (A), Syrian Arabic (A), Balinese (A–B), Hungarian (A–B), Russian (A–B), Amharic (B), Wolofian (B), Turkish (B), Fula (B), Wintu (B–C), Kanuri (B–C), Mandarin (B–C), Indonesian (B–C), Manam (C), Tongan (C), Nunggubuyu (C), Marathi (C–A). The classification is shown in parentheses.
Therefore, concluding from the insights of the twenty languages examined here, I propose a unified grammaticalization pathway: Existential > Possessive > Aspect. This pathway can be read as an implicational universal; that is, if the existential expression in a language can be used as an aspectual marker, it can also be used to express possessive, and so on. The next section puts forward a formal analysis for this generalisation which also captures the cross-variety variations in Chinese.

5 An incorporation account of cross-variety variations
My proposal draws fundamental assumptions from the Probe-Goal Agree approach of the Minimalist Program (Chomsky 2000, 2001) and Incorporation of the Probe with its Defective Goal (Roberts 2010) as defined in (7) and (8). Section 5.1 takes the development shared by all three Chinese varieties, i.e. EX=POSS as an illustration; then I apply the analysis to what captures their cross-linguistic differences in 5.2.

(7) *Incorporation* (Roberts 2010)
   (i) Incorporation can take place only where the label of the incorporee is nondistinct from that of the incorporation host; and
   (ii) The category dominating both the incorporee [...] and its host are minimal.

(8) *Defective Goal* (Roberts 2010)
   A Goal G is defective if G’s formal features are a proper subset of those of G’s Probe P.

5.1 The common ground: EX=POSS
Freeze (1992) argues that the three sentences in (9) share the same underlying locative structure. In fact, we can easily translate the relation among these constructions into the evolution pattern identified for the realisation of EXIST, that is: BE > BE+LOC > HAVE (as in 9a, b, and c respectively). Kayne (2000) discusses this process with a similar claim that HAVE is the result of combining LOC with BE. Indeed, the two analyses differ mainly in the perspective taken. Freeze sees these three constructions under the lens of a common locative element; while Kayne interprets them in terms of possession (i.e. a relation between the possessor and the possessed).

(9) (Freeze 1992:553)
   a. There is a book on the bench. [Existential]
   b. The book is on the bench. [Predicate locative]
   c. Lupe has a book. [HAVE predication]

Drawing insights from both proposals, this paper argues for an analysis that accounts for the different forms of existential, as well as the emergence of possessive and perfective meaning from the existential expression. To start with, figure 4 presents the pre-incorporation configuration. In featural terms and adopting Roberts’ (2010) theory of incorporation, figure 4 is the configuration for type A languages, where the negative existential is compositionally expressed by having a negator plus an existential expression. Thus this is a stage where existence is expressed by two separate functional heads (i.e. v and P) as represented in the diagram below.
The next step in the development of an existential expression is incorporation of BE and LOC, as in figure 5. In languages like Chinese, which has a have-form existential, the existential verb also carries possessive meaning. This is attested in all three varieties, as well as the typological findings in Section 4.2.

5.2 The diversion: POSS > ASP, or not (yet)
As aforementioned, what distinguishes the three Chinese varieties is the different stages they are at in the POSS > ASP development of the existential verb. In HK Cantonese (type C) where the negative existential mou 'not have' has developed into one of the general negators; this negator also encodes perfective aspect. Sentential negation of type C languages should have the configuration as in figure 6. The ∅ here stands for the endpoint of semantic bleaching, where the existential expression has lost all its interpretable features. The existential having grammaticalized and incorporated into Asp has lost its semantic properties as a verbal element, and the precise aspectual information encoded in the incorporated output form [Asp-∃] is largely dependent on which specific aspect head the existential is incorporated into.
6 Conclusions
To conclude, the present study centres around the negative-existential cycle proposed in Croft (1991) and its application on three Chinese varieties – Mandarin, HK Cantonese, and GZ Cantonese. In light of the inadequacy in classifying these varieties based solely on the Croft Cycle, I have shown that the negative-existential cycle has to be understood in close connection with two other grammaticalization pathways:

(i) In terms of the realisation of existential: BE > BE+LOC > HAVE
(ii) In terms of the distribution of existential: Existential > Possessive > Aspect

I have also put forward a formal analysis based on the incorporation of different structural heads (Roberts 2010), as well as the change in lexical entries of the existential. This is summarised as follows:

Negative existential
- Type A (NEG EX): no incorporation
- Type B (NEG.EX): Neg-v incorporation [ $\exists$ (1) EXIST; (2) POSSESSIVE]
- Type C (NEG = NEG.EX): Neg-Asp incorporation [ $\exists$ = (1) EXIST & POSS; (2) $\varnothing$]

References