

## On the shaping of Chinese negation systems – interaction between Croft’s negative-existential cycle and BE/HAVE evolution<sup>1</sup>

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### Roadmap:

- 1 Introduction to three Chinese negation systems
- 2 A Croft Cycle perspective
- 3 Looking beyond Croft Cycle
- 4 Towards a formal analysis
- 5 Conclusions

## 1 Three Chinese negation systems

### 1.1 A brief introduction

This study focuses on three Chinese varieties:

- ▷ Mandarin Chinese (Mandarin)
- ▷ Hong Kong Cantonese (HKC)
- ▷ Gaozhou Cantonese (GZC)



(Source: <http://azmega.com/vector/map-of-guangdong-and-guangxi.html>)

Table 1 shows an overview of the negation system in these three varieties; and examples (1) through (4) illustrate some of the constructions listed.

	Negator A	Negator B
<b>GZ Cantonese</b>	冇 <i>mau<sup>5</sup></i> ‘not’	
<b>Mandarin</b>	没(有) <i>mei (yǒu)</i> ‘not (have)’	不 <i>bù</i> ‘not’
<b>HK Cantonese</b>	冇 <i>mou<sup>5</sup></i> ‘not.have’	唔 <i>m<sup>4</sup></i> ‘not’
	perfective predicates; existential constructions; possessive constructions	non-perfective predicates; copula constructions; A-not-A yes/no questions (Mandarin <i>mei</i> as well)

Table 1. Negation systems in Chinese (Mandarin, Hong Kong Cantonese and Gaozhou Cantonese)

<sup>1</sup> Many thanks to my Mandarin, Hong Kong Cantonese and Gaozhou Cantonese informants, as well as to my supervisors Ian Roberts and David Willis for their guidance and inspiration.

## (1) Existential construction

*'There aren't pencils in the classroom'*

- a. 教室 裏 沒 (有) 鉛筆 [Mandarin]  
*Jiaoshi li mei you qianbi*  
 classroom inside **NEG have** pencil
- b. 課室 度 冇 (\*有) 鉛筆 [HK Cantonese]  
*Fosat dou mou jau jyunbat*  
 classroom place **NEG.have have** pencil
- c. 課室 具 冇 (有) 鉛筆 [GZ Cantonese]  
*Fosat gui mau jau jinbat*  
 classroom that.place **NEG have** pencil

## (2) Possessive construction

*'I don't have pencils'*

- a. 我 沒 (有) 鉛筆 [Mandarin]  
*Wo mei you qianbi*  
 I **NEG have** pencil
- b. 我 冇 (\*有) 鉛筆 [HK Cantonese]  
*Ngo mou jau jyunbat*  
 I **NEG.have** have pencil
- c. 我 冇 (有) 鉛筆 [GZ Cantonese]  
*Ngo mau jau jinbat*  
 I **NEG have** pencil

## (3) Perfective predicate

*'I didn't take your pencil.'*

- a. 我 沒 (有) 拿 你的 鉛筆 [Mandarin]  
*wo mei you na ni-de qianbi*  
 I **NEG have** take you-GEN pencil
- b. 我 冇 (\*有) 攞 你 枝 鉛筆 [HK Cantonese]  
*ngo mou jau lo lei zi jyunbat*  
 I **NEG have** take your CL pencil
- c. 我 冇 (\*有) 攞 (過) 你 枝 鉛筆 [GZ Cantonese]  
*ngo mau jau lo-gwo nei zi jinbat*  
 I **NEG have** take-EXP your CL pencil

## (4) Copula construction

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

- a. 不 是 鐵路, 是 高速 [Mandarin]  
*Bu shi tielu shi gaosu*  
**NEG be** railway be highway
- b. 唔 係 鐵路, 係 高速公路 [HK Cantonese]  
*M hai titlou hai goucukgunglou*  
**NEG be** railway be highway
- c. 冇 係 鐵路, 係 高速 [GZ Cantonese]  
*Mau hai titlou hai goucuk*  
**NEG be** railway be highway

## 1.2 Some observations

(a) *A 'split' system of negation or not*

Both Mandarin Chinese and HK Cantonese have two negators, each understood to be 'specialised' for a particular aspectual context, and for some constructions; while GZ Cantonese has only one negator.

(b) *Distribution of HAVE: existential = possessive negation*

The distribution of *HAVE* in negative existential construction is the same as that in negative possessive constructions within each variety, although it varies across varieties.

(c) *Distribution of HAVE: existential vs. standard negation*

The distribution of *HAVE* in negative existential construction may differ from that in negative perfective predicates, as in GZ Cantonese.

Table 2 summarises the pattern in observations (b) and (c).

	Negative existential & possessive	Negative [+PFV] predicates
<b>GZ Cantonese</b>	<i>optional:</i> not (have) DP	<i>inhibited:</i> not (*have) V
<b>Mandarin</b>	<i>optional:</i> not (have) DP	<i>optional:</i> not (have) V
<b>HK Cantonese</b>	<i>inhibited:</i> not (*have) V	<i>inhibited:</i> not (*have) V

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

I shall explore on these observations from different perspectives in the coming sections: starting from Croft's (1991) quasi-historical approach in section 2, to an integration of several grammaticalisation generalisations in section 3, and finally an attempt towards a formal analysis in section 4, before I conclude in section 5.

*Some disclaimers:*

- Focuses only on Negator<sub>A</sub>; discussion regarding Negator<sub>B</sub> (i.e. *bu* and *m<sup>4</sup>*) will not be covered.
- Uses only synchronic cross-variety data; no historical data.
- Examines only colloquial spoken data is examined, and variations in different registers will not be discussed.
- Discussion regarding the different varieties of Mandarin will not be covered.

## 2 A Croft Cycle perspective

### 2.1 Croft's negative-existential Cycle (Croft 1991)

Croft (1991) has proposed a negation cycle that is driven by the merging and separation of negation with the existential predicate. The main idea is illustrated in the diagram below: (adapted from Croft 1991:6; van Gelderen 2011:296; Willis et al. 2013:24; Veselinova 2014)

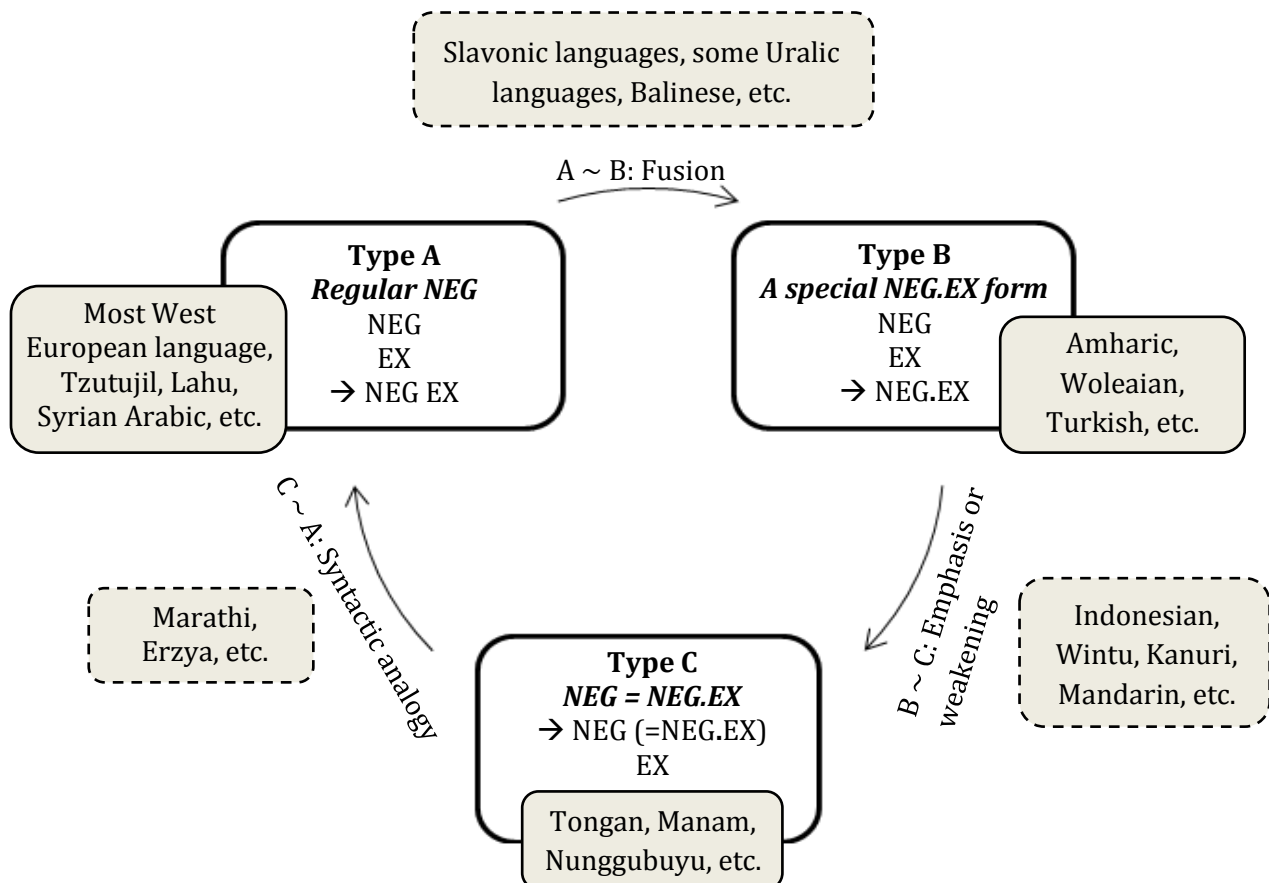


Figure 1. Croft's negative-existential cycle

### 2.2 Croft Cycle and the three Chinese varieties

In Mandarin, Hong Kong Cantonese and Gaozhou Cantonese, the verb 'have', namely, 有 is the existential verb. This is phonologically realised as *yǒu*, *jau<sup>5</sup>*, and *jau<sup>5</sup>* in the three varieties respectively. Examples (1), repeated from section 1.1, and (5) below shows how negative existential and its positive counterpart are like in the three Chinese varieties.

## (1) (Negative) existential construction

*'There aren't pencils in the classroom'*

- a. 教室 裏 沒 (有) 鉛筆 [Mandarin]  
*Jiaoshi li mei you qianbi*  
 classroom inside **NEG have** pencil
- b. 課室 度 冇 (\*有) 鉛筆 [HK Cantonese]  
*Fosat dou mou jau jyunbat*  
 classroom place **NEG.have have** pencil
- c. 課室 具 冇 (有) 鉛筆 [GZ Cantonese]  
*Fosat gui mau jau jinbat*  
 classroom that.place **NEG have** pencil

## (5) (Positive) existential construction

*'There are pencils in the classroom'*

- a. 教室 裏 有 鉛筆 [Mandarin]  
*Jiaoshi li you qianbi*  
 classroom inside **have** pencil
- b. 課室 度 有 鉛筆 [HK Cantonese]  
*Fosat dou jau jyunbat*  
 classroom place **have** pencil
- c. 課室 具 有 鉛筆 [GZ Cantonese]  
*Fosat gui jau jinbat*  
 classroom that.place **have** pencil

Thus, according to Croft Cycle, the three Chinese varieties should be classified as:

- Mandarin: Type A~C (with a stage B missing)
- Hong Kong Cantonese: Type C
- Gaozhou Cantonese: Type A~C (with a stage B missing)

*Challenges to this classification:*

- From table 1: GZ Cantonese differs from Mandarin in having only one negator;
- From table 2: Mandarin *meiyou* 'not have' is acceptable in the negation of perfective predicates, but *jau*<sup>5</sup> 'have' is not allowed in GZ Cantonese for the same contexts.

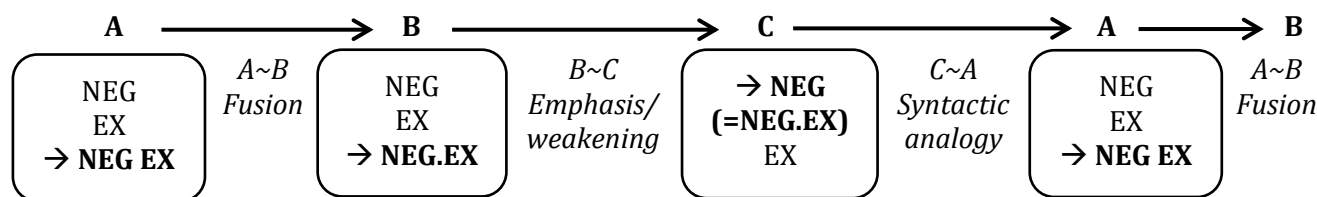
Therefore, Croft Cycle alone is inadequate in distinguishing the three systems of negation. To construct a more comprehensive account, I shall integrate these observations from Croft Cycle, with some other grammaticalisation pathways in the next section.

### 3 Looking beyond Croft Cycle

Three other diachronic pathways are found relevant to the observations made with regard to the three Chinese negation systems in section 1. For ease of exposition, Croft Cycle and the three processes concerned are summarised below. I suggest that these four processes together can form a broader picture which better captures the distinction among these Chinese negation systems.

## (6) The four interacting diachronic pathways

## a. Croft's negative-existential cycle (Croft 1991)



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

BE &gt; BE + LOC &gt; HAVE

## c. Genitive Schema (Heine 1997)

Existence > Possession > 'Nuclear' existence  
 (Y exists with reference to X) (X has Y) (It has Y > Y exists)

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

H(ave)-possessive &gt; PERFECT &gt; Perfective; Past

*So, how do the four processes fit together?*

## (a) Croft Cycle:

- ▶ the material that make up Negator<sub>A</sub> (or the negator) in the Chinese varieties, i.e. negator plus existential verb (HAVE)

## (b) BE&gt;HAVE:

- ▶ the change in *form* of the existential verb;
- ▶ explains why 有 'have' expresses both existence and possession

## (c) Genitive Schema:

- ▶ the development of possession from existence; both of which are encoded by 有 'have' in Chinese

## (d) H-possessive &gt; PFV:

- ▶ the presence/absence of which distinguishes GZC from Mandarin and HKC

In fact, having examined the 18 languages used in Croft (1991) and the two Cantonese varieties here, I have noticed the following patterns regarding the development in *form* and *distributional pattern* of the existential expression.

## (7) Some typological findings

(a) *In terms of FORM:*

- ▶ Type A-related languages tend to have a BE-form existential
- ▶ All HAVE-form existentials are of at least type B

(b) *In terms of DISTRIBUTION:*

- ▶ All languages with a HAVE-form existential have their existential verb expressing possession as well.
- ▶ Those languages which existential expression also expresses aspectual information are a proper subset of those which existential expression also expresses possession.

*My proposal: a unified implicational universal*

## (8) Existential (EX) &gt; Possessive (POSS) &gt; Aspect (ASP)

From what we see in the three negation systems so far, what the three varieties share in common in terms of grammaticalisation process would be the development of 有 'have' from EX to POSS, while the presence/absence of the further development of POSS to ASP is one way to set them apart from each other. With this idea, I attempt to formally capture this unified process as well as the linguistic pattern of the three negation systems in the next section.

## 4 Towards a formal analysis

### 4.1 Theoretical assumptions

My proposal draws fundamental assumptions from the Minimalist Program, and the following:

- Probe-Goal Agree approach (as defined in (9))
- Incorporation of the Probe with its Defective Goal (Roberts 2010) (as defined in (10) and (11))

(9) *Agree* (Chomsky 2000, 2001)

$\alpha$  *Agrees* with  $\beta$  where:

- (i)  $\alpha$  and  $\beta$  have non-distinct formal features.
- (ii)  $\alpha$  asymmetrically c-commands  $\beta$ .
- (iii) there is no  $\gamma$  non-distinct in formal features from  $\alpha$  such that  $\gamma$  c-commands  $\beta$  and  $\alpha$  c-commands  $\gamma$ .

(10) *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.

(11) *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.

Recall from section 1.2 the patterning of NEG and HAVE in the Mandarin, HKC, and GZC respectively in existential, possessive and perfective contexts. This section takes the development that the three varieties have in common, i.e. EX=POSS as an illustration first before moving on, in section 4.3, to see how this proposed analysis can capture their cross-linguistic differences as well.

	Negative existential & possessive	Negative +PFV predicates
<b>GZ Cantonese</b>	<i>optional:</i> not (have) DP	<i>inhibited:</i> not (*have) V
<b>Mandarin</b>	<i>optional:</i> not (have) DP	<i>optional:</i> not (have) V
<b>HK Cantonese</b>	<i>inhibited:</i> not (*have) V	<i>inhibited:</i> not (*have) V

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

**4.2 The common ground: EX = POSS**

Freeze (1992) and Kayne (2000): BE > BE.LOC > HAVE

Freeze’s (1992) proposal:

- ▷ The three types of constructions in (12) share the same underlying structure (i.e. the universal locative D-structure) as in (13).
- ▷ Thus, possessive HAVE is the result of combining BE with a LOC (i.e. Prep<sup>0</sup>), with the locative constituent containing a [+HUMAN] argument which contrasts with that in an existential construction.

(12) (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]

(13) (adapted from Freeze 1992:588)

[<sub>IP</sub> [<sub>SPEC</sub> e] [<sub>I'</sub> I ] [<sub>PP</sub> [<sub>SPEC</sub> NP<sub>(Theme)</sub>] [<sub>P'</sub> P NP<sub>(Location)</sub>]]]]  
 [+AGR] ([+HUMAN])  
 [+LOC]

Kayne’s (2000) proposal:

- ▷ locative element as a “nonovert prepositional (oblique) D<sup>0</sup>”, termed as D/P<sup>0</sup>.
- ▷ D/P moves to and incorporates with BE; and the BE+D/P form is later spelled out as HAVE at the PF interface.
- ▷ This is used to explain the development of HAVE as a main verb denoting possession and auxiliary HAVE which marks the participle form of a verb (a la Benveniste 1966), as in (14) below.

(14) (adapted from Kayne 2000:111; 112)

- a. ... DP<sub>POSSi</sub> **D/Pe<sub>j</sub> + BE** [<sub>DP</sub> [e<sub>i</sub>] [<sub>D/P</sub> e<sub>j</sub>] [AGR<sup>0</sup> QP/NP]] (Possessive HAVE)
- b. ... DP<sub>SUBJi</sub> **D/Pe<sub>j</sub> + BE** [<sub>DP</sub> [e<sub>i</sub>] [<sub>D/P</sub> e<sub>j</sub>] [<sub>VP</sub> [e<sub>i</sub>] V DP]] (Participle HAVE)

In featural terms and adopting Roberts’ (2010) theory of incorporation, type A languages in Croft Cycle, where negative existential is compositionally expressed by having a negator plus an existential expression, should have the following structure in figure 2.

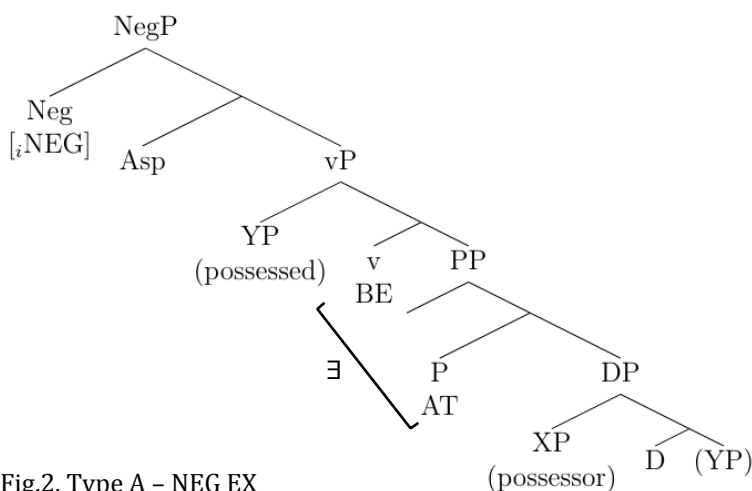


Fig.2. Type A – NEG EX



In languages like those three Chinese varieties, where the existential verb has already taken the form of HAVE, in this case 有 ‘have’; this existential expression would also carry possessive meaning as attested in Mandarin, HKC, and GZC, as well as the typological findings mentioned earlier in (7) of section 3. For this type of languages, negative existence and negative possession would share the same structure as figure 3 below.

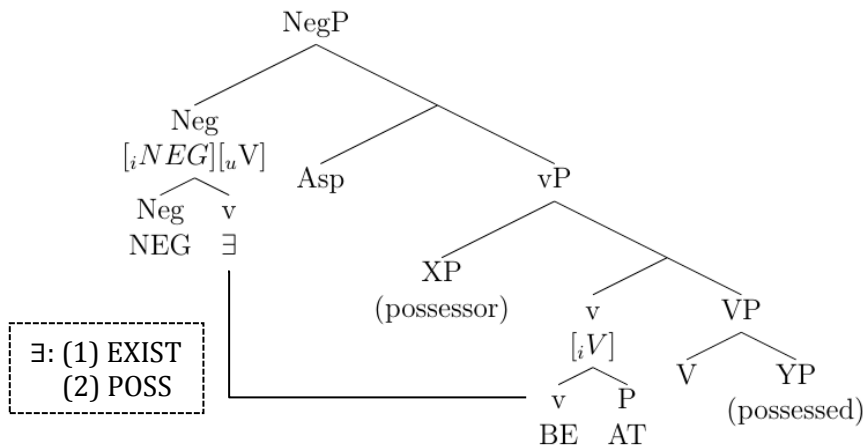


Fig.3. Type B – NEG.EX

### 4.3 The diversion: POSS > ASP, or not (yet)

As aforementioned, what distinguishes the three varieties from each other is the different degrees of POSS > ASP development of 有 ‘have’. In HKC, a typical type C language, where the general negator 冇 *mou<sup>5</sup>* ‘not.have’ is the original negative existential (*a la* Law 2014), the negator also carries aspectual value – in this case perfective. For languages of this type, their standard negation would take the following structure. The  $\emptyset$  here stands for the endpoint of semantic bleaching where the existential expression has lost all meaning (i.e. interpretable features). The existential having grammaticalised and incorporated into Asp has lost its semantic properties as a verbal element, and the exact aspectual information encoded in the incorporated output form [Asp- $\exists$ ] is largely dependent on which specific aspect head the existential is incorporated into.

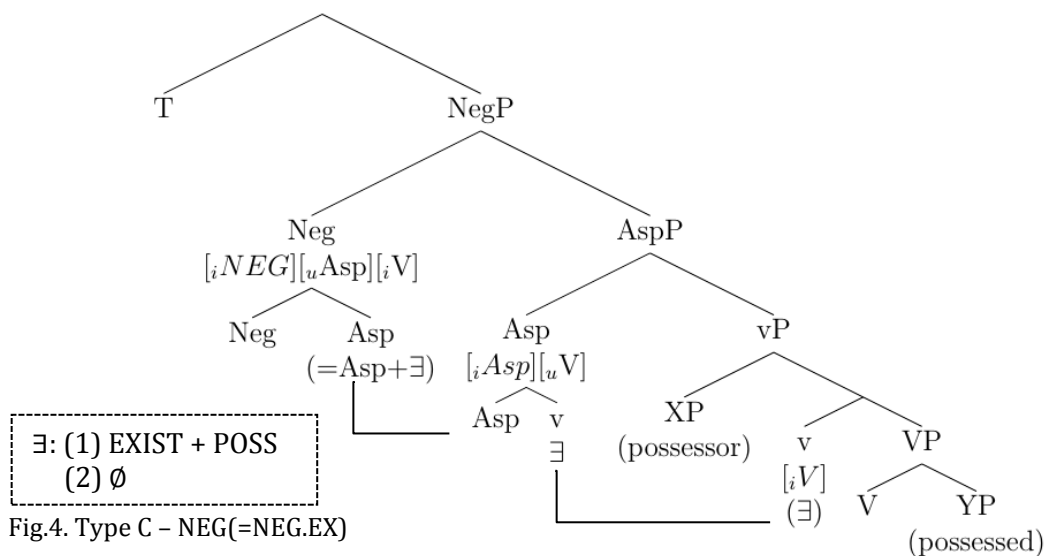


Fig.4. Type C – NEG(=NEG.EX)

## 5 Conclusions

The present study centres around the negative-existential cycle proposed by Croft (1991) and its application on three Chinese varieties – Mandarin, Hong Kong Cantonese, and Gaozhou Cantonese. In light of the difficulty in classifying these varieties according to Croft's Cycle, I have shown that the negative-existential cycle has to be understood in close connection with two other grammaticalisation 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)  $\emptyset$ ]

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