Negation under Incomplete Language Acquisition of Mandarin Chinese

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Abstract

This paper aims to investigate semantics, morphology and syntax of negation under incomplete language acquisition of Mandarin Chinese, which is an unexplored territory of linguistic research in Mandarin Chinese. Negation is a hot and controversial topic since negative markers are included in the core analysis of tense and aspect in sentential structure (Zanuttini, 2001). Predominantly, the author focuses on the morphosyntactic analysis of negation under incomplete language acquisition of Mandarin. The author carries out a comparison experiment to explore relevant language attrition or transfer under incomplete language acquisition of Mandarin Chinese. Three important themes, including semantic denotation, aspectual features and cliticization of negation in Mandarin, are addressed in this preliminary study. The results show that incomplete language learners have no difficulty in identification of clitic status of negative morphemes in relatively simple sentence (simple S-V-O structure), while incomplete language learners in the experiment have trouble in (1) distinguishing the semantic difference between "bu" and "mei", two Chinese negative morphemes; (2) telling perfective aspectual features of these two negative morphemes, "bu" and "mei"; (3) positioning the negative morpheme "bu" syntactically appropriately in sentential negation with more grammatical elements.

1. Introduction

Negation is a universal grammatical feature in all languages. Syntax of negation has been paid much attention by a lot of researchers (e.g Chomsky, 1957; Dahl, 1979; Payne, 1985; Huang, 1988; Zanuttini, 1991, 2001). Li (1999) mentions that evidence of NegP projection is largely based on Germanic/Romance languages and Indo-European languages which have fruitful inflectional morphology, while NegP functional projections also lie in languages which lack inflectional markers, like Mandarin Chinese. Also, negation in language acquisition was largely discussed in the aspect of second language acquisition of western languages (Caconi et al., 1987; Hawkins, 2001; Swart, 2009). Few studies were implemented to explore negation in language acquisition of East

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Asian languages. The paper, however, aims to explore negation under incomplete language acquisition of Mandarin Chinese.

With regard to incomplete language acquisition, Polinsky (2005) proposes that incomplete language acquisition refers to "the acquisition of L1 by a healthy child who starts out either monolingual or dominant in L1 but switches to another language (L2) as primary before 10" (p.419). Moreover, Valdes (2001) defines it as heritage language acquisition. Fishman (2001) argues that heritage language is connected with a particular family and indigenous relevance. Heritage language (HL) brings about complications and ambiguities that do not exist in first and second language acquisition (He, 2008). Incomplete language acquisition or heritage language acquisition is heatedly-discussed topic recently. However, little research investigates incomplete language acquisition of Mandarin Chinese through a specific linguistic perspective. My preliminary research may be limited but could pose some intriguing and thought-provoking ideas to future studies in this area.

In this paper, first of all, I present the theoretical framework of Chinese negation which is put forward by different researchers (e.g Li & Thompson, 1981; Huang, 1988; Ernst, 1995; Li 1999). Two particular morphemes of Chinese negation, namely "bu" and "mei" are discussed. To be more previse, aspect and cliticization of these two negative morphemes are explored based on the previous theoretical foundation. Also, combining with the theoretical framework, I would like to see featured morphosyntactic attrition or acquisition under incomplete/heritage languages in the literature. Second, an experiment is implemented to investigate morphosyntactic awareness or attrition of negation under incomplete language acquisition of Mandarin Chinese. Ten incomplete language learners and ten native speakers of Mandarin Chinese participated in the experiment. Two negative morphemes ("bu" and "mei") are specifically addressed in the experiment in order to explore three crucial themes (semantic denotation, aspectual features and clitic status) of negative markers under incomplete language acquisition. Finally, the results of the experiment are presented; further discussion is made about the study and a brief conclusion is drawn about the overall study at the end of this paper.

2. Negation in Mandarin Chinese

Negation is a way to convert an affirmative statement into a contradictory speech of denial. This common linguistic feature exists in all the languages (e.g Indo-European languages, Sino-Tibetan languages). Regardless of the position of negation markers, the form of sentential negation does exist in various languages. For example:

(1)

Italian

a. Io **non** parlo l'italiano.

I NEG speak Italian.

'I don't speak Italian.'

English

b. I do **not** speak English.

I AUX NEG[2] speak English.

'I don't speak English.'

Japanese

c. watashi wa nihongo o hanasa-**nai.**

I AUX Japanese AUX speak -NEG.

'I don't speak Japanese.'

Mandarin

d. wo **bu** shuo zhongwen.

I NEG speak Chinese.

'I don't speak Chinese.'

Bieber, Conrad & Reppen (1998) mention that negation can be divided into two types, namely synthetic (e.g "no", "neither") and analytical (e.g not). In addition, negative words can act as different functions (adjective, pronoun, noun or adverb) in a sentential structure. I will take an English sentence as an example.

Nobody never does nothing for no one.

In the foregoing sentence, there are four negative markers, each of which takes various grammatical parts (nobody-pronoun; never-adverb; nothing-noun; no-adjective). In Mandarin Chinese, morphemes of negation mainly work as an adverb syntactically to contradict the affirmative statement. Negative adverbs catch the attention, which leads to great emphasis on them in the research of Chinese negation. There are lots of negative adverbs in Mandarin Chinese. These diverse adverbs range from some prevailing[3] ones (e.g "不 bu", "没 mei", "别 bie", "无 wu2", "未 wei") to some relatively less commonly-

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[2] AUX-Auxiliary; NEG-Negative marker

[3] The criteria to quantify "prevailing" and "less prevailing/common" are based on the spoken and written corpora of Mandarin in the study of Xiao & McEnery (2008). The major corpus data comes from Lancaster Corpus of Mandarin Chinese (LCMC) and Callhome Chinese corpus (which is from Linguistic Data Consortium, University of Pennsylvania)

used ones (e.g "莫 mo", "休 xiu", "毋 wu4", "弗 fu"). Examples are shown as follows (2)-more prevailing and (3)-less prevailing:

(2). a. Wo **bu**   xihuan.

   I   NEG like.

   'I don't like.'

  b. Wo **mei**(you) qian

   I NEG (have) money.

   'I don't have money.

  c. Qing   **bie** zou.

   Please NEG walk.

   'Please don't walk away.'

(3). a. **Mo**   chou.

   NEG worry.

   'Don't worry.'

  b. **Xiu**   xiang.

   NEG think about.

   'Never think about it.'

  c. **Wu**   wang wo.

   NEG forget me.

   'Don't forget me.'

  These negative adverbs in Mandarin seem to be semantically equivalent to "not" in English. However, there are nice semantic or syntactic distinctions among them. For instance, "xiu" not only expresses the denotation of "not", but connotes the meaning of "never". Through corpus-based and intuition-based approaches of linguistic analysis, it is still complicated to clarify discrepancies among different negative adverbs in Mandarin Chinese. Researchers try to look into Chinese negation through morphosyntactic and semantic-syntactic lens (Li &Thompson, 1981; Lu, 1982; Huang, 1988; Shen, 1995; Liu,

1997; Bai 2000; Lin 2003), so that they explored relevant data and evidence to find out the underlying variation pertaining to the functions of negation morphemes.

3. "bu" and "mei" in Mandarin Chinese

3.1 General Morphosyntactic Model

From the corpora of Mandarin Chinese, precisely, the two most frequent negative words in Mandarin Chinese are "bu" and "mei". Moreover, concerning the range of negation, "bu" covers larger scope than "mei". Generally, negative morphemes are procliticized to predicate. Negators (bu and mei) can be fit in the following morphosyntactic model (4)/(5) in Mandarin Chinese (Li, 1999).

Subject + *NEG***+ Predicate**

(4) a. Yuehan **mei**　you　che.

　　　 John　NEG　have　car.

　　　 'John doesn't have car.'

　　b. *Yuehan you　**mei**　che.

　　　 John　　 have NEG car.

　　　 'John doesn't have car.'

(5) a. Mali　 **bu**　chi　pinguo.

　　　 Mary NEG eat　apple.

　　　 'Mary doesn't eat apple.'

　　b. *Mali　chi　**bu**　 pingguo.

　　　 Mary　eat　NEG　apple.

　　　 'Mary doesn't eat apple.'

3.2 Aspect and Cliticization

Many studies focus on the comparison between "bu" and "mei". Li & Thompson (1981) argues that "mei" denies the completion of an action while "bu" is a neutral negative marker which denies the state of an action. Similarly, in the aspect of telicity, Li (1999) implies that "mei" indexes [telic] whereas "bu" implicates [atelic]. (6)

(6)

VP Bu + V (e.g chi)	VP Mei + V (e.g chi)
1. atelic 2. non-completion	1. telic 2. completion

a.Xiaohong **bu** chi wanfan.

Xiaohong NEG eat dinner.

'Xiaohong doesn't have dinner.'

b. Xiaohong **mei** chi wanfan.

Xiaohong NEG eat dinner.

'Xiaohong hasn't had dinner.'

As the examples are shown above, both "bu" and "mei" negate the action of "eat dinner". "mei" refers to the denotation that Xiaohong intended to eat dinner, but she didn't complete the event/action of "eating". However, "bu" just functions as a negator to deny the action of "eat dinner", which has no concern with negation of completion of an action/event.

In addition, regarding aspectual feature, Liu (1997) and Xiao & McEnery (2004) put forward the idea of "realization" between "bu" and "mei", which is similar to comparison between atelic and telic; completion and non-completion. (7)

(7). Nimen dong wo shuo de hua ma?

You understand I said AUX words InterP[4]?

'Do you understand what I said?'

a. wo **bu** dong ni shuo de hua.

I NEG understand you said AUX words.

'I didn't understand what you said.'

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b. wo **mei** dong ni shuo de hua.

I NEG understand you said AUX words.

'I haven't understood what you said.'

In (7)a and (7)b, "mei dong" negates the endpoint of "I understand", meaning that the event/action of "I understand" does not take place. Nonetheless, "bu dong" represents the statement of "I understand what you said" was not true. Similar examples can also be shown as follows (8).

(8) a. Chi fan zhi qian, Bide **bu** xi shou.

Eat dinner AUX before, Peter NEG wash hands.

'Before eating dinner, Peter doesn't wash hands.'

b. Chi fan zhi qian, Bide **mei** xi shou.

Eat dinner AUX before, Peter NEG wash hands.

'Before eating dinner, Peter didn't wash hands.'

In (8)a and (8)b, "mei" denies the realization of action of "xi shou" (wash hands) in a particular situation, whereas "bu" just negates the statement of "xi shou" implying that not washing hands before dinner is a habitual feature of Peter.

Concerning the cliticization of these two negators, Ernst (1995) proposes that "bu" does not refer to perfective aspect nor coexist with perfective marker, like "le", "guo" while "mei" can denote perfective aspect, sometimes can be formed with aspectual marker "guo" in a sentential negation structure. Moreover, Shen (1995) maintains that "bu" exists in unbounded situations while "mei" can lie in bounded situation (9).

(9) a. Xiaoming qu-**le** xuexiao.

Xiaoming go-PRF school.

'Xiaoming went to school.'

b. Xiaoming **mei** qu xuexiao.

Xiaoming NEG go school.

'Xiaoming hasn't gone to school.'

c. Xiaoming **mei** qu-**guo** xuexiao.

Xiaoming NEG go-PRF xuexiao.

'Xiaoming hasn't been to school.'

d. *Xiaoming **bu** qu-**le**/qu-**guo** xuexiao.

Xiaoming NEG go-PRF[5] school.

Cliticization of "bu" is an intriguing and complicated issue in Mandarin Chinese. Ernst (1995) puts forward that insertion of adverbial predicate in a sentential negation would lead to positioning change of negation marker "bu" in Mandarin.

Subject+Main Verb+*NEG*+Adverbial Predicate

(10) a. Wugui zou de man.

Turtle walk AUX slowly.

'Turtle walks slowly.'

b. *Wugui **bu** zou de man.

Turtle NEG walk AUX slowly.

'Turtle doesn't walk slowly.'

c. Wugui zou de **bu** man.

Turtle walk AUX NEG slowly.

'Turtle doesn't walk slowly.'

As shown in (10), "bu" is cliticized to adverbial predicate instead of main verb. Huang (1988) analyzes the cliticization of "bu" by scope-based perspective. Huang (1988) argues that it is semantically anomalous that manner expression takes wide scope over the verb when "bu" is glued to the verb.

Moreover, Ernst (1995) proposes the expected basic configuration with negation in a sentential structure. The model and examples (11) are shown as follows:

Subject+*NEG*+Manner Adverbial +Main Verb+Object

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[5] PRF-Perfective marker

Sentence
S   VP   O
NegP
NegAdv (bu) + V
Manner Adv. + V'
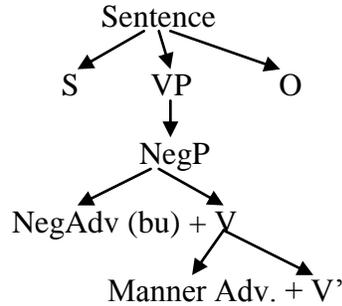
(11) a. Wo toutou   de   gei nǚpengyou xie   xin.

    I secretly AUX to girlfriend write letter.

    'I secretly wrote letters to girlfriend.'

   b. Wo **bu**   toutou   de   gei nǚpengyou xie   xin.

    I NEG secretly AUX to girlfriend   write letter.

    'I didn't secretly write letters to girlfriend.'

   c. *Wo toutou   de   gei nǚpengyou **bu** xie   xin.

    I   secretly AUX to   girlfriend NEG write letter.

   d. *Wo toutou   de   **bu** gei nǚpengyou xie   xin.

    I   secretly AUX NEG to girlfriend write letter.

4. Morphosyntax of Negation under Incomplete Language Acquisition

A lot of studies have been carried out in the aspect of morphosyntax under incomplete language acquisition, which mostly cover the topic of morphological deficits in incomplete/heritage language acquisition (Polinsky, 2011). Also, aspectual features are frequently discussed in the literature.

Aspectual restructuring and transfer are salient issues in incomplete/heritage language acquisition. Recent researchers (Anstatt, 2008; Gupol, 2009; Laleko, 2010) cope with the issue of morphosyntactic restructuring and transfer in bilingual speakers (incomplete language speakers of a language). Laleko (2010) mentions that heritage language learners reduce the sensitivity to lexical or clausal determinants of aspect in Heritage Russian acquisition. Montrul (2009), through a comparison between native speakers and heritage language speakers of Spanish, draws a conclusion that heritage language speakers make errors in verbal morphology. In addition, Polinsky (2008) upholds that general aspectual features are abandoned by low-proficiency heritage

language speakers of Russion. Language attrition or loss does exist among incomplete language acquisition in the aspects of morphology and syntax.

Nevertheless, a lot of studies of incomplete language acquisition predominantly cover the topic under languages with fruitful morphology. Mandarin Chinese, lacks explicit morphological markers, have its distinct morphosyntactic structure (aspectual feature and cliticization of negative morphemes) as I mentioned in the foregoing part. Negative morphemes, as a unique and particular category with morphosyntactic distinction in Mandarin Chinese, are vital for researchers to study on. Recently, most researchers in Chinese heritage language studies lay emphasis on sociolinguistic or anthropological linguistic aspects including language ideology (Li & Wu, 2008), language policy (Xiao, 2008; Jia, 2008; Koda, Zhang, &Yang, 2008) or language and identity (He, 2008). Jia & Bayley (2008) mention that few studies have explored the acquiring of Mandarin as a heritage language through theoretical linguistic tool. Hence, as a preliminary study, I would like to look through the lenses of morphosyntactic change of negation under incomplete Chinese acquisition so that it would provide us with insights into further morphosyntactic analysis or other linguistic inquiries in incomplete language acquisition of Chinese.

Based on the theoretical linguistic framework of negation in Mandarin Chinese, I conducted a simple test concerning comparison between morphosyntactic awareness/difference under complete language acquisition and incomplete language acquisition of Mandarin Chinese.

5. Comparison Study of Negation between Complete First Language Speakers and Incomplete Heritage Language Speakers

5.1 Participants

Twenty participants participated in the experiment. Half of them are incomplete language learners and half of them are first complete language speakers of Mandarin Chinese. All the incomplete language learners (four females and six males) were born in the U.S. Their ages range from fourteen to eighteen. They primarily speak Chinese (different varieties of Chinese including Mandarin, Fujiannese, and Cantonese) at home environment. Their self-reported Mandarin Chinese proficiency level varies from high to poor.[6] One participant self-reported as high level and one participant reported as poor level. All the other subjects generally reported their Mandarin Chinese proficiency level as intermediate or fair. The ten complete first language speakers of Mandarin Chinese are

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[6] The scales of self-reported overall Mandarin Chinese proficiency are native-speaker, high, intermediate, fair, poor

from fourteen to twenty years old, who immigrated to U.S in the past one to three years. They are all uninterrupted Mandarin Chinese speakers[7].

5.2 Tasks and Data elicitation

In addition to personal demographic information, twenty participants were required to finish a simple nine-question test concerning negation of Mandarin Chinese (detailed test questions are shown in appendix). They were required to finish the task within ten to fifteen minutes. All the questions were presented in Chinese. Since the language in the test was not difficult, neither hanyu pinyin[8] nor English translation was provided. I distributed the questionnaires and tests to the participants in person.

In the aspect of question types, the test includes two tasks, blank filling and multiple choices. First five questions are blank-filling questions, and the last four questions are multiple choices (students could choose more than one answers). From the perspective of morphosyntactic inquiry, the test could be divided into three parts. The first three questions aimed to explore the general morphosyntactic model/structure of negation under first language acquisition and incomplete heritage language acquisition. The middle four questions would explore the underlying aspectual difference between negative markers "bu" and "mei" under two categories of language acquisition. The last two questions would look into the clitic status of "bu" in Mandarin Chinese.

Twenty participants were categorized into two groups. Group of uninterrupted language speakers and group of incomplete language speakers participated in the written experiment separately. Questions were straightforward, which did not need much guidance. All the questions and data are collected and output to the computer for further linguistic analysis of comparison between two categories of language acquisition.

5.3 Research Questions

Prior to the study, based upon the literature review of sentential negation ("bu" and "mei") in Mandarin Chinese, I would like to distinctively address three questions in this preliminary research.

1. Is there difference in acquisition of general morphosyntactic structure of sentential negation between incomplete language speakers and complete first language speakers of Mandarin?

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[7] Polinsky (2005) puts an idea of "interrupted learners", who are opposite to the "incomplete learners", have healthy complete acquisition of their native language.
[8] Pinyin is the official system to transcribe Chinese characters into the Roman alphabet.

2. How incomplete language speakers and complete language speakers of Mandarin distinguish the semantic denotation and morphosyntactic (aspectual) structure of the two most prevailing negative morphemes ("bu" and "mei")?

3. What are cliticization rules of negative morphemes ("bu" and "mei") under incomplete heritage language acquisition and complete first language acquisition of Mandarin?

5.4 Results and Discussion

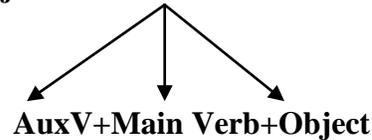### *General morphosyntactic model of sentential negation*

From the first three items, participants were required to negate the sentence within the structure of "Subject+Predicate".
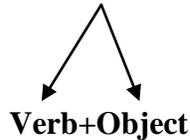
Subject+Predicate	**Subject + Predicate**

Verb+Object	**AuxV+Main Verb+Object**

我	喜欢	睡觉		我	会	唱	歌
I	like	sleeping.		I	can	sing	songs

我	有	钱
I	have	money

Seven incomplete language speakers and all ten complete language speakers finished these three questions. They all positioned negative markers "bu" and "mei" between the subject and predicate (Subject+NEG+Predicate), which is procliticized to predicate.

1. Subject + NEG + Predicate

我		喜欢睡觉
我	不(bu)/沒(mei)	有钱
我		会唱歌

From all the valid answers of both incomplete language learners and first language learners, incomplete language learners are not confused with the positioning of negative marker in sentential structure. However, incomplete language speakers of Mandarin show unselective usage of two negative markers "bu" and "mei". The rates of accurate usage of

"bu" and "mei" in the first three items between first language learners and incomplete language learners are shown in table one.

Table One

Rate of Correct-ness	我 不 喜欢 睡觉。 I NEG like sleeping 'I don't like sleeping.'	我 沒 有 钱。 I NEG have money 'I don't have money.'	我 不 会 唱 歌。 I NEG AuxV sing song 'I can't sing songs.'
L1L[9]	8/ 10	10/10	10/10
ILL[10]	5/7	6/7	4/7

Although incomplete language learners position negative markers correctly in sentential negation, they are generally more confused with exact semantic and syntactic alignment of two negative morphemes "bu" and "mei" compared with learners under complete first language acquisition. By contrast, complete first language learners make few or no error in the accurate selection of negative morphemes in sentential negation.

Semantic denotation and morphosyntactic(aspectual) structure of "bu" and "mei"

The fourth question aims to test on both speakers' ability to distinguish the difference of semantic meaning of "bu" and "mei". Semantic-syntactically appropriate answers are shown as follows:

4.

A: 你 做 好 了 吗？ 你 身体 好 吗？

You did finished PRF InterP[11] You health good InterP

'Have you finished?' 'Is your health good?'
↓ ↓
B: 沒 好。 不 好。

NEG finished NEG good.

'I haven't finished.' 'Not good.'

Two negative markers have different meanings when attached to a unique word "好 (hao)". "不好(bu hao)" refers to "not good" while "没好(mei hao)" represents "not finished". All the ten complete first language learners were able to distinguish the

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[9] L1L: First Language Learners

[10] ILL: Incomplete Language Learners

[11] Part.: Particle. 了：particle of action completion; 吗：final interrogative particle

semantic difference between these negative phrases. Nonetheless, incomplete language speakers had difficulty in telling the difference of two negative phrases. All the ten participants of incomplete language learners finished this question. The result is demonstrated as following two pie charts.

**Table Two: Answers of incomplete language learners in Q4**

你做好了吗？
没 (mei) 好 20%
不(bu) 好 80%

你身体好吗？
没 (mei) 好 0%
不(bu) 好 100%
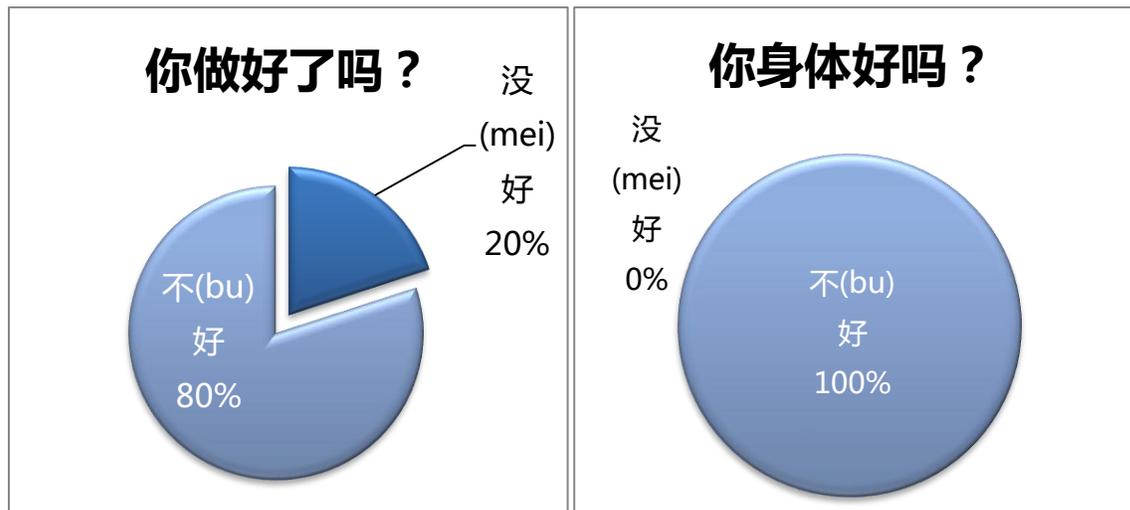
From the above two pie charts, ten incomplete language learners of Mandarin tended to rely on the negative marker "bu" in sentential negation. In this question, only two participants of incomplete language learners figure out that "bu" and "mei" have different denotations when glued to a distinct word, while all the participants of first language learners draw on "mei" as opposed to "bu" to negate the question in the left picture above. Similarly, all the participants of incomplete language learners fail to distinguish the difference between "**mei**"+xi shou (wash hands) and "**bu**"+ xi shou (wash hands) in the question five. On the contrary, almost all the participants of first language learners can successfully tell that "bu" + xi shou in this context implies that the person has the habit of not washing hands before dinner.

Moreover, the underlying difference between "bu" and "mei" exists in aspectual features. Researchers analyze the aspectual distinction in these two negative morphemes including completion versus non-completion (Li & Thompson, 1981); telic versus atelic (Li, 1999); and realized versus unrealized (Liu, 1997; Xiao & McEnery, 2004). In this experiment, question six and seven aim to test subjects' ability to differentiate the aspectual characteristics of negative morphemes and judge the appropriateness of specific morphosyntactic features in sentential negation. The results are shown as follows:

Table Three A: Answers of ILL and L1L in Q6
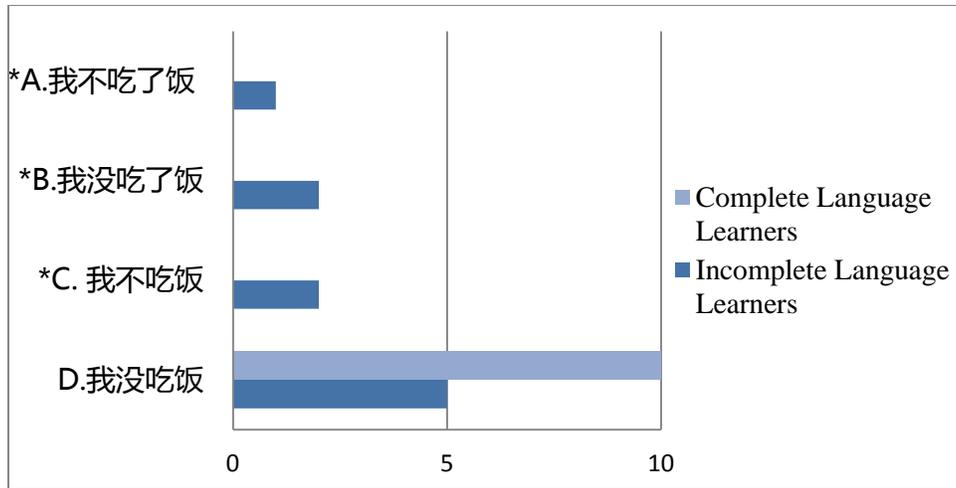
Three B: Answers of ILL and L1L in Q7
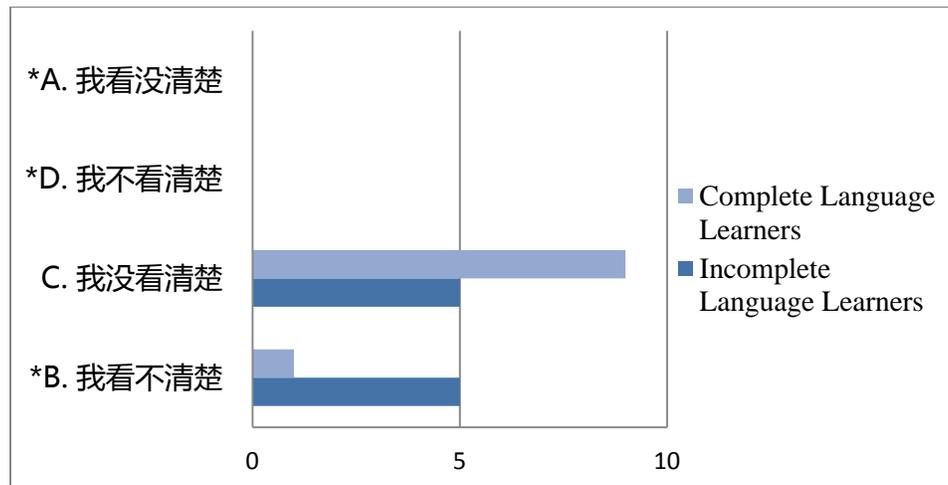
6. 我 吃 了 饭。

    I   eat PRF dinner.

    'I have eaten/ate dinner.'

7. 我 看 清楚 了。

    I   see clearly PRF.

    'I have seen/saw clearly.'

Li (1999) mentions that Chinese does not have fruitful inflectional morphology compared with Indo-European languages. Nevertheless, there do exist perfective markers in Chinese to indicate the perfective aspect. "le (了) " is a unique particle to index the completion of actions. Item six and seven represent that I accomplished the action of eating or seeing. Thus, these two items are supposed to be negated by a particular morpheme to embody the denial of the completed action/events. Li & Thompson (1981) support that "bu (不)" is a neutral negative marker not to imply the perfective aspectual

feature. In comparison, "mei(没)" is employed to deny the completion of action, which indicates the perfective aspect .

For the results of question six and seven, only one participant of first language learners made error in determining a specific negative morpheme ("mei") to demonstrate the perfective aspect inferred from the declarative statement. However, only half of the participants of incomplete language learners made the right decision. They are confused about the selection of "bu" or "mei" to deny the completion of actions (shown in table 3A and 3B). Moreover, incomplete language learners feel vague about constructing the sentential negation with perfective aspect according to the result of question six. They are not able to determine if it is necessary to keep the perfective marker in the structure of negation. In accordance with question six, the grammatically-correct model of sentential negation with perfective aspect in Mandarin is demonstrated as below:

2. Subject+V-PRF+Object

Negation

Subject+*NEG (mei)***+ V+Object**

(PRF-omitted)
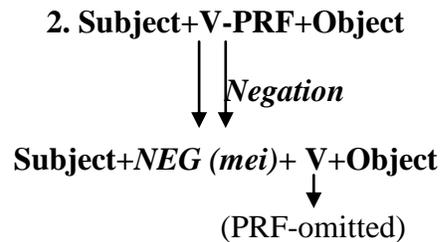
From the result of question six, all the subjects of first language learners managed to pinpoint the answer correspondent with the foregoing structure of sentential negation with perfective aspect. In comparison, only half of the subjects of incomplete learners are able to make judgment about which item can denote perfective aspect with morphosyntactic appropriateness.

Cliticization of Negative Morpheme "bu"

Last but not least, clitic status of negative morphemes is an important issue I explore in this paper. Based on the theoretical framework of Huang (1988) and Ernst (1995), cliticization/scope analysis seems controversial and complicated.

3. Subject+V+Adverbial Predicate

Negation

Subject+Main Verb+*NEG(bu)***+Adverbial Predicate**
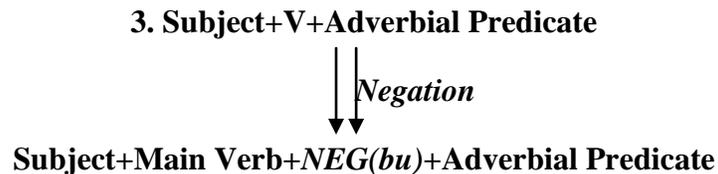
4. Subject+ Manner Adverbial +Main Verb+Object

Negation

Subject+*NEG(bu)*+Manner Adverbial +Main Verb+Object

Since the sentential structure is added by more elements (e.g adverbials), incomplete language learners and complete language learners might have different morphosyntactic awareness of specific clitic status of negative morpheme (bu). Hence, the last two questions try to investigate cliticization of negative morphemes between incomplete language acquisition and complete language acquisition.

8. 我　说　　的(得)　　很　　清楚。

 I　 said AUX very clearly.

 'I said very clearly.'

9. 我　偷偷　　地　　给　女朋友　　写　　信。

 I　 secretly AUX to girlfriend write letter.

 'I secretly wrote letter to girlfriend.'

The declarative statements of question eight and nine are inserted by adverbials "clearly" and "secretly" respectively. The foregoing seven questions, incomplete language participants make no error in the clitic status of negative morphemes in sentential structure. They successfully make judgment that negative morphemes are procliticized to predicate verb. Even though most incomplete language learners fail to distinguish the semantic denotation and underlying aspectual features of "bu/mei", they are able to correctly position the negative markers in simple S-V-O sentential negation.

Nonetheless, complication of sentential structure by adding more elements (adverbial and preposition phrase) would pose deeper insights into understanding of clitic status of negative morphemes under complete and incomplete language acquisition. The results of incomplete language learners and complete language learners are shown as follows:

Table Four A: Answers of ILL and L1L in Q8[12]
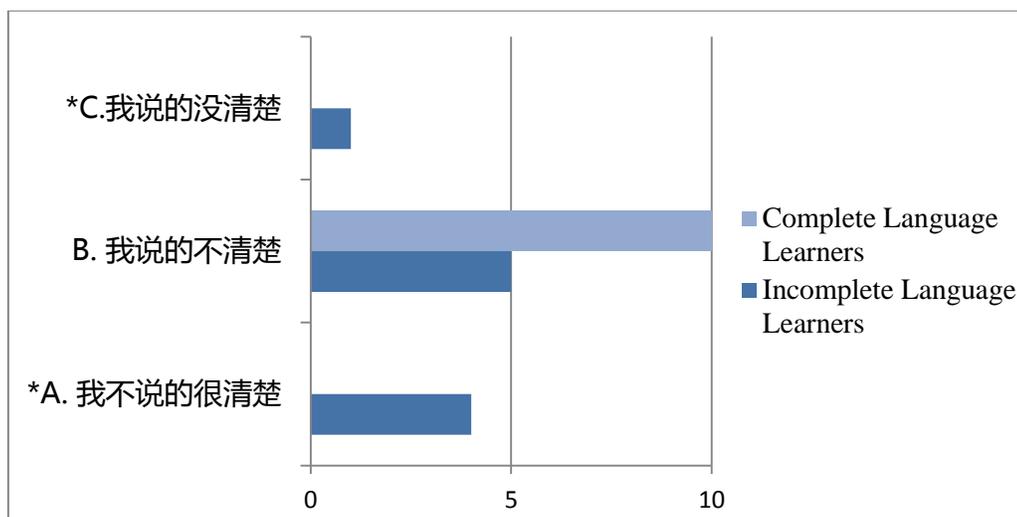
With respect to this question, there is no doubt that complete language learners of Mandarin make no error in positioning the negative morphemes. All the participants know that negative morpheme "bu" is supposed to be procliticized to adverbial. In contrast, four out of ten incomplete language learners maintain that negative morpheme "bu" should be cliticized to verb predicate as the situation in relatively simple sentential structure (simple S-V-O). Therefore, in my present study, incomplete language learners would make errors or show ambiguity in identifying the clitic status of negative morpheme "bu" when sentential negation is added with adverbial predicate.

Table Four B: Answers of ILL and L1L in Q9

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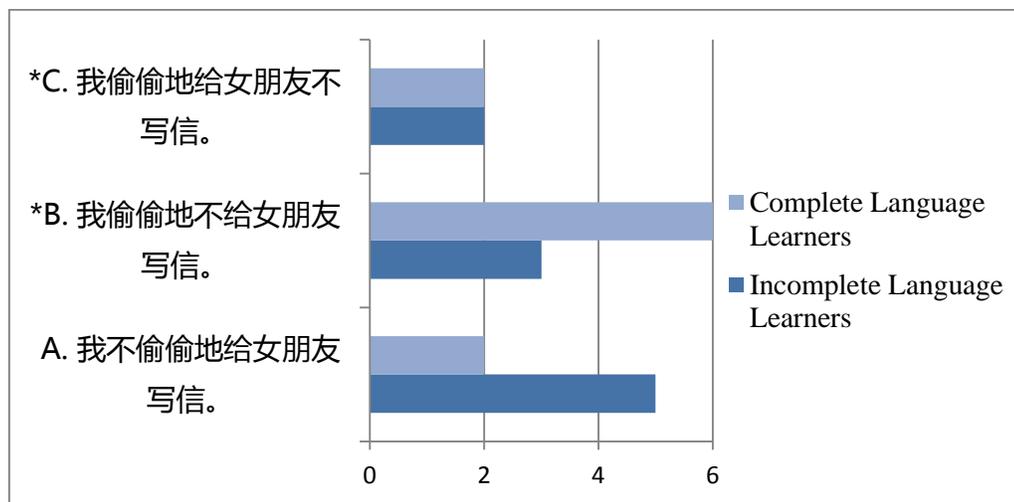
[12] Table Four A & B: Only the first part of each sentence is elicited in the tables. The complete sentences are shown in Appendix.

Interestingly, in the last question, complete language learners of Mandarin did not show any advantage in correct identification of clitic status of "bu". Half of incomplete language learners deem it appropriate to put "bu" before the adverbial "偷偷地 (secretly)", while more than half of complete language learners bolster the idea that "bu" should be procliticized to the preposition "给 (to)". Ernst (1995) reinforces that in sentential negation with manner adverbial, the negative morpheme "bu" is procliticized to manner adverbial instead of main verbs. Cliticization of "bu" to PP is grammatically appropriate when negation is emphasized on PP (Ernst, 1995).

(12).Wo zai tushuguan xuexi.   Wo **bu**   zai tushuguan xuexi.

  I   in   library   study.   I   NEG   in   library   study.

  'I study in the library'   'I don't study in the library'

The example shown in (12) focuses on the negation of PP (in library). More importantly, Ernst (1995) argues that in Chinese, negation is inclined to emphasize on the item adjacent to it. Question nine is the different case, which is not similar to the example (12). In question nine, nonetheless, negation in this sentential structure focuses on the adjacent adverbial rather than PP. Therefore, this result, somewhat surprisingly, shows that eight out of ten complete language learners are not able to identify the clitic status in sentential negation with manner adverbials and preposition phrase (PP). In this particular question, both incomplete language learners and complete language learners have difficulty identifying the clitic status of "bu" accurately.

5.4 Further Discussion

In this part, I would like to analyze negation under incomplete language acquisition through my experiment. The analysis of overall study is shown in the following table.

Table Five

		Semantic Denotation	Aspectual Features	Cliticization
Simple Sentences	1.2.3 general declarative S	–	N/A	+
	4.5. comparative sentences	–	–	N/A
	6.7 declarative S with perfective aspectual marker	–	–	+
Complicated Sentences	8. with post-adverbial	N/A	N/A	–

	9. with pre-adverbial and PP	N/A	N/A	–

+: without difficulty; **–**: with difficulty; **N/A**: not applied

In the table, there are three variables vertically, which are the important themes I explored in this paper. Horizontally, there are generally two categories, namely simple sentences and complicated sentences[13]. These two major categories are sub-divided into several parts in accordance with various question types in the experiment. From this table, therefore, some important points could be elicited and generalized.

First of all, in simple sentences, incomplete language learners have difficulty in identifying the distinct semantic meaning of two negative markers, "bu" and "mei". They are confused about the denotation when these two negative markers are glued to the same word, e.g bu+hao versus mei+hao.

Their ambiguity of semantic denotation leads to their second difficulty that incomplete language learners have trouble to distinguish the aspectual features of two negative morphemes in Mandarin. They feel vague about the fact that "mei" implies the completed aspectual feature while "bu" just indexes the general denial of declarative statement. In addition, incomplete language learners have a dilemma to make judgment on which sentential negation with perfective aspectual marker is morphosyntactically appropriate.

Finally, the issue of cliticization is addressed. In simple sentences, there is no obstacle for incomplete language learners to position two negative morphemes correctly. All the participants know that negative morphemes should be procliticized to verb in simple sentences as illustrated in the previous discussion part. Nonetheless, participants of incomplete language learners make errors when the sentence is added by more elements like adverbials and preposition phrase. Subjects are not firmly sure about where negative morpheme "bu" should be cliticized.

6. Limitations and Conclusion

I have discussed about the comparison study of negation under incomplete heritage language acquisition and complete first language acquisition of Mandarin Chinese. Several limitations need to be demonstrated in this experiment. First, this study was carried out in a large city in the U.S. The participants are all high school students in that region, who cannot represent all the incomplete heritage language learners of Mandarin.

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[13] The standard to differentiate simple sentences and complicated sentences, in this case, does not necessarily refer to whether the sentence contains clauses or not. Relatively complicated sentences represent the sentence with more decorative elements (like preposition phrase, post-adverbials, pre-adverbials, etc.)

Moreover, test questions are not many enough to furnish us with a complete picture about participants' semantic or morphosyntactic awareness of negation acquisition. Therefore, due to the restricted demographic distribution of participants and limited content of the test, this simple experiment cannot provide us with the overall and decisive conclusion about sentential negation under incomplete language acquisition of Mandarin. Nevertheless, with the limited sources, I did find that some definitive morphosyntactic features of sentential negation under incomplete language acquisition of Mandarin in this study.

Throughout the study, it is found that complete first language learners have no difficulty in identifying semantic denotation and aspectual features of negative morphemes. Complete language learners only have the problem of clitic status of unique negative morpheme "bu" when sentential negation is filled with more elements (preadverbial and preposition phrase). Comparatively, incomplete language learners have no difficulty in positioning negative markers in simple sentential negation. However, in most cases, incomplete heritage language learners have trouble in distinguishing the difference between two distinct negative morphemes in the perspectives of semantics and morphosyntax (including aspectual features and cliticization).

All in all, this study investigates the unexplored territory of Mandarin Chinese incomplete language acquisition through the lenses of morphosyntax of negation. This specific area of linguistic inquiry provides me with the insights into the issue of incomplete language acquisition, which might be conducive for further analysis of incomplete language acquisition from the view of theoretical linguistic inquiry. As I stated, the experiment lacks diversity of subjects and plentiful testing questions to look deeply into the complete and overall morphosyntactic feature of Mandarin Chinese. Thereupon, further research pertaining to morphosyntax of Chinese linguistic development, especially incomplete language acquisition is paramount to be implemented in order to find out any language attrition, reconstructing, or transfer in this distinct linguistic area.

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Appendix

Questionnaire and Test of Chinese Language

Study on Negation in Mandarin Chinese (10-15 minutes)

Your personal information and answers will NOT be disclosed. All the data will be used in an independent study of Chinese heritage language acquisition. Your time and efforts would be really appreciated.

I. Personal information

1. Age_____ Gender _____

2. Were you born in the U.S? _____ If not, when did you come to the

   U.S ? At the age of_____

3. Do you identify yourself as Chinese-American? _____

4. Do you speak Chinese at home? _____

   If so, which language/dialect do you predominantly speak?_____

   (Mandarin, Cantonese, Southern Min Dialect, others.)

5. Have you ever learned Mandarin Chinese in classroom settings? _____

   If so, how long? _____

6. On which level do you think your overall Mandarin Chinese would be? (Please circle)

   Native-speaker, High, Intermediate, Fair, Poor

II. Negation in Chinese-Test

(In this test, you will be asked several questions about "negation" in Chinese)

e.g I like papaya.--- ---Negation: I don't like papaya.

I. Fill out the blanks with negation

1. 我喜欢睡觉。

   _____

2. 我有钱。

_____

3. 我会唱歌。

_____

4. A: 你做好了吗？B: _____ (不/没) 好。

   A: 你身体好吗？ B: _____ (不/没) 好。

5. A. 他吃饭之前**不**洗手。

   B. 他吃饭之前**没**洗手。

   Which one represents "他"has the habit of not washing hand before eating.

   _____

II. Multiple Choices (there might be more than one answers)

6. 我吃了饭。

A. 我不吃了饭　　B. 我没吃了饭　C. 我不吃饭　D. 我没吃饭

7. 我看清楚了。

A. 我看没清楚　　B. 我不看清楚　　C. 我没看清楚　D. 我看不清楚。

8. 我说的很清楚, 所以大家都能听懂。

A. 我**不**说的很清楚　B. 我说的**不**清楚　C.我说的**没**清楚

9. 我偷偷地给女朋友写信，因为怕妈妈发现。

A. 我**不**偷偷地给女朋友写信。

B. 我偷偷地不给女朋友写信。

C. 我偷偷地给女朋友不写信。