The Grammaticalization of Hakka, Mandarin and Southern Min
The Interaction of Negatives with Modality, Aspect, and Interrogatives

by

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ABSTRACT

The primary topic of this dissertation is the grammaticalization of negation in three Sinitic language varieties: Hakka, Mandarin, and Southern Min. I discuss negative morphemes that are used under different modality or aspect contexts, including ability, volition, necessity, and perfectivity. Not only does this study examine Southern Min affirmative and negative pairs, but it also highlights the grammaticalization of negation and parametric differences in negation among the languages under investigation. This dissertation also covers the reanalysis of negatives into interrogatives.

I approach the investigation of Southern Min negation from both synchronic and diachronic perspectives. I analyze corpus data in addition to data collected from fieldwork for the contemporary linguistic data. For my diachronic research of Chinese negation, I use historical texts and etymological dictionaries.

Diachronically, many of the negative morphemes originate from full-fledged verbs and undergo an analogous grammaticalization process that consists of multiple stages of reanalysis from V to T (aspect; modality), and then T to C (interrogative; discourse). I explain this reanalysis, which involves head-to-head movement, using generative frameworks that combine a modified cartographic approach and the Minimalist Economy Principles.

Synchronic data show that Southern Min affirmative modals are characterized by a certain morphological doubling. These doublings consist of two near synonyms used in sequence, resulting from the loss of features in a verb and a second verb added as a renewal. In the negation paradigm, some negatives
project a negative phrase, while the others serve a dual function, occupying a modal/aspect head as well as a negative head. The latter system is gradually shifting to the former. This study uncovers evidence to counter the long-established paradigm, where negation is tied to its independent modality (abilitive, volitional and necessitive) or aspect (perfective and perfect). I observe a mismatch between the use of interrogatives and their modality/aspect and attribute this phenomenon to feature loss during their reanalysis from negatives to interrogatives. Results however show that consistency occurs in the grammaticalization of negation within Southern Min and intra-linguistically among the three Sinitic languages, and that parametric differences are found at the morphological level.
DEDICATION

I am happy to know that the time to write acknowledgments has come. There are surely too many to whom I would like to express my deep gratitude. I thank Shing-Huei and Wei-Bin for handling my affairs during my absence from Taiwan. I am so fortunate to have a friend like Sonia, who always believes in me and who has been a good listening ear. I thank Virgil for bringing cheer and laughter to my life, and for providing me with an environment that featured English almost exclusively after school for six straight years. I shall never forget about the kindness given by Chu-Yu, who has been a very patient chauffeur. I thank Ben, Li-Chi, Paul, and Laohuang for always being there, however busy they themselves are. I enjoyed the wonderful exchanges on Chinese with George Oliver and Lauren Paschke. I am grateful to have met Daniela Kostadinovska; her many good qualities of character have exerted a positive influence on me. I thank Bonnie Quinn, Christian Thompson, James Berry, Jining Han, Mohammed AlRashed, and Victor Parra-Guinaldo. The many weekends spent in the computer lab alongside Ahmed Gul will always be a fond memory.

I owe my parents more than I can repay. I admire my mother’s passion for linguistics; I appreciate my father, who never said no to my educational investment. I thank my siblings, nieces, and nephews, who have provided me with so many happy summers while back in Taiwan. I honor my grandfather, a man of wisdom who spoke five languages in his life time and who taught me what life is about. This dissertation is dedicated to him.
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All errors rest entirely with the author.
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Chapter 1

INTRODUCTION

This dissertation revolves around the grammaticalization of negation in three Chinese language varieties, namely Hakka, Mandarin, and Southern Min. It also addresses several important related issues in syntax, such as the categorial status of negative morphemes and word order, and in the interface between syntax and semantics, such as negation and modality. The first chapter provides information about three questions: what, how and why?

1.1. Purpose of study

Negation has been discussed in a considerable number of studies in the field of Chinese Linguistics, such as Teng (1974), Tang (1994), Ernst (1995), Li (1999), Wang & Lien (2001), Huang (2009), among others. Some of these studies are descriptive, while others are more theoretical. The former group attempts to distinguish characteristics of Chinese negatives, while the latter group draws conclusions with respect to syntax, semantics and/or pragmatics. Despite the fact that several researchers adopt theoretical frameworks to account for the unique phenomena found in negation, a larger number of scholars approach Chinese negation in a descriptive fashion. There are also scholars who take a diachronic approach to explaining changes in Chinese negation using texts from different periods of Chinese history. Overall, recent research on negation has mainly addressed Mandarin negation with very few exceptions for other varieties within

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1 The order is simply ranked alphabetically.
the Chinese language family, such as Li (2007) and Lien (2008) on Southern Min, and Fang (1994) on Hakka.

Except for the above two studies, Southern Min and Hakka, two other languages spoken in Taiwan, have been much less addressed in the field of linguistics. The literature shows that research on these two languages has only appeared sporadically over the past 15 to 20 years. Negation has been one of the best researched topics (see Fang 1994, He 1997, Yu 2002, and Wu 2009). Most of the Min and Hakka studies analyze synchronic negation data and pay little attention to diachronic changes. To the best of my knowledge, little research has associated Chinese negation with diachronic language change. Much work has been on synchronic descriptions. This dissertation addresses this big gap.

Previous research has failed to bridge the gap between historical linguistics and modern language usage. Most look into one or two negatives at a time in a single study; thus far, no research has addressed the full range of negation in one language, let alone three. Few studies on negation cover more than one Chinese language. The connection of negation to questions is even less addressed in the literature. Also little research has attempted to account for language internal change under the framework of generative grammar and together with grammaticalization. This current study attempts to fill these gaps.

1.2 Scope of Research

This dissertation first answers the question, “How does negation evolve in the history of the Chinese language?” Attempts are made to answer two what questions: (a) what has been changed in the three Chinese languages under
investigation? and (b) what characteristics these languages share in expressing negation? I also investigate how negation interacts with modality and aspect, and how negatives are reanalyzed into interrogatives. Finally, I answer why these changes happen.

I begin my investigation with the use of *mei* 沒 and *bu* 不 as sentential negative markers, as in (1) and (2), respectively.

(1)  
\text{ta jintian mei-you ke.  \quad \text{Mandarin}}  
\text{3sg today NEG-have class}  
\text{‘He doesn’t have school today.’}

(2)  
\text{ta jintian bu shangke.  \quad \text{Mandarin}}  
\text{3sg today NEG attend.class}  
\text{‘He isn’t going to school today.’}

The first puzzle that arises is the fact that negation can be used in questions.

(3)  
\text{koushi-le mei?  \quad \text{Mandarin}}  
\text{defense-ASP Q}  
\text{‘Have you defended your thesis?’}

As stated in the literature (cf. van Gelderen, 2011), negative morphemes are reanalyzed as interrogatives in languages such as Latin, Arabic, Navajo and Mandarin Chinese. For instance, in non-standard Saudi-Najdi Arabic, negatives are also used in questions, as the past negative particle *ma* in (4) and (5) (Mohammed Al-Rashed, p.c.).

(4)  
\text{Mohammed ma ja’a.  \quad \text{(Arabic; Saudi-Najdi dialect)}}  
\text{Mohammed NEG.PST come}  
\text{‘Mohammed didn’t come.’}
Ma ja’a Mohammed? (Arabic; Saudi-Najdi dialect)

Q come Mohammed

‘Did Mohammed come?’

The second mystery is the interaction between negation and aspect/modality. Negation in Southern Min is connected to modality and aspect. For instance, *e* and *be* in (6), are affirmative and negative modality counterparts. The aspectual negative *bo* is the opposite of *u* in (7).

(6) a. i e lai. Southern Min

3sg will come

‘He will come.’

b. i be lai.

3sg will.not come

‘He will not come.’

(7) a. i u lai. Southern Min

3sg ASP come

‘He did come.’

b. i bo lai.

3sg NEG.ASP come

‘He did not come.’

There is a one-to-one relationship between the affirmative *e* and the negative *be*. In a question such as (8), *be* is used as the question marker in order to pair up with *e* in modality.

(8) i e lai be? Southern Min

3sg will come Q

‘Will he come?’
However, modern Taiwanese Southern Min data show that bo can also be a candidate to substitute for be as in (9).

(9) 3sg will come Q `Will he come?'

However, the question marker bo in (9) is mismatched with the affirmative modal e. There is no modality/aspect relationship between the modal e and bo. Sentences (8) and (9) reveal a grammar that allows one to choose either be or bo as the question marker.

The interrogative bo in (9) is, by far, the most flexible. The other aspectual negative bue ‘not.yet’ is not a candidate for the question in (9). I am therefore interested to know the status of the one-on-one match mechanism in negatives when they are reanalyzed as interrogatives. Contra Cheng, Huang and Tang (1996), I will argue that a revision is required for Taiwanese Southern Min: some interrogatives are base-generated in C, whereas some are base-generated in a lower position, moving to C. The latter interrogatives have not entirely lost their former (aspectual/modality) features.

The above puzzles have brought up the other questions: (a) Is there an asymmetry in selection of the morphemes between negation and questions?; (b) Have the negative morphemes at sentential final position all lost their original features?; (c) Where are these words situated in the syntax of modern Taiwanese Southern Min?
A last puzzle accompanying my research along the way is the various lexical choices allowed among the Sinitic languages. For instance, Mandarin *mei* marks both perfective and perfect aspects, as in (10a) and (11a). However, Southern Min and Hakka distinguish these two aspects by using two different negatives.

(10) a. wo *mei* chi-fan. Mandarin
    b. gua *bo* tsiah-png. Southern Min
    c. ngai *mo* sit-fan. Hakka

    ‘I did not eat (a meal).’

(11) a. wo *hai mei* chi-fan. Mandarin
    b. gua iau *bue* tsiah-png. Southern Min
    c. ngai han *mang* sit-fan. Hakka

    ‘I have yet not eaten (a meal).’

In this dissertation, I raise the following questions:

1. What are the basic negatives in these languages (Hakka, Mandarin and Southern Min)? How do they converge or diverge throughout the history of the Chinese language? What is the grammaticalization path of negation in each language variety?

2. What are the common and/or distinct characteristics of negation in these languages?

3. What role does modality or aspect play in negation?

4. How do interrogatives interact with negatives in each of the languages?

5. How does the framework of generative grammar account for linguistic change found in these languages?
1.3 Languages investigated

This section introduces the languages investigated. I first address the topic on how the term Chinese is used, followed by a brief background on major Chinese language varieties. I then provide more detailed information about Southern Min.

1.3.1 Major Chinese language varieties.

Chinese can be broadly defined as people from China, a group of people who share a similar culture, a unified writing system, and a collection of languages spoken by ethnic Chinese persons, or a common language spoken by ethnic Chinese persons. Non-Chinese may also be included in the last entry. The word “Chinese” used in this dissertation primarily refers to the languages spoken by ethnic Chinese and secondarily to the history of Chinese.

There are seven major Chinese dialects, although most linguists consider them languages. Chinese is hypothesized to have split roughly as follows: Among the major Chinese dialects, Min was split from Old Chinese, whereas the other six, namely Mandarin, Wu, Xiang, Gan, Yue, and Hakka, were separated from Middle Chinese later (Norman 1988).

The languages under investigation include Hakka, Mandarin, and Southern Min, particularly the varieties spoken in Taiwan. Although Mandarin retains its official status as lingua franca in business settings, Southern Min is the most widely spoken vernacular language in Taiwan. The version of Southern Min spoken in the original areas in China where the ancestral Min speakers came from is different from that of Taiwanese Southern Min. The Min immigrants brought in
two major sub-dialects, Quan and Zhang. Since the 17th century, Southern Min has gradually developed its own linguistic patterns on the island, following, among other processes, contact with languages such as Japanese and Formosan languages. Today, Southern Min remains the most widely spoken vernacular in Taiwan due to its retention or use by 75-78% of population occupancy (Chung 2007: 220).

As my discussion in this dissertation centers around Taiwanese Southern Min along with a comparison with Mandarin and Hakka, I will provide more detailed background of Southern Min.

1.3.2 Characteristics of Southern Min.

Because the Min language preserves archaic Middle Chinese sounds, it is often postulated to have been split before Middle Chinese prior to the Han Dynasty (206 BCE) (Norman 1988).

Southern Min differs from the other Chinese language varieties in many aspects. Like Mandarin, modern Southern Min is an analytical language. Nevertheless, a Southern dialect, Min is, first of all, not mutually intelligible with Northern dialects such as Mandarin. This may not be due to their syntax, however.

Secondly, Southern Min and Hakka preserved more archaic words and contain more monosyllabic words in their lexicons, whereas Mandarin possesses more multisyllabic words in its lexicon, as it has fewer tones (four) than these dialects (Sun 2006: 7; Norman 1988). There are seven tones in Southern Min, and tone sandhi can be commonly found in this language (Lü 2003).
Also, there is a distinction between the colloquial versus literary reading in today's Chinese dialects. That is, a morpheme may have two pronunciations: colloquial versus literary such as (12) and (13) in Southern Min.

(12) 無 ‘not have’  
    bu (literary)  bo (colloquial)

(13) 未 ‘not yet’  
    bi (literary)  be (colloquial)

Historical stratification gives rise to the two readings. Baxter (1992: 47) argues that literary items are later borrowings from other dialects occurring in the Tang Dynasty (618-907 CE). The literary reading was used in official settings, such as at the court or at school. Poetry was also read in the literary reading.

Lien (2001: 310) notes that Taiwanese Southern Min is abundant with “[a] rich repertoire of chronological strata”. Norman (1991) claims that Min dialects have incorporated three strata: (a) the Han dynasty stratum (206 BCE-220 CE); (b) the Nanbeichao stratum (420-581 CE); and (c) the Tang Chang’an stratum (7th-8th centuries). Lien (2001) further proposes that the colloquial reading of Min is built upon the first two strata, and the third stratum contributes to Min’s literary reading. Based on Lien (2005: 206), stratal differences may be realized in vowel contrast such as in the two negative words in modern Southern Min.

(14) 無 ‘not have’  
    bu (literary)  bo (colloquial)

(15) 未 ‘not yet’  
    bi (literary)  be (colloquial)

---

2 Vowel distinction is not the only mechanism to distinguish one reading from the other. Scholars have tried to find out a systematic pattern for the two readings in Southern Min. Because of the complexity of historical strata and perhaps because of the lack of written data in this language, the two readings have remained less known to most of its speakers (cf. Lien 2001; 2005).
1.4 Methodologies

This study includes both theoretical frameworks and empirical linguistic data. I address the theoretical frameworks in chapter two. For the collection of data, corpus analysis is the major method adopted in this study. However, I also conducted fieldwork for some parts of my research to further clarify certain issues.

1.4.1 Methods used by previous studies.

Below is a discussion of the two major research methodologies adopted by Chinese scholars, corpus linguistics and dialectology. One research method that is robustly adopted by Chinese syntacticians is corpus linguistics. Studies using such a method include Xing (2003), Yang (2006), Ji (2007), Wei (2007), to name just a few. These studies are on contemporary and/or historical Chinese linguistics. Xing (2003) has one section on the diachronic change of the Chinese morpheme bei, meaning ‘sleeping clothes’, which is used as a passive marker in modern Chinese. Yang (2006) examines the grammaticalization of this Chinese passive marker from modern texts among three regions where Mandarin is spoken as an official language and where Chinese is used as the writing system. Ji (2007) uses both diachronic and synchronic corpora to explain the order of CP left periphery adverbs. Wei (2007) focuses on diachronic texts and examines the change of negation throughout the history of Chinese. Other than the above-mentioned studies on Mandarin, Lien (2002; 2003; 2008; 2009) has used corpora in his work on Southern Min.

More recently, an increasing body of research in Chinese has made use of dialectology to compare and contrast particular morphemes, such as the passive
marker, among different dialect variations for their etymology. This line of research is often associated with historical linguistics since the study of other Chinese language variations may provide insights into how some of the unique Chinese constructions have derived. Dialectal studies are particularly common among Chinese phonologists, whose research relies heavily on rhyme books from different periods in Chinese history. The oldest accessible rhyme book, the *Qie Yun* (切韻), discovered in 601 CE (and perhaps written long before), offers insights of Chinese phonology back to Middle Chinese. From these rhyme books, Chinese phonologists are able to reconstruct Old Chinese and trace cognates shared by different Sinitic language varieties. Since this dissertation is primarily about syntax, I do not follow such a research tradition. However, when necessary, I make use of the findings from this type of research as supplements.

1.4.2 Research Methods.

Since this study involves three languages, it is rather difficult to find one site that provides the data for all the relevant languages. To compensate, I use multiple sources such as corpora, literature reviews and fieldwork data.

*Primary research data*

The forms of primary research include corpus analyses and/or linguistic data from fieldwork. Fieldwork was conducted when my research questions couldn’t be thoroughly or satisfactorily answered through online corpus data.

Primary research data mainly covers Hakka and Southern Min. I use previous studies on Mandarin negation for a comparison. However, when there is no literature about Mandarin on a certain topic, I conduct primary research.
I utilize contemporary corpora that are publicized, such as Min and Hakka storybook series, as well as the online modern Mandarin corpora provided by Taiwan Academia Sinica. The previous two provide synchronic data, while the latter source includes both diachronic and synchronic data.

As Southern Min is a living language, other sources included can range from TV shows, to popular music, and to biblical texts. There is no need to incorporate them all. Contemporary Taiwanese Southern Min data examined here are from the Southern Min story series (Hu 1992-2007). The most important reason is for comparison in that many previous studies have made use of these corpora.

Data from other studies

I include literature reviews as my major secondary research data. This is mainly for Mandarin to give a comparison with the other two languages under investigation since Chinese (in many studies, Chinese means Mandarin) negation is one of the hotly studied topics in Chinese linguistics. The research results are ample and impressive, and I look into literature on Chinese negatives/interrogatives (mainly on Mandarin). Research on modality is another focus. Literature on descriptive historical linguistics is an additional source I make use of. With abundant diachronic data and descriptive analyses, research in historical linguistics provides theoretical linguists with a good resource to interpret language change.
Dictionaries

Chief among the dictionary resources I utilize here are Shuowen jiezi 說文解字 and Hanyu da cidian 漢語大詞典. Shuowen jiezi, literally meaning "Explaining Simple Characters and Analyzing Compound Characters", is edited to completion in 100 CE by Xu Shen 許慎 (58-147 CE) and is commonly referred to the Analytical Dictionary of Characters. Despite the fact that it is not the first Chinese dictionary, Shuowen dissects structures of Chinese characters and provides etymology of a good number of characters (9,353 character entries, plus 1,163 graphic variants, with a total length of 133,441 characters).³ Hanyu da cidian 漢語大詞典, the contemporary Chinese dictionary (2010), is considered to be one of the most comprehensive and influential Chinese lexicographic reference books.⁴ I also make use of the Archaic Chinese dictionary by Wang li: Wangli gu hanyu zidian 王力古漢語字典 (2000).

1.5 Terminology

1.5.1 Languages.

This dissertation mainly investigated three languages spoken in Taiwan. I use the term Taiwan Southern Min rather than Taiwanese mainly because the latter term is not precise enough to describe and to cover the linguistic facts. In a multilingual society like Taiwan, Taiwanese should cover all the languages that

³ I use this online version: http://ctext.org/shuo-wen-jie-zi/zh

⁴ I utilize both the (2010) and the online bridged version, the latter of which is from the Academia Sinica Words at http://words.sinica.edu.tw/sou/sou.html.
local people speak. If I use Taiwanese, I would not be able to include Hakka, a distinct Chinese dialect spoken by approximately 15% people in Taiwan.

There are also more languages spoken throughout the island than the two languages of Southern Min and Hakka. Most current native speakers of Southern Min and Hakka are considered to be descendants of earlier immigrants. Those who came from China roughly about the end of World War II are regarded as late immigrants and may still speak their first languages in addition to Mandarin and/or the two earlier local dialects. Additionally, there are also aboriginal languages; some foreign languages are spoken by Southeast Asian immigrants. Due to these reasons, I feel that Taiwanese would be too vague a term to cover the version of Southern Min spoken in Taiwan.

Following some other scholars’ definitions, I chose to use Taiwan Southern Min, abbreviated as TSM, henceforth. In the literature, it is often interchangeable with Taiwanese, Southern Min, Taiwan Southern Min, (Taiwanese) Min Nan, and, in some cases, Amoy, Hokien, or Hoklo.

With the same reasoning, the term Taiwanese should also be added to Hakka in order to distinguish it from the Hakka language spoken in China, where Taiwan Hakka originated from. To make it less complex, I use Hakka for short to stand for the Taiwanese version of Hakka throughout my research.

Unless stated otherwise, Mandarin examples provided by me also refer to Mandarin spoken in Taiwan. As a matter of fact, Mandarin in Chinese linguistic terms is regarded as a specific dialect (Norman 1988). The official lingua franca is modern standard Chinese, abbreviated as MSC in the Chinese linguistic literature.
In brief, wherever examples are specifically taken from Taiwanese version of Southern Min, I call it Taiwanese Southern Min. My fieldwork Hakka data or examples collected from Taiwanese speakers of Hakka are simply termed as *Hakka*. Mandarin data are marked as *MSC*.

I am also aware of regional or sub-dialectal differences in the other languages. Unless noted otherwise, I provide first-hand examples for TSM and MSC, of which I am a native speaker. However, all data are double checked with my consultants, the age ranging from the thirties to fifties. Data for Hakka, for which I only have passive knowledge, entirely rely on my consultants, who are in their mid-forties and mid-sixties. The checking is chiefly for syntactic issues.

### 1.5.2 Transcription systems.

As Chinese characters are not phonetics-based, it is essential to incorporate a decipherable transcription system. I use a phonological rather than phonetic system for transcription. I use the Taiwanese/Hakka Romanization System for Southern Min and Hakka spelling.\(^5\) For first-hand data, I transcribe in my own Southern Min accent, which is in most cases *Zhang* (漳州音), but may sometimes be a mix of *Zhang* and *Quan* (泉州音). Hakka is based on *Hailu* or *Hoiluk* (海陸腔) accents spoken by my consultants.

Following linguistic conventions, I use *Hanyu Pinyin* (漢語拼音) for modern standard Mandarin although this spelling system is different from that of

\(^5\) While another system called TLPA (Taiwanese Language Phonetic Alphabet) is also used by scholars, the system adopted in this study is officially used in Taiwan for elementary school language teaching.

http://140.111.34.54/MANDR/content.aspx?site_content_sn=12693
Southern Min and Hakka in some aspects. I also ignore reflections upon spoken MSC from social linguistic markedness.

Tones are neglected throughout, however. Unless otherwise cited from previous studies, Southern Min and Hakka data are mainly transcribed without giving corresponding Chinese characters. Where no indication is given, the example sentences are based on my personal knowledge and double checked with my consultants.

1.5.3 Periodization of Chinese.

As noted, the term “Chinese” may be used to cover all its varieties of modern times. However, when used for diachronic development, Chinese refers to the written records of the Chinese language, including both official and vernacular versions. For periodization of Chinese, I adopt Sun’s (1996: 3) divisions as follows:6

- **OC** Old Chinese (500 BCE – CE 200)
- **MC** Middle Chinese (CE 201-1000)
- **EM** Early Mandarin (CE 1001-1900)
- **MMC** Modern Mandarin Chinese (CE 1900-present)

I add the years to the time periods whenever an example from historical texts is given. Modern standard Mandarin (MSC) is used for contemporary Mandarin data.

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6 Please refer to Tai and Chan (1998) for a review of different proposals for periodization.

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1.5.4 Historical texts.

I also discuss major historical texts in this dissertation. Historical texts on Min are only available after the 16th Century. I mainly use examples from Lijin ji 荔鏡記 (published roughly 1566-1884 CE) and Zhuzi yulei 朱子語類 (compiled in 1270 CE), the latter of which is however a mix of lingua franca and Min during the Southern Song Dynasty (1127-1279 CE). The genre of these texts is however not the same. Lijin ji is a collection of plays, whereas Zhuzi yulei is spoken records as it comprises of conversations. To avoid repetition, in later chapters I will skip basic information for these texts.

1.6 Organization

There are nine chapters in this dissertation. The second chapter includes a discussion of theoretical frameworks. The third chapter presents some background information on Chinese negation as well as on aspect/modality. Chapters four through seven constitute my primary research; the first three chapters cover three modal negatives and the last chapter is on two aspectual negatives in Southern Min. Theoretical accounts are addressed in each chapter after its corpus analysis.

Chapters four through seven by and large adopt the same organization so as to include the five sets of basic negatives and affirmatives in Southern Min. A cross-linguistic comparison between Southern Min and the other two language varieties is included in each of the above chapters. Chapter eight is a review of Southern Min negation paradigms. Finally, chapter nine is the conclusion.
Chapter 2

THEORETICAL FRAMEWORKS

I use generative grammar and grammaticalization in this dissertation to account for internal language change. This chapter begins with generative grammar, with a focus on Cartography, the Economy Principles, and the Linear Correspondence Axiom (Kayne 1994). The second focus is the framework of grammaticalization. This chapter finishes with the grammaticalization of negation.

2.1 Generative grammar

Generative grammar began with Chomsky’s Ph.D. dissertation in 1955. It has gone through many revolutionary changes along the way. The most updated framework, namely the Minimalist Program (MP) by Chomsky (1995 and later works), has two core components: merge and feature checking.

*Merge* is crucial in MP, and it is derivational, approaching syntax from the bottom-up, as opposed to representational theories, as in cartography, which approaches syntax from the top-down. The basic concept is that derivation takes place in the narrow syntax, where two components are merged (called *external merge*, often a verb and a *Theme*) and where another type of merge, *internal merge*, also participates. These processes take place at the VP layer, the TP layer, up to the CP layer, although more recently Chomsky has abandoned *labeling* so *bare phrase structures* are instead used. Participating in this derivation are mechanisms that put things together to make sense of an utterance.

*Feature checking* is central to MP. The most important features introduced in Chomsky (1995) are *interpretable* and *uninterpretable features*. The
uninterpretable features, often labeled as [u-F], have to be valued by checking off interpretable ones, as [i-F], and this agree mechanism begins with a probe (with uninterpretable features) looking down in its c-command domain for a goal that has properly matching interpretable features. This way, case and the subject-verb agreement in the traditional grammar sense (tense or finiteness) are explained.

I adopt feature checking for the head-to-head movement of V > Mod/Asp > NEG > C in negation of the Sinitic languages under investigation. For clausal relationships between TP and CP, I adopt the Minimalist feature checking modal proposed by van Gelderen (2012: 146-147) in (1) for ‘she may have left’.

(1)

```
CP
  / \ 
C   TP
   / \ 
  [i-ind] [u-T]
     / \ 
    T   MP
     / \ 
    [i-T] [i-T]
       / \ 
      M   ASPP
          / \ 
         [u-irr] [i-irr]
            / \ 
           ASP  VP
              / \ 
             [u-ReiT] [i-ReiT]
               / \ 
              have she left
```

I explain feature checking of (1) from top-down for convenience; MP derivation is bottom-up. In (1), a declarative sentence has interpretable indicative
features [i-ind] in the mood head C, so this sentence is not read as a question. On the other hand, when there are uninterpretable features, as in [u-Q], sitting in the C, the features must find an [i-Q] to check their features.

While interpretable features can stand independently (van Gelderen 2012) as the [i-ind] in the tree diagram, un-interpretable features cannot. The [u-T] on the C probes down and finds the [i-T] on the T head, which values the un-interpretable features on the C. Same as the uninterpretable irrealis features on the Mod and the uninterpretable relevant time features on the ASP. Feature checking allows the derivation to take place, and is thus more economical.

Other than feature checking across Minimalist clauses (van Gelderen 2012), I also make use of Kayne’s (1994) LAC to account for Chinese final particles that indicate mood, such as question markers. LCA stands for Linear Correspondence Axiom, which is responsible for the externalization or spell-out of the narrow syntax. The basic idea behind LAC is asymmetry of two components, one of which has to spell out before the other.

(2) asymmetry in LCA

```
  a
 /|
| b|
| |
 c d
```

The linear order of (2) then becomes a-b-c, but there is a problem to externalize c and d as they are sisters to each other. The literature has used LCA for Chinese questions, suggesting a move of everything below TP to the Spec of
CP. The problem is then resolved. To linearize (3), the hierarchical structure is shown as (4) and (5). Compare (4) with (5), the portion of TP and below is now in the spec of CP.

(3)  ni   chi-le  ma?  MSC  
     2sg  eat-ASP  Q  
     ‘Did you eat?’

(4)  [CP [C ma [TP ni [VP [V chi-le ]]]]]

(5)  CP
     C
        ma
     ni
     TP
        T
           vP
              v
                 asp
                    asp
                       le
                            chi
                               vP
                                   le
                                          chi

2.2 Cartography

This section addresses two scholars’ work: Rizzi (1997) and Cinque (1999). The CP, VP and TP layers are investigated.

2.2.1 The framework.

Cartography is used to map clauses. This approach began roughly with the rise of the functional category coupled with the development in which researchers observed more than one head in the functional structure, such as the IP which can
be split into Agr (cf. Pollock 1989) and T, M, and/or Asp. Rizzi and Cinque (2009) do not consider cartography to be a theory; neither do they think of it as a framework. They call it a project or a topic. I use the term approach.

The cartographic approach to syntax basically claims that each element in a sentence fills a specific spot. This line of study looks for a precise order from the top-down, namely a universal hierarchical order for multiple heads/specifiers within the same layer. Cartographic studies thus postulate multiple sub-layers in each traditionally defined layer, such as CP, TP, VP, and DP.

In the following two subsections, I mainly address Rizzi’s clausal hierarchy and Cinque’s adverbial universal hierarchy as these two scholars are the pioneers of cartography.

2.2.2 Rizzi’s clausal hierarchy.

Under the cartographic approach, the CP has individual functional heads to host Force, Focus, Topic and Fin as in Rizzi (1997; 2000). According to his observation on Italian, English, and French, and the like, Rizzi suggests that each sub-layer has to be made available for its functional head to fill in even though some heads may be null in other languages.

He proposes a fixed order for the CP such as (6) where a Topic can occupy multiple places, as the asterisk shows.

(6) Rizzi’s clausal hierarchy in the CP (1997: 288)

<table>
<thead>
<tr>
<th>ForceP</th>
<th>(TopP*)</th>
<th>FocP</th>
<th>(TopP*)</th>
<th>FinP</th>
<th>IP</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+ind]</td>
<td>(DP)</td>
<td>(who)</td>
<td>(DP)</td>
<td>[+]tense</td>
<td></td>
</tr>
</tbody>
</table>

7 I do not mean that Pollock is a cartographer.
van Gelderen (2012: 31) demonstrates the categorial status and features for each projection in the discourse area, which is shown in the third line of (6). The indicative mood is abbreviated as ind. Focus asks \textit{wh}-questions, so she uses \textit{who} to represent that. She has DPs for the Topic Phrase, of which the topicalized \textit{cigarettes} in (7) is an example.\(^8\)

(7) \textit{Cigarettes, I don’t smoke them.}

Since Rizzi (1997), different models of cartography have been proposed in the literature. In Rizzi (2005), he proposes a hierarchy for the components in the left periphery, including INT (interrogative) as in (8); emphases are mine.

(8) \textit{Force > Topic}*> INT > Topic* > Foc > Mod > Topic* > \textbf{Fin} > IP

In Rizzi’s modal, every clause is a ForceP and this includes embedded sentences. However, scholars have various views on the Force. Haegeman (2002) inserts a SD (Speaker Deixis) into Rizzi’s modal, illustrated in (10), where Sub indicates the subordinate complementizer. She considers SD in the subordinate clause to be anchored to the speaker but not to the subject of the predicate. This shows that the speaker’s mood can be expressed in embedded clauses too.

(9) \textit{Sub Top Focus SD Fin}

Following Rizzi (1997), Roussou (2000) suggests different sub-layers for the CP domain, distinguishing among three types of C: a plain C to host pure subordinators without modal or illocutionary force, a \textit{C} \textit{op} (= ForceP) to host illocutionary force, and another head \textit{C} \textit{m}, which is equivalent to FinP; see (10).

(10) \textit{C [ Topic/Focus [ \textbf{C} \textit{op} [ NegP [ \textit{C} \textit{m} …}}

\(^8\) Bare nouns are not always considered to be DPs.
Li (2006: 169) postulates a cartographic hierarchy for Mandarin “mood markers” as follows:

(11) Discourse >> Degree >> Force >> Evaluative >> Mood >> Fin

\(a \text{ 啊} \quad ba \text{ 吧}, \text{ ma \ 嘛} \quad ne \text{ 呢}\)

As seen, many different models are postulated under the cartographic approach or to argue again a strong version of cartography. We then may not want to take it for granted that any of these models is universally determined. For instance, the topic/focus concept in the CP layer is applicable to topicalization in Chinese, but not so useful in English as the latter language does not show as various topicalized or focalized components in its left periphery as does Italian.

Nevertheless, some set patterns can certainly be identified, such as the hierarchical order. For instance, Belletti (2004; 2005) exploits the left periphery of the VP in a similar fashion to Rizzi (1997), and concludes that “the VP shares a periphery which closely resembles the clause external CP left periphery”.

(12) \([\text{TopP} \text{ Top} [\text{Foc} \text{ Foc} [\text{Top Top} \ldots \text{VP}]])\) (Belletti 2005: 9)

Chinese is commonly accepted as a topic-prominent language and presumably has a richer CP. There has been work on the left periphery of Chinese. Paul (2005) examines the architecture of the area between IP and vP in Mandarin, and argues against the existence of ModP and TopP below the external FocP.

(13) \(\text{CP(force)} >> \text{TopP} >> \text{‘even’ FocusP} >\)

\(\text{IP} >> \text{inner TopP} >> \text{‘even’ FocP} >> \text{vP}\)

Compared Paul’s cartographic structure of (13) with Rizzi’s (8), one finds that there is no ModP, which would accommodate prepositional adverbs or TopicP to the left of FinP. One such example is below (Paul 2005: 119).
Paul concludes that the vP left domain parallels that of the clausal-external left periphery, the order in Chinese is not the same as postulated by Rizzi (1997) and Belletti (2003). Note that INT (interrogatives) and Fin (finiteness) are not discussed by Paul either, as her focus is on the Mandarin ‘even’.

Tsai (2008) examines Mandarin Chinese how’s and why’s, which are used as ‘instrument vs. manner’ and ‘reason vs. purpose’, respectively, and suggests the following for the order of each wh-adverbial type (Tsai 2008: 107).

(15) Force Top* INT Top* Focus Mod* Top* Fin [TP Tense Mod* [vP}

From the above studies, we see discrepancies in the conclusions about the left periphery in Mandarin. Each project in fact emphasizes a different area. For instance, (96) only demonstrates how Chinese adverbials (how’s and why’s) resemble Rizzi’s model. The key point in Tsai (2008) is to suggest a split CP for different types of zenme 怎麼 ‘how’ and weishenme 爲什麼 ‘why’ as hierarchical functional projections. Paul (2005), on the other hand, investigates topicalization and Mandarin even focus (lian 連…dou 都) to decide on the order of Topic and Focus below and above the IP. I do not plan to pursue any of these issues in this current study, however. The review is to show what cartography is about and how it contributes to the literature.
2.2.3 Cinque’s adverbials hierarchy.

Cinque (1999) proposes a hierarchical order for the aspectual phrases and of the adverbs within the lower IP area. According to Cinque, each of the different adverbs in the left periphery occupies a different sublayer; their cartography is given in (16) and the line below shows corresponding examples in English.⁹

(16) Cinque’s left peripheral adverbs (1999)

\[
\begin{array}{ccc}
\text{Mood}_{\text{speech act}} & > > & \text{Mood}_{\text{evaluative}} & > > & \text{Mood}_{\text{evidential}} \\
\text{frankly} & & \text{fortunately} & & \text{apparently} \\
& > > & \text{Mod}_{\text{epistemic}} \\
& & \text{Probably}
\end{array}
\]

With a strong claim about the cartographic approach to adverbs in syntax, Cinque (1999; 2004) argues that adverbs are specifiers of functional heads rather than verbal adjuncts. Cinque’s argument, together with Pollock’s, suggest that the traditional claim of the IP is over simplified and cannot explain the different elements in the CP.

Ji (2007) examines the CP left periphery of Mandarin Chinese. She finds that Chinese only needs two layers (17). In other words, Cinque’s (1999) universal hierarchy does not hold for Chinese.

(17) \text{Mood}_{\text{speech act/evaluative/evidential}} > > \text{Mood}_{\text{evaluative/epistemic}}

Briefly, Cinque and Rizzi are two of the pioneer scholars in cartographic studies. Their works are similar with an emphasis on the left periphery of the clause. Cinque, however, differs from Rizzi in that the former researcher works

---

⁹ This is a simplified version of Cinque (1999).
on accommodation of the different sentential adverbs in the lower IP, whereas Rizzi’s work is on the order of the clausal phrases situated in the CP layer, left to FinP or TP.

2.2.4 The VP cartography.

I address the issue of VP because the negatives under my investigation are mostly modals, including deontic modals. Deontic modal verbs are connected to event in the VP (more in chapter three).


(18) They gave books to Mary.

\[
\begin{array}{c}
\text{VP} \\
\text{They} & \text{V'} \\
gave (+to) & \text{AspP} \\
\text{Mary} & \text{Asp'} \\
gave (+to) & \text{VP} \\
\text{books} & \text{V'} \\
gave (+to) & \text{PP} \\
\text{to} & \text{Mary}
\end{array}
\]

As argued by van Gelderen (2012: 121), the advantage of (18) is the use of AspP for affectedness, for which she provides a pair sentences with a ditransitive verb teach. She argues that ‘Chinese’ in (19a) occupies the spec of AspP.
(19)  
   a.  *Ivy taught James Chinese.*  
   b.  *Ivy taught Chinese to James.*

Sybesma (1999: 157) holds a different view of the structure of the Mandarin VP. He treats the special constructions in Mandarin, such as the resultative, verb-le, prepositional dative, and *ba-* constructions, as SCs (small clauses), consisting of an NP and a predicate. The schema is given in (20).

(20)  \[ \text{NP } [\text{VP } V [\text{SC } \text{NP } \text{XP }]]] \]

Take the *ba-*construction as an example. Sybesma argues that the *ba-*noun phrase is not base-generated in the preverbal position; instead, it is generated in the small clause. The trace shows that *shu* ‘book’ originates in the small clause.

(21)  \[
\begin{array}{l}
\text{wo } \text{ba} [\text{VP } [\text{ba-NP } \text{shu}] [\text{VP } \text{nong} [\text{resulative SC } \text{e} \text{ zang } \text{le}]]] \\
1sg \quad \text{DISP} \quad \text{book} \quad \text{make} \quad \text{dirty} \quad \text{LE}
\end{array}
\]

‘I caused the book to become dirty.’

Multi-layered VPs with an additional AspP have also been pursued by Travis since her (1991) work. Travis (2005) argues for an inner aspect in the VP shell and proposes three places to encode (in her terms) telicity: v, Asp and X.

This tree is particularly useful to describe aspectual sentences.

(22)  Travis’ (2005: 71) articulated vP structure
As modals are also important in this study, I then modify the AspP to Asp/ModP in order to accommodate both inner AspP and ModP in my Chinese data; see (23).

(23) An abridged VP structure

\[
\begin{array}{c}
\text{vP} \\
| \quad \text{Asp/ModP} \\
| \\
\text{Asp/Mod} \quad \text{VP}
\end{array}
\]

I make use of (23) when arguing for the interpretation of negation in the secondary predicate position (chapter seven).\(^{10}\)

The evidence that we need an inner Asp/ModP comes from a special word order in which a modal verb follows the verb. I provide an example of Mandarin Chinese as in (24), where *de/bu* can provide modality.

\(^{10}\) I am ignoring the order of Mod and Asp now; they are placed in one head only for convenience.
(24) sanlunche pao de/bu kuai. MSC
  tricycle run able/not.able fast
  ‘The tricycle [does/does not; can/cannot] run fast.’

In the Southern Min sentence below in (25), the aspectual u ‘have’ and its negation bo ‘have.not’ can also occupy the same inner position.

(25) sann-lian-tshia tsau e/be kin. TSM
  three-wheel-vehicle run able/not.able fast
  ‘The tricycle [does/does not; can/cannot] run fast.’

I analyze the modal in the other word order (26) (the canonical one) as a reanalysis into a higher position.

(26) sann-lian-tshia e-sai tsai sann-e lang-kheh.
    three-wheel-vehicle able accommodate three-CL passenger
    ‘This tricycle can accommodate three passengers.’

The aspectual secondary predicate is given in (25’) and (27).

(25’) sann-lian-tshia tsau u/bo kin. TSM
  three-wheel-vehicle run PF/not.PF fast
  ‘The tricycle did/didn’t run very fast.’

(27) sann-lian-tshia iau bue kau. TSM
    three-wheel-vehicle yet not.yet arrive
    ‘The tricycle has not arrived.’

To conclude, a VP cartography must take into account factors such as aspect, mosality, and affectedness, by means of an additional inner phrase.

In the chapters where I address the movement of V > v in a modal, MP is adopted. I adopt a modified VP cartographic structure to accommodate the inner
aspect/modality sublayer. My VP analysis will emphasize on feature loss and the generative view on grammaticalization: moving upwards. I also make use of Minimalist perspectives when dealing with clausal relations between the VP and TP layers.

2.2.5 The TP cartography.

We now move to TP. I address the order of TAM morphemes because many of the negatives discussed in this dissertation have a dual function as modal or aspect marking. Historically, modals are grammaticalized from lexical verbs in Chinese (see chapters three to seven).

One important work by Pollock (1898) is the split of the IP to accommodate more components, such as AgrP and T in French.11 Here I investigate the hierarchical order for TAM (tense, aspect and modality); more is in chapter three.

The generative tradition treats epistemic modals as raising verbs as opposed to control verbs for deontic modals (such as Bošković 1997); also see Abraham (2002) for his view on the loss of Aktionsart properties in English.

However, in Minimalism, feature checking is the key and move/inner merge is only performed as a last resort. So, I assume that there is no raising versus control distinction for modal verbs in MP any longer. Presumably feature economy should account for the ordering of TAM, since future markers can be

---

11 The terms TP and IP are often used interchangeably. IP is split into TP and AgrP by Pollock (1989) and since then, TP has been used. To avoid confusion, I use IP in this dissertation as a general term for TAM but ignore tense in my data, as I adopt the notion that Chinese does not express tense by grammatical means.
reanalyzed from modals historically, and many modals were reanalyzed from full-
fledged verbs.

Nuyts (2006: 19) suggests an ordering for modality and aspect, given in (28).
She, however, admits that a precise ordering is far from settled.

(28) > evidentiality
   > epistemic modality
   > deontic modality
   > time
   > quantificational aspect [frequency]/dynamic modality
   > qualificational aspect [internal phases]

   V (parts of the ) STATE OF AFFAIRS

The ordering tells us the relationship between V and TAM. The order for three basic types of modality is epistemic > deontic > dynamic, and aspect is closer to the V.

I investigate proposals that make use of cartography in the IP/TP layer. First, Cinque’s adverbial hierarchy is also associated with TAM. I summarize TAM-associated adverbs that are relevant to this study from Cinque (1999: 106).

(29)

<table>
<thead>
<tr>
<th>Mod epistemic</th>
<th>T past</th>
<th>T future</th>
<th>Mood irrealis</th>
<th>Mod necessity</th>
<th>Mod possibility</th>
<th>ASP habitual</th>
<th>Mod volitional</th>
<th>ASP perfect</th>
<th>ASP proximative</th>
</tr>
</thead>
<tbody>
<tr>
<td>probably</td>
<td>once</td>
<td>then</td>
<td>perhaps</td>
<td>necessarily</td>
<td>possibly</td>
<td>usually</td>
<td>intentionally</td>
<td>always</td>
<td>soon</td>
</tr>
</tbody>
</table>
From (29), we learn that epistemic modality is higher than the other types of modality, with the volitional modality occupying the lowest position.

I now turn to Southern Min. I adopt the order for modality postulated by Hsin (1999: 66). The second line in (30) shows the XP layer the spec of which each modal adverb occupies.

\[(30) \quad \text{discourse} \quad >> \text{epistemic} \quad >> \text{subject-oriented} \]
\[\text{CP} \quad \text{IP} \quad \text{ModP} \]

Her example in (31) however does not correspond to (30) in that e ‘will’ is not a modal adverb (Hsin 1999: 70).

\[(31) \quad \text{早晚伊一定會知影你挑故意欲予歹看。}^{12} \quad \text{TSM} \]
\[tsiah\text{-ban} \quad i \quad \text{it-tng} \quad e \quad \text{tsai-iann} \]
\[\text{sooner.\text{-}or.\text{-}later} \quad 3sg \quad \text{definitely} \quad \text{will} \quad \text{know} \]
\[
\begin{array}{lllll}
\text{li} & \text{tiau-koo-i} & \text{beh} & \text{hoo} & (i) \quad \text{phai-kuan} \\
2sg & \text{purposely} & \text{want} & \text{PREP} (3sg) & \text{embarrass} \\
\end{array}
\]

‘Sooner or later he will surely come to know (that) you purposely wanted to embarrass him.’

Hsin also claims that epistemic adverbs must precede epistemic modals and that subject-oriented adverbs must precede subject-oriented modals (Hsin 1999: 66-67). Hsin treats adverbs as in the spec and modals as heads of the same projection. Examples for these are (32) and (33).^{13}

\[(32) \quad i \quad \text{tai-khai} \quad e \quad \text{lai} \quad \text{Taipak.} \quad \text{TSM} \]
\[3sg \quad \text{probably} \quad \text{will} \quad \text{come} \quad \text{Taipei} \]

‘It is probable that he will come to Taipei.’ (Hsin 1999: 66)

---

^{12} The Chinese characters are provided by Hsin. Glosses and translation are mine.

^{13} Beh ‘want’ is a modal in Southern Min.
(33) i tiau-koo-i beh hoo li phai-kuan. TSM

3sg on purpose want PREP 2sg embarrass

‘He purposely wanted to embarrass you.’ (Hsin 1999: 67)

In principle, Hsin’s hierarchy for modality resembles Nuyts’ (2006) in (28). However, Hsin does not address the relative order for the various types of modal verbs, namely epistemic, deontic and dynamic, in Southern Min.14

We turn to the topic on where modals are situated in English. Typically, the order of TAM in the English TP layer is TMA as in (34).

(34) He might have been forgotten.

Based on Cinque (1999), van Gelderen (2012: 148) postulates a hierarchy for English ModPs illustrated in (35).

(35) The English modal sub-layers

\[
\text{ModP} \\
/ \quad \text{Mod-epis} \\
/ \quad \text{Mod-necc} \\
/ \quad \text{Mod-poss} \\
/ \quad \text{Mod-vol} \\
/ \quad \text{Mod-obl} \\
\]

14 A more detailed discussion on modals is in chapter three where the modal classification may change.

34
Cormack and Smith (2002: 141) suggests two ModPs for English as summarized in Table 2.1.

Table 2.1
LF positions for English modals

<table>
<thead>
<tr>
<th></th>
<th>necessity</th>
<th>possibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Pol (Modal$_1$)</td>
<td><em>shall, should, must, will, would, ought + to, is + to, have + to</em></td>
<td>epistemic readings only: <em>may, might</em></td>
</tr>
<tr>
<td>Post-Pol (Modal$_2$)</td>
<td><em>need</em></td>
<td><em>can, could, dare</em> (only deontic)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>deontic readings only: <em>may, might</em></td>
</tr>
</tbody>
</table>

The authors argue against the notion by which modals are merged under T or I, as noted by Pollock (1989) and Lightfoot (1999). Cormack and Smith’s (2002: 141, 148) argument lies in the relative order between modals and negation.

(36) \((Q)\) (Echo) C T (Modal$_1$) Pol (Modal$_2$) (Adv [NEG])

Simply put, the polarity type of negation separates ModP$_1$ from ModP$_2$.

For instance, two orders available for negation yield two readings (Cormack and Smith 2002: 136).

(37) *Edwin can not climb trees.*

a. ‘It is not permitted that Edwin climb trees. \(\text{NOT} \ [ \text{CAN} \)

b. Edwin is permitted not to climb trees. \(\text{CAN} \ [ \text{NOT} \)

35
As seen, the position for modals is complicated. Both van Gelderen (2012) and Cormack and Smith (2002) attribute the relative order in English modals to a cognitive system, the new UG.

I adopt the two-layered ModP proposal. The hierarchy proposed by Cinque is not examined as I do not extend my research to double modals.

### 2.2.5 Cartography and Minimalism.

Cartography and minimalism differ in that the former is a top-down mechanism, while the latter is bottom-up. Both approaches are by nature incompatible with one other, in that the minimalist approach is derivational, whereas cartography is representational.

What follows is a discussion of the application of these two approaches to Chinese studies. Because the Chinese language is morphologically poor, some find it easier to approach Chinese syntax within the framework of cartography. I have provided studies, such as Paul (2005), Ji (2007), and Tsai (2008), in which the cartographic approach is adopted or the hierarch is examined.

Yet, the Cartographic approach is not flawless when applied to Chinese syntax. For example, Chinese syntax may not perfectly reflect the rigidly hierarchical fixed order. For example, we have see various conclusions from Paul (2005) and Ji (2007). Yet, the fixed order under the modified Cartography can be a good guideline for investigating and accounting for some linguistic phenomena within Sinitc languages.

To summarize, these two lines of research (minimalism and cartography) can complement and compensate for each other with some modifications. Both
frameworks assume universal principles/computational efficiency across languages in relation to features and mapping order.

2.3 Grammaticalization

This section covers the phenomenon and framework of grammaticalization, including several definitions, the generative “up the tree” notion, and ends with Chinese examples.

2.3.1 The framework.

The term “grammaticalization” is thought to be first coined by Meillet in 1912. At first, grammaticalization was mostly pursued by grammarians and historical linguists. Not until in the 1980s, with the appearance of important work of (Lehmann 1982), did this line of linguistic research regain attention. The basic concept behind grammaticalization is the loss of phonology and the bleaching of semantics in some morphemes, and gain of a language’s syntactic complexity. This means that grammaticalization is often accompanied by phonological weakening and semantic bleaching as well.

Grammaticalization is observed “when a lexical item becomes a grammatical one, or when a less grammatical item becomes more grammatical” (Detges and Waltereit 2002: 188). A case for the former description is when a verb is reanalyzed as an auxiliary, such as ‘to go’ > ‘be going to’ (future) in English (Hopper and Traugott 2003: 3). An example for the latter case is when ‘going to’ becomes reduced to ‘gonna’. English for from the status of a preposition to

---

15 The phrase be going to is not a full auxiliary yet.
complementizer is also an instance of the latter type. This definition is still questionable because C is not really more grammatical than P. It fits better with the notion of “moving upwards,” which is discussed in a later paragraph.

Hopper and Traugott (2003: 7) outline the cline of grammaticalization as (38).

Zero or Ø is usually added in the literature.

(38) content item > grammatical item > clitic > inflectional affix (≠ zero)

When the cline in (38) comes to an end, one cycle of change takes place. The end of a cycle motivates a renewal, for which van Gelderen gives an example of negation (2008; 2010; 2011). The term renewal may have been first addressed in Whitney (1870). It is sometimes called reinforcement (van Gelderen 2009).

One of the grammaticalization paths for English negation suggested by van Gelderen (2008: 193; 2010) mirrors the pattern of (38).

I summarize it as (39). I will come back to this change in section 2.5 on negation cycles.16

(39) na wiht OE ‘no creature’ > not > n’t > (zero; never as a renewal)

In the above case, it can be claimed that English negation is renewed by never. The renewal never is not commonly observed, possibly due to prescriptive reasons (van Gelderen 2011: 295).

In addition to renewal, reanalysis, layering, and unidirectionality are also important terminology in the grammaticalization framework. I explain below.

16 (39) is applicable to some dialects of English, but not standard English.
The term *reanalysis* is frequently seen in studies on grammaticalization. Langacker may be the first who uses reanalysis, defined by him as “a change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation” (1977: 58). Hopper and Trougott (2003) side with Harris and Campbell (1995: 61) in their view on reanalysis, which is “a change in constituency, hierarchical structure, category labels, grammatical relations, and cohesion (type of boundary)”. Below is an example of reanalysis from Hopper and Traugott (2003: 51). They discuss the phenomenon of reanalysis in terms of boundary change.

(40) \[ [(\text{back of the barn})] \rightarrow [\text{back of [the barn]}] \]

Bisang regards reanalysis as “the occurrence in a particular position within a syntactic pattern” (Bisang 2008: 34). This definition is less broad than the above mentioned. van Gelderen uses reanalysis to explain a morpheme being used in a more grammatical sense. For instance, the complementizer *for* is a reanalysis of preposition *for* indicating location, time, or cause.

(41) *I would prefer for John to stay in the 250 class.* (van Gelderen 2011: 7).

Next, once grammaticalization takes place, the syntactic structure becomes more complicated and synchronically a morpheme can be observed occupying different categories, which phenomenon is called *layering* (Hopper 1991). Another term “bridging contexts” by Evans and Wilkins (2000) is a similar notion. Hopper and Traugott (2003: 126) give an example of Latin from the periphrastic *cantare habet* ‘he has to sing > he will sing’ to morphological *cantabit* ‘he will sing’, both forms of which coexisted at some stage in Latin.
Taking Southeast Asian languages as empirical data, Bisang (2008) suggests that all layerings may be synchronically observed in a language. For instance, Khmer ‘come to have’ can be interpreted as ability, permission, obligation, past and emphasis of truth or factuality (Bisang 2008: 31). We shall see in later chapters that many Chinese morphemes follow this pattern.

The third concept often encountered in the grammaticalization literature is the unidirectional property. Scholars have claimed that grammaticalization is unidirectional although this notion has been hotly debated. I assume that grammaticalization is unidirectional. Nevertheless, just like the claim made by Bisang, multiple layering is often observed in negation of the Sinitic languages under investigation.

Linguists have worked on grammaticalization from different theoretical frameworks and approaches. Both the formal and functional work on grammaticalization. Scholars such as Traugott herself are in the functional camp and its basic reasoning is that pragmatic reasons trigger linguistic changes. On the other hand, the formal camp views grammaticalization as syntax-driven. The scholars in this camp, such as van Gelderen (2004) and Roberts and Roussou (2003), propose that grammaticalization involves moving higher up across the CP,

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18 Those scholars include, but are not limited to, Heine and Hünnemeyer (1991), Lehmann (1986) and Heine and Claudi (1986), Hopper and Traugott (2003), Roberts & Roussou (2003), and Van Gelderen (2004).
IP and VP layers. Therefore, the phrase “up the tree” is generally used. I adopt this definition of reanalysis in this dissertation.

As van Gelderen points out, the concept is not the one where the lexical item “moves” to a higher position (head), given that under the Minimalist syntax is “inert and doesn’t change” and language change is associated to “the lexical items that are reanalyzed” (2008: 186). Therefore, the “up the tree” notion should not be confused with movement in the narrow syntax.

2.3.2 Grammaticalization in Chinese.

Grammaticalization in Chinese has been adopted by many scholars as well. This approach of research has been used profitably by scholars in historical linguistics, such as Sun (1996) and Shi (2002), and by functionalists such as Xing (2003), as well as by minimalists, such as Z. Wu (2004) and Ting (2003; 2006).

I discuss the grammaticalization of ba 把 and le 了, given that they are among the most well-known examples. I then add dao 到 as a third example.  

*The affected marker ba*

I first discuss the well-known Chinese *ba*-construction. The categorial status has been a hotly debated topic19. In principle, *ba* originates as a full-fledged verb, meaning ‘to hold; to take’ in archaic Chinese.

The grammaticalization path is shown in (42).

(42)  *ba*: ‘to hold; to take’ $>$ affected marker

19 Other terms are also used, such as disposal marker, object marker or case marker.
In the following instances, *ba* is a lexical verb that takes a single argument as its complement; examples are from Sun (1996: 61-62).²⁰

(43) 左手把其袖 *Zhanguoce*, compiled in the 3rd to 1st centuries BCE

```
zuoshou  ba  qi  xiu
left-hand  hold  his  sleeve
```

‘The left hand holds his sleeve.’

(44) 醉把花看益自傷 *Bai Juyi* (772-846 BCE)

```
zui  ba  hua  kan  yi  zi  shang
drunk  hold  flower  watch  more  self  hurt
```

‘Drunk, I hold the follower and gaze at it, even more broken-hearted.’

However, *ba* in (45) does not mean ‘hold’. It is a grammatical marker. In (45), *qi* ‘deceive’ is the main verb that the negative *mo* ‘do not’ scopes over and *ba* can be seen as a light verb that indicates definiteness and affectiveness.

(45) 莫把杭州刺史欺 (Sun 1996: 62)

```
mo  ba  Hangzhou  cishi  qi
NEG  DISP  (place)  magistrate  deceive
```

‘Do not deceive the magistrate of Hangzhou.’

*Ba* is a grammatical marker in MSC (46).

(46) ta  ba  pingguo  chi-le.

```
3sg  DISP  apple  eat-LE
```

‘He ate the apple.’ (Sun 1996: 53)

---

²⁰ I change part of the translation in (44).
I would like to draw the reader’s attention to the morpheme jiang ‘to take’ in (47), which is a renewal. In some Chinese languages, such as Hakka, jiang rather than the cognate of ba is used; see (48).

(47) 把聖賢說話將來學 Early Mandarin (1001-1900 CE); Sun (1996: 71)

\[ \begin{align*}
\text{ba} & \quad \text{sheng-xian} & \quad \text{shuo-hua} & \quad \text{jia**ng} & \quad \text{lai} & \quad \text{xue.} \quad 21 \\
\text{DISP} & \quad \text{sage-worthy} & \quad \text{words} & \quad \text{take} & \quad \text{come} & \quad \text{learn} \\
\end{align*} \]

‘Take the words of the Sages and worthy people, and learn them.’

(48) ziong /*ba mun ta khoi. Hakka

\[ \begin{align*}
\text{DISP} & \quad \text{door} & \quad \text{hit} & \quad \text{open} \\
\end{align*} \]

‘to push the door open’

The perfective marker -le

The second case of grammaticalization is le, which is also one of the most researched and debated topics. 22 There are two le’s in MSC: the bound morpheme -le₁, attached to the verb, and the free morpheme le₂, often seen in sentential final position. 23 I only discuss the perfective marker –le₁ below. Let us first compare (49) and (50) in the two Sinitic languages. 24

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21 Sun (1996: 71) notes that this is a bi-clausal purposive construction and that lai is purposive.

22 A general claim is that there are two le’s: one is marked as –le (le₂, a bound morpheme) and the other le (le₁; a free morpheme). A further distinction is made between the perfective –le and the sentence final particle le, often referred as Currently Relevant State (abbreviated as CRS) (Li and Thompson 1981: 240). While some scholars such as Sun (1996) hold the view of having two le’s, some see le as one morpheme (cf. Li 1989). Lin (2004) considers le to be denoting inchoativity. For other views, see Chao (1968) and Lin (2003).

23 I do not agree this distinction because it is too simple; nothing hinges on this, however.

24 These two are phrases and are only used parallel for comparison. In regular
Shi (2002: 136) argues that the disyllabification in the Chinese history gives rise to the reanalysis of liao as the modern perfective marker –le. The verb liao underwent semantic bleaching and became an aspect marker in modern Mandarin as in (50). Note that liao also underwent phonological reduction, from liao to le.

The general view on the grammaticalization path of -le is shown in (51).

(51) liao ‘to finish’ > -le = perfective marker

Xing (2003) classifies reanalysis into three types when discussing the grammaticalization of le.

Xing (2003: 37) argues that a reanalysis of a verb takes place in three steps.

(52) verb serialization > verb de-centralization > functionalization

The first stage is when liao is used as ‘to finish’ (52), and this process is serialization.

(53) 吃飯了也。 Zutangji; 10th century

chi fan liao ye

‘ate and completed the food’ (Xing 2003: 37)

conversations, chi-le fan le ‘I had my meal.’ or chi-le fan jiu qu ‘I’ll go after my meal’ are more common. Also note that le does not necessarily mean completion.
Xing (2003) analyzes *liao* in (53) as part of a serial verb construction (SVC) and the verbal meaning is central to the sentence. If *liao* is analyzed as Asp in (53), the meaning is ‘one has finished eating the meal’. She claims that when *liao* in (53) is decentralized, it gradually becomes more grammaticalized; (54).

(54)  
軍官食了，便即渡江。 10\textsuperscript{th} century, *Bianwen* (Xing 2003: 37)  
\begin{verbatim}
junguan  shi  liao  bian  ji  du  jiang
officer  eat  complete  then  soon  cross  river
\end{verbatim}
\begin{quote}
‘Soon after the officers finished eating, they crossed the river.’
\end{quote}

The third type of reanalysis is functionalization; see -le in (55).

(55)  
他去了北京。 MSC  
\begin{verbatim}
ta  qu-le  Beijing
3sg  go-LE (place)
\end{verbatim}
\begin{quote}
‘She went to Beijing.’ (Xing 2003: 38)
\end{quote}

In the cases for *ba* and *le* just discussed above, layerings and renewals are evident in the historical texts. *Ba* or *le* are no longer used as verbs, except in some set items, such as *bawo* 把握 ‘to seize’ and *liaoshi* 了事 ‘to finish something’.

(56)  
*ba* ‘hold’ + *wo* ‘grasp’ = *bawo* ‘to seize’

(57)  
*liao* ‘finish’ + *shi* ‘matter’ = *liaoshi* ‘to finish something’

However, there are cases where the old layers co-exist with the newer layers. I show *dao* as such an example below.

The dictionary *Shuowen* has an entry for *dao*: ‘to arrive’. *Dao* was a verb ‘to go, to visit’ in archaic Chinese; see (58).

(58)  
蹶父孔武，靡國不到。 *Shi Jin*, 1046-771 BCE  
Jue-fu kongwu,  mi  guo  bu  dao.
Jue-fu martial NEG nation NEG arrive

‘Jue-fu was very martial, and there was no State which he had not visited.’

Ma (2002: 134-135) shows that the use of dao to indicate the end point can be observed in the Analects as in (59), where dao is a verb and yu is a preposition.

Sentences are all from Ma; translation is mine.

(59) 民到于今稱之。論語 Analects of Confucius
min dao yu jin cheng zhi.
people DAO till today praise them
‘To this day, people still praise them.’

Ma further states that dao can be used for the starting point, as in (60).

(60) 到秋馬肥，變必起矣。（漢書）(the Book of Former Han)
dao qiu ma fei, bian bi qi yi.
DAO fall horse corpulent rebel certainly arise PAR
‘Rebels are sure to arise when fall comes and the horses become corpulent.’

The V-dao phrase has been documented back in the Han Dynasty (206 BCE - 220 CE); see (61).

(61) 惠王用張儀之計…，使之西面事秦，功施到今。（史記）Shiji
hui wang yong zhangyi zhi ji,
hui king use (name) GEN strategy
… shi zhi xi mian shi Qin,
make them west fac worship Qin,
kong shi dao jin.
effect take.effect till today
‘King Hui adopted Zhangyi’s strategy…, making (them) worship Qin from the west side, and this has worked to this day.’

46
Ma (2002) concludes that not until the Yuan Dynasty (1271-1368 CE) can one see the post-verbal *dao* such as (62).

(62) 直吃到銀燭暗，玉繩低，雪晴時人未歸。（全元散曲）(the loose melody of Yuan Dynasty)

\[
\begin{align*}
\text{zhi} & \quad \text{chi} & \quad \text{dao} & \quad \text{yin} & \quad \text{zhu} & \quad \text{an}, \\
\text{continue} & \quad \text{eat} & \quad \text{DAO} & \quad \text{silver} & \quad \text{candle} & \quad \text{dark}, \\
\text{yusheng} & \quad \text{di}, \\
\text{constellation} & \quad \text{low}, \\
\text{xue} & \quad \text{qing} & \quad \text{shi} & \quad \text{ren} & \quad \text{wei} & \quad \text{gui}.
\end{align*}
\]

\[
\text{snow} \quad \text{bright} \quad \text{time} \quad \text{person not.yet return}
\]

“(someone) continued to eat until the silver candle became dark, and the stars went below; when the snow stopped [falling], the person had not yet returned.”

Different from *le* and *ba*, the use of *dao* as a verb, preposition and a telicity marker co-exists in modern Mandarin Chinese; see (63)-(65).

(63) qiutian *dao* le. 秋天到了。 *[dao] as a verb*

\[
\begin{align*}
\text{fall} & \quad \text{arrive} & \quad \text{PAR} \\
\text{‘Here arrives fall.’}
\end{align*}
\]

(64) chi *dao* bao. *[dao] as a degree indicator*

\[
\begin{align*}
\text{eat} & \quad \text{to.the.point} & \quad \text{full(ness)} \\
\text{‘all-you-can-eat’}
\end{align*}
\]

(65) wo *zhao*-*dao* che yaoshi le. *[telicity marker]*

\[
\begin{align*}
\text{1sg} & \quad \text{look.for-*dao* car} & \quad \text{key} & \quad \text{PAR} \\
\text{‘I found the car key.’}
\end{align*}
\]

In this subsection I have reviewed the phenomenon of grammaticalization and discussed several case studies on Chinese grammaticalization.
Grammaticalization is the framework I adopt for the VP and the ModP layers when discussing language change. I now move on to how grammaticalization is viewed under the generative approach.

2.4 Computational Economy

I have addressed Cartography and grammaticalization as my major frameworks. Another important topic I will discuss is the Computational Economy under Minimalism.

As discussed, UG has a different definition since Chomsky (1995) under the new Minimalist framework. UG is now associated with computational efficiency, the third factor by Chomsky (2005; 2007), or the initial cognitive system in a language acquirer.

I do not pursue feature economy as it does not seem to be compatible with the empirical data in the Sinitic languages. Rather, I use Economy Principles from MP, to account for the reanalysis occurring in Southern Min negation.

Feature loss is taken from van Gelderen’s (since 2008) feature economy model, which is revised from her (2004) work of the Late Merge and Head Preference Principles. Feature loss adopted in this dissertation is center to the Economy framework. According to van Gelderen, uninterpretable features are more economical than interpretable features in that the former ones keep derivation going. Likewise, interpretable features are more economical than semantic features (2011: 4). The concept can be conceptualized as (66).

(66)  u-F >> i-F >> semantic features
Feature loss participating in this model has a reverse order, as in (67).

(67) semantic features > [i-F] > [u-F]

A lexicon has an array of features. Semantic features are in lexical items, typically in verbs or nouns. When a morpheme is taken out by the speaker with fewer features, [i-F] is at play. When it comes to the stage with [u-F], a renewal comes about and is often viewed as a linguistic cycle in the literature. As van Gelderen claims, feature economy motivates language change, as it is evident in diachronic language change as well as child language acquisition (2004; 2011: 6).

The term “economy” is used by van Gelderen in the sense that the syntactic derivation needs something uninterpretable to probe for another item that is interpretable, thus a speaker only needs lexical inputs into the course of derivation where agree and merge/move take place. The change of features in a lexical item derives different syntactic patterns in narrow syntax. It is economical given that the speaker does not use as much lexicon as s/he would have to.

I consider reanalysis in a higher head to be a result of feature loss. A reanalysis in the way reflects upon one step of feature loss in a grammaticalization cline. Take the Chinese morpheme *dao* as an example. The lexical verb *dao* means ‘to arrive’, but *dao* in (68) has lost its semantic features.

(68) \[ta \; dao \; Zhangguo \; qu \; le. \; [dao \; as \; a \; locative]
\]

3sg \ LOC China \ go \ PF

‘He went to China.’ (Heine & Kuteva 2002: 45)
van Gelderen concludes with a path with feature loss in *dao* as (69) and the verbal case cline is shown in (70), where she furthers shows that *dao* has undergone several reanalysis processes, thus having a shift from V to v and to P.

(69)  
\[
\text{*dao* ‘arrive’} > \text{*dao* ‘to’} \quad (\text{van Gelderen 2011: 188})
\]

[move, direction] [i-direction] (or [i-T])

(70)  
\[
\text{V} > \text{v} > \text{P} \quad (\text{van Gelderen 2011: 191})
\]

[move, finish] i-loc ??

Note that she uses [i-loc] for this use of *dao* in (68). Below I attempt to continued on the prepositional and telic uses of *dao*. The morpheme *dao* is often used as a preposition; (71) is repeated from (64) for convenience.

(71)  
\[
\text{chi \underline{dao} bao. \quad [\text{*dao* as a degree indicator]}
\]

\text{eat to.the.point full(ness)}

‘all you can eat’

I consider the reanalysis of *dao* applicable to the reanalysis of v [i-loc] > P in (70). Like many other instances, the use of *dao* extends from spatial to temporal as *dao* indicates telicity in (72), repeated from (65).

(72)  
\[
\text{wo \underline{zhao-\underline{dao}} che yaoshi le. \quad [\text{telicity marker]}
\]

\text{1sg look.for-\underline{dao} car key PAR}

‘I found the car key.’

What is more, the use of *dao* as a phase or telicity marker in modern Mandarin as in (73) and (74) is very much grammaticalized and is also a late
development. Below are two more fascinating examples where *dao* is attached to telic verbs.

(73) 讓我學習到做事應有的態度。 MSC
    rang wo xuexi-*dao* zuoshi
    let 1sg learn-DAO do.thing
    yingyou de taidu.
    necessary GEN attitude
    ‘Let me learn the attitudes in coping with things.’

(74) 這有沒有解決到你的問題。
    zhe you-mei.you jiejue-*dao* nide wenti.
    this Q solve-DAO your problem
    ‘Did this solve your problem?’

With additional data from (71) to (74), a more complete cline of *dao* should look like (75), modified from (70). More research certainly has to be conducted from a diachronic perspective so as to determine where the telicity use of *dao* situates in the cline.

(75) V > v > P
    [move, finish] i-loc/i-telicity [degree]

I adopt feature loss from van Gelderen’s feature economy model to account for the multi-functional morphemes in Chinese. A skeptic may argue for a possibility of many different *dao’s*. My brief answer here is that a path such as (75) is empirically evident in the literature of typology and grammaticalization. Feature loss is a better account than having multiple words for a language

---


26 taken from the acknowledges of an MA thesis written in Chinese
acquirer to learn, the latter of which is not economical. We will see more applications in chapters four to seven.

2.5 Negation Cycles

The last section contributes to motivation for Chinese negation. According to van Gelderen, language change follows principles of Economy, one of which is the Late Merge Principle (LMP). In addition to feature loss, the LMP explains the grammaticalization pathway of negative words.

The LMP describes how children “build their grammar in a particular way” (p.12). In the case of negatives reanalyzed as interrogatives, children tend to place the interrogatives “higher [in the tree] rather than merge them early and then move” (van Gelderen 2004: 12). One example is the English not, which undergoes changes from a phrase, to Spec and to head (van Gelderen 2008: 193).

(76)  
\begin{align*}
  \text{na wiht} & \rightarrow \text{ne} \rightarrow \text{not} \\
  \text{negative object/DP} & \rightarrow \text{Spec} \rightarrow \text{head of NegP}
\end{align*}

In a revised modal, namely Feature Economy, van Gelderen uses (77) to account for negative cycle instead.

(77)  
\begin{align*}
  \text{Adjunct/Arg} & \rightarrow \text{Spec} \rightarrow \text{head} \rightarrow \text{Affix} \\
  \text{Features} & \left[\text{semantic}\right] \left[\text{i-F}\right] \left[\text{u-F}\right] --
\end{align*}

She argues that another grammaticalization process is responsible for Chinese negation (van Gelderen 2011: 292, 299). Similar to (77), a loss of semantic features as shown in (78) accounts for the reanalysis of a lexical head to a higher head for Chinese.
Chinese negation does not seem to have \([u-F]\), as there is no renewal doubling as a negative concord language has; French \(ne\) and \(pas\), for instance. The mechanism for the latter path is illustrated in (79).

(79) The negative head cycle (van Gelderen 2011: 298)

van Gelderen (2008) uses Head-to-Head movement to explain the reanalysis of Chinese \(\text{沒有}\) \(mei\), which originates as a verb ‘to die/to sink’ (pronounced as \(mo\)) but is later used as an negative as well as aspectual marker(, and then an interrogative).

The tree in (80) demonstrates that the lexical \(mo\) has semantic features [to die; not exist; lack; not possess] and occupies the V head.

(80) the verbal \(mo\): [die; not exist]
The features of lacking or not possession in *mei* lead *mei* to become reanalyzed as aspect, as possession to aspect is attested across languages. (81) shows a reanalysis of *mei* into an aspectual marker.

(81) the aspectual *mei*: [iASP] < [not exist; not possess]

\[
\text{AspP} \\
\hspace{1cm} \text{mei} \quad \text{VP} \\
\hspace{2cm} \text{[iASP]} \\
\hspace{3cm} \text{mei}
\]

The reanalyzed *mei* in a higher head has interpretable aspectual features, [i-ASP]. The LMP takes place when *mei* is reanalyzed as a new head in AspP. Note that the cross-out does not mean copy/delete, and neither does the arrow indicate movement, as reanalysis is a result of one head landing in another head.

There is also a stage during which *mei* loses lexical features [lacking], leading to a reanalyzed *mei* with interpretable grammatical features [i-NEG]. This *mei* lands at the head of NegP.

(82) The negative *mei*: [i-NEG] < [lacking]

\[
\text{NegP} \\
\hspace{1cm} \text{[uNeg]} \quad \text{VP} \\
\hspace{2cm} \text{V} \\
\hspace{3cm} \text{mei [i-NEG]}
\]
The negative *mei* carries *irrealis* features, easily reanalyzed as an interpretable question feature, i.e. [i-Q].

(83) the interrogative *mei*: [i-Q]

```
CP
   [u-Q] NegP
       Neg
       mei [i-Q]
```

The i-Q feature in (83) agrees with the un-interpretable question features [u-Q] in the head of CP. Thus, *mei* moves from Neg to Q. This phenomenon is evident in the history of the Chinese language (cf. Wei 2007; Wei 2010).

Through the course of time, *mei* is further reanalyzed as an interrogative and is base-generated in C, in accordance with the LMP.

(84) the base-generated interrogative *mei*

```
CP
   C
       mei
```

The trees illustrate how *mei* is reanalyzed in each stage to a different head.

The Principle of Economy is in play, as we observe features loss in *mei*, from lexical to grammatical ones. This triggers language change. Reanalysis takes
place through several generations. Whenever mei lands in a particular position without any movement, it is a late merge.

Van Gelderen’s Late Merge Principle helps to explain language change in children’s grammar through a reanalysis of mei to a higher up position (i.e. C in the CP) rather than undergoing several steps of movement because (external) merger is “cheaper” than movement/internal merge (Chomsky 1995; 1998). Through late merges, in the new grammar, the negative word mei is base-generated in C as an interrogative as shown in (84).

Next chapter discusses negation and modality/aspect as Southern Min negation interacts with modality and aspect.
Chapter 3

NEGATION AND TAM

This chapter focuses on negation and modality. I first address negation from
a typological perspective. The second and third sections discuss Chinese negation
in general and then specifically Southern Min negation. The remainder of the
chapter centers around modality, as concepts of modality will be used in later
chapters when negative modal verbs are introduced. Also touched upon is aspect.

3.1 Cross-linguistic negation

3.1.1 Negation strategies.

I address what strategies are used across languages to form negation and
relate those to Chinese. As Dahl (1979) notes, three standard negation strategies
can be found in natural languages, either through a negative particle, a negative
auxiliary, or a negative affix.27 Below are examples for each type.

(1) ta    bu    he    jiu. Mandarin
       3sg   NEG   drink   wine.
       ‘He/She does not drink wine.’ (Whaley 1997: 228-229)

(2) bi    dukuwun-ma  a-ca-w  duku-ra. Evenki
       1sg    letter-OBJ   NEG-PST-1sg   write-PAR
       ‘I didn’t write a letter.’ (Whaley 1997: 228-229)

(3) m-a-rany. Massai
       NEG-1sg-sing
       ‘I do not sing.’ (Whaley 1997: 228-229)

27 Standard negation is interchangeable with clausal negation; lexical negation is
not addressed here.
The negative particle has been the focus in the literature. Negative particles are independent and non-inflectional (Dahl 2020: 19). Payne (1985) suggests that in some languages, such as Russian, an invariant particle is used for any predicate type. Chinese, on the other hand, has different particles at the sentential level. Payne suggests three basic strategies in such languages that use different negatives. First, negation particles vary based on mood. For example, Hungarian employs *nem* and *ne* for statements and imperative sentences, respectively. Second, tense or aspect determines which particle to use, especially in Semitic languages (Payne 1985: 223). Third, the grammatical category of the predicate also determines the choice of negative particles. For example, in Baghdad Arabic *ma:/m* is used with verbal predicates, as opposed to *mu:*, which is for nominal, adjectival, and prepositional predicates” (Bakir 1970, in Payne 1985: 223).

Let us briefly examine Chinese negation based on Payne’s analysis. Mandarin utilizes different particles depending on the verb type and the mood of the sentence (Li and Thompson 1981). *Bu 不, mei 没* and *bie 别* are the most commonly used negatives in Mandarin. The first and second strategies by Payne apply to Chinese. *Bu* is used for habitual negation and *bie* negates imperatives. Thus, mood is associated with negation. The choice between *bu* and *mei* is tied to aspect and modality.

Another typological characteristic of negation is the symmetric vs. asymmetric distinction (Miestamo 2005). Asymmetry refers to when affirmation changes to negation while being accompanied by structural changes in addition to
negative markers. Take Mandarin as an example. The affirmative sentence has an aspect marker –le in (4). When (4) is negated, ungrammaticality occurs if a negative such as bu or mei is simply added, as in (5).

(4) ta chī-le fan.
3sg eat-ASP rice
‘He ate.’

(5) *ta bu/mei chī-le fan.
3sg NEG eat-ASP rice
Int.: ‘He did not eat.’

The counterpart of (4) is shown in (6), where mei ‘not’ appears together with an optional aspect marker you ‘have’ and –le is dropped.28

(6) ta mei(-you) chī fan. Mandarin
3sg NEG(-ASP) eat rice
‘He did not eat.’

Southern Min and Hakka differ however, in that these two languages make use of a symmetric affirmative and negative system.

Let us investigate another negative bu in Mandarin. Bu is considered to be a pure or habitual negator in the literature; see the examples below.

(7) ta chī yu.
3sg eat fish
‘He eats fish.’

(8) ta bu chī yu.
3sg NEG eat fish
‘He doesn’t eat fish.’

28 Note that mei by itself can be aspectual too and glossed as NEG.ASP.
*Bu* is also used for modal verbs and stative verbs; see (9) and (10). I address the relationship between negation and predicate types immediately.

(9) ta **bu** hui kaiche.
    3sg NEG can drive
‘He doesn’t know how to drive.’

(10) ta **bu** gao.
    3sg NEG tall
‘He is not tall.’

However, *bu* can express volition as in (11).

(11) ta **bu** chi yu.
    3sg not.want eat fish
‘He doesn’t want to eat fish.’

### 3.1.2 Topics in the typology of negation.

I draw particular attention to three issues: (a) negation with non-verbal predicates; (b) negation in existential sentences; and (c) negation as interrogatives. These concepts will be encountered in later chapters individually.

**Negation with non-verbal predicates.** Negation is related to its predicate. For examples, in Indonesian, the negative particle *tidak* is used as a standard negator, as in (12); however, another negative *bukan* is used when the predicate changes to nominal, as in (13) (Dahl 2010: 19 & 27).

(12) saya **tidak** tidur. Indonesian
    3sg NOT sleep
‘I am not asleep.’

29 The gloss in (13) is modified.
(13) itu **bukan** jeruk. Indonesian
that NEG orange
‘That is not an orange.’

(14) itu **(adalah)** jeruk. Indonesian
that COP orange
‘That is an orange.’

Example (14) above is the affirmative counterpart of (13), where a copula verb *adalah* is optional (Dinny Aletheiani, p.c.).

Czech makes use of a special negator in copular constructions; a comparison between the affirmative and negative is shown below (Dahl 2010: 28).

In later chapters, I will show that the Chinese language is similar in this respect.

(15) Jan **je** doma.
Jan COP.3sg at.home
‘Jan is at home.’

(16) Jan **neni** doma.
Jan NEG.COP.3sg at.home
‘Jan is not at home.’

**Negation in existential sentences.** Another typological characteristic of negation is that the negative existential can be identical to the standard negator (Croft 1991: 11). I provide Mandarin examples to show that the Chinese language shares this typological characteristic.

As shown in (17), *you* is the existential verb ‘to exist’; its negative form *meiyou* can be used as a negative existential as in (18) and a negator in (19).

(17) zheli **you** ren. Mandarin
here exist person
‘There is a person here./ There are some people here.’

(18) zheli mei(-you) ren. Mandarin
here NEG.exist person
‘There is nobody here.’

(19) ta mei(-you) nian yanjiusuo. Mandarin
3sg NEG.ASP attend graduate.school
‘He did not attend graduate school.’

**Negation in interrogatives.** Palmer (2001: 12, 52) provides examples of Imbabura to show that languages may use the same negative marker for questions, as they are both “non-assertive” (Palmer 2001: 53). In (20) and (21), *chu* is used as ‘not’ and as a question marker.

(20) űuka-ka mana chay llama-ta shuwa-shka-ni-chu.
1sg-TOP NEG that sheep-ACC steal-PF-2sg-NEG
‘I did not steal that sheep.’ Imbabura

(21) mayistru-chu ka-ngui? Imbabura
teacher-Q COP-2sg
‘Are you a teacher?’

The use of negative markers to form interrogatives is not unknown; van Gelderen (2008) argues that in the world languages “many negatives develop into mood markers in C, in particular into interrogatives” (2008: 236). The reanalysis of negatives into interrogatives is addressed in chapter four to seven when I discuss negation of Southern Min.
3.2 A brief history of Chinese negation

3.2.1 Evolution of Chinese negatives.

Chinese has been abundant in negative expressions throughout its history. Djamouri (1991: 8), Pulleyblank (1990, Chapter 11) and Xu (2003: 2) show that there were four negatives in Jiaguwen 甲骨文 (oracle bone script) as in (22), and others, (23), emerged later in the Zhou-Qin Dynasties (1066-221 BCE).^30

(22) 不 bu, 弗 fu, 勿 wu, 毋 wu

(23) 非 fei, 匪 fei, 微 wei, 無 wu, 譲 mie, 未 wei

The various negatives in archaic Chinese serve different functions. Pulleyblank (1990, cited in Djamouri 1996: 291) and Sagart (1999: 84) suggest that some negatives function like verbs. For example, wu 無 means ‘not have’.

Also discussed is the dual function in one morpheme, one such example is fu 弗, which is believed to be a fuse word of a negative bu 不 and an object pronoun zhi 之 (Pulleyblank 1995: 104).

Among these negatives, 不 bu is still productively used in modern Mandarin Chinese. The prohibitive 勿 wu also survives to this day, but mainly in written texts or as set expressions. The rest are no longer productive, with some lexicalized and others used in idiomatic expressions.

Wu 無 ‘not have’ is postulated by Shi and Li (2004) to be replaced by mei 沒.

Neither seen in (22) nor (23), the morpheme mei developed later in the Chinese

^30 The transcription is in modern standard Mandarin pronunciation. Some negatives may have been pronounced the same in or before Middle Chinese time.
history before early Mandarin, and is now another commonly used negative in Mandarin other than *bu* and the prohibitive *bei*, as noted in previous paragraphs.

How do the many negatives differ? According to Shi and Li (2004: 241), the use of various negatives between the Wei-Jin Periods (265-420 CE) and the Yuan-Ming Dynasties (1271-1644 CE) is determined by the predicate, as shown in (24) and (25).

(24) negative candidates for a VP or AdjP predicate:
不*bu*, 未*wei* ‘not yet’, 不曾*bu.zeng* ‘never’, 未曾*wei.zeng* ‘never’

(25) negative candidates for a NP predicate:
無*wu* ‘not have’, 没*mei* ‘not have’

Below are examples.

(26) 今日做未得，且待來日做。 朱子語類訓門人 Zhuzi yulei; 1270 CE
jinri zuo wei de, qie dai lairi zuo
today do not.yet obtain just wait future do
‘Whatever hasn’t been done today will be kept until a later day.’

(27) 不見仙人，
*bu* jian xian ren,
NEG see transcendent person
不可謂世間無仙人也。 抱朴子內篇 Baopuzi; 371-420 CE
bu-ke wei shijian wu xian ren ye
NEG.can say world not.have transcendent person PAR
‘One can’t conclude that there is no transcendent being in the world until he sees one.’

64
Shi and Li (2004: 262) suggests that *mei* replaced the functions of the negatives *wu* in (25) and *wei, buzeng*, and *weizeng* in (24). Only two out of these candidates, namely *bu* and *mei*, survive in modern Chinese to this day.\(^{31}\)

**3.2.2 Modality in Classical Chinese.**

An important topic is that the incorporation of modality into negation is by no means an innovation of Southern Min. As noted in Dobson (1966: 282), Chinese had established a “symmetry of the modal paradigm in late Archaic Chinese […] by the third century.” Pulleyblank (1995: 122-123) addresses different types of modality in Classical Chinese, which I summarize in Table 3.1, showing examples that are related to my research.\(^{32}\) As argued by Pulleyblank, the first four verbs can take clausal objects, but *de* ‘get’ is used in a verb series with another verb following.

There are some things to note in Table 3.1. First, in today’s Mandarin Chinese, only few of these morphemes can appear alone: *neng, gan*, and *ken*. Many others are combined with another modal; an example is the disyllabic modal *ke-neng* 可能 ‘maybe’. Another important point is the two uses of the same morpheme *ke* 可, which I demonstrate in different rows. The possibility modal *ke* has, in our terms, epistemic modality (possibility), whereas the other *ke* is in the

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\(^{31}\) In Southern Min and Hakka, many archaic negative forms are preserved, such as *bue* 未 and *mang* 歹, both glossed as ‘not yet’. I will visit this in chapters four to seven where Southern Min negatives are introduced.

\(^{32}\) Transcription is in modern standard Mandarin.
deontic necessity paradigm.\textsuperscript{33} This is crucial in grammaticalization and typology in that English makes use of \textit{can} for epistemic (probability), abilitive, and deontic.

In comparison, Mandarin uses \textit{neng} and \textit{ke} for the possibility (as opposed to necessity) modal paradigm. Additionally, some of these modal morphemes are related to one another and thus used in the same paradigm (possibility, necessity or volition). For instance, \textit{bi} and \textit{de} are in the necessity paradigm, equivalent to the use of English \textit{need}. I address this in a later subsection of this chapter.

Table 3.1
Modality in Classical Chinese

<table>
<thead>
<tr>
<th>modals</th>
<th>categorial status</th>
<th>meanings</th>
</tr>
</thead>
<tbody>
<tr>
<td>neng 能</td>
<td>verb</td>
<td>‘can, be capable of’</td>
</tr>
<tr>
<td>gan 敢</td>
<td>verb</td>
<td>‘dare’</td>
</tr>
<tr>
<td>ken 肯</td>
<td>verb</td>
<td>‘be willing to’</td>
</tr>
<tr>
<td>yu 欲</td>
<td>verb</td>
<td>‘wish, intend, will’</td>
</tr>
<tr>
<td>de 得</td>
<td>verb</td>
<td>‘get to do, can’</td>
</tr>
<tr>
<td>ke 可</td>
<td>adjective</td>
<td>‘possible’</td>
</tr>
<tr>
<td>ke 可</td>
<td>adjective</td>
<td>‘ought to, should’</td>
</tr>
<tr>
<td>jiang 将</td>
<td>adverb</td>
<td>Intentionality &amp; futurity</td>
</tr>
<tr>
<td>bi 必</td>
<td>adverb, verb, adnominal particle</td>
<td>necessity, ‘must’</td>
</tr>
</tbody>
</table>

\textsuperscript{33} Epistemic and deontic are introduced in this chapter.
Many of the archaic negatives are associated with modality too. They are 

毋 (or 無) wu and 勿 wu (Pulleyblank 1995: 107-108, 124), which are 
prohibitives.34

(28) 王無罪歲 孟子 Mencius (372-289 BCE)

wang wu zui sui.

King WU blame harvest

‘Let your Majesty not blame the harvest.’

(29) 百畝之田，勿奪其時 孟子 Mencius (372-289 BCE)

bai mu zhi tian,
hundred (measure) GEN field
wu duo qi shi.
WU deprive GEN time

‘Do not deprive the hundred mu fields of their times (of cultivation).’

3.3 Southern Min Negation

Southern Min has a rather systematic periphrastic system of affirmatives and negatives. There are four pairs of affirmatives and negatives: (a) e vs. be, (b) beh vs. m, (c) tioh vs. bian, and (d) u vs. bo. The five basic negatives are thus be, m, bian, bo, and additionally bue. Table 3.2 shows the systematic negative auxiliaries and their affirmative counterparts in Taiwanese Southern Min. Intriguingly, each negative morpheme above is marked for aspect or modality, and these negatives can also be used as interrogatives.

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34毋 and 無 are homophones in Mencius 孟子 (Pulleyblank 1995).
Table 3.2
The affirmative-negative pairs in Southern Min

<table>
<thead>
<tr>
<th>Affirmatives</th>
<th>Negatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>e 會 ‘will’; ‘able’</td>
<td>be 躍 ‘will not’; ‘unable’</td>
</tr>
<tr>
<td>beh 卜 ‘want’</td>
<td>m1 毋 ‘not-want’; m2: pure negator</td>
</tr>
<tr>
<td>tioh 著 ‘need’</td>
<td>bian 免 ‘need not’</td>
</tr>
<tr>
<td>u 有 ‘have’</td>
<td>bo 無 ‘not-have’</td>
</tr>
<tr>
<td></td>
<td>bue⁴⁷ 未 ‘not yet’</td>
</tr>
</tbody>
</table>

This section is not meant for a thorough investigation of Southern Min negation. To avoid repetition, I simply present the basic information here to prepare my reader for a much detailed exploration in chapters four through seven. Except for cases otherwise indicated, all examples below are Taiwanese Southern Min generated by me.

3.3.1 The Basics.

Scholars have noticed that Southern Min negatives encode modality and/or aspect. For instance, Crosland (1998: 260) lists five negatives with their distinctive functions, as in (30), based on his fieldwork investigation in Xiamen, China, where Southern Min is spoken.

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³⁵ Some studies transliterate boe as be; this is due to dialectal differences.

³⁶ I follow the most widely accepted Chinese characters for these Southern Min words. Other studies may use, 欲 for 卜, 唔 for 毋 and 勿會 for 躍.

³⁷ According to my fieldwork, bue can be pronounced as be in some sub-dialects, whereas in other sub-dialects, be ‘will not; cannot; unable’ is pronounced as bue. In other words, be and bue are free variations for some speakers.
Southern Min negatives\textsuperscript{38}

\begin{align*}
m & \text{ negative of volition } (m_1) \\
m & \text{ negative simplex } (m_2) \\
bo & \text{ negative possessive/existential/affirmative aspect} \\
bue & \text{ negative potential/possibility} \\
be & \text{ negative perfective aspect} \\
\end{align*}

Crosland suggests that except for $m_2$, which is devoid of any modality, the negative words have additional semantic properties. The negatives in (30) can also be found in Taiwanese Southern Min. I briefly comment on the use of each negative in Taiwanese Southern Min below.

### 3.3.2 The systematic pairs.

Below are examples with negatives occurring with activity verbs. All negatives are compatible with the verb \textit{senn-kiann} ‘give birth’.

\begin{align*}
(31) & \quad i \quad \text{be} \quad \text{senn-kiann.} \quad \text{(abilitive)} \\
& \quad 3sg \quad \text{can.not} \quad \text{give.birth} \\
& \quad \text{‘She is unable to reproduce.’} \\
(32) & \quad i \quad m \quad \text{senn-kiann.} \quad \text{(volitional)} \\
& \quad 3sg \quad \text{not.want} \quad \text{give.birth} \\
& \quad \text{‘She doesn’t want to have babies.’} \\
(33) & \quad i \quad \text{bian} \quad \text{senn-kiann.} \quad \text{(obligatory)} \\
& \quad 3sg \quad \text{need.not} \quad \text{give.birth} \\
& \quad \text{‘She is allowed not to give birth.’ (e.g. Her sister-in-law has children.’)} \\
(34) & \quad i \quad \text{bo} \quad \text{senn-kiann.} \quad \text{(habitual)} \\
& \quad 3sg \quad \text{not.have} \quad \text{give.birth} \\
& \quad \text{‘She doesn’t have children.’} \\
\end{align*}

\textsuperscript{38} I leave out his superscript numbers as tone markers. His negative potential vs. negative aspect are transcribed differently from those in Table 3.1, but it is not an issue, as explained in footnote 29.
Next, I show sentences with the same negatives but with stative verbs in (36) through (41). Stative verbs are adjectival. As shown, only the aspectual negatives 

*bo and *bue can occur with stative verbs; *be is restrictive with stative verbs. This shows that negative particles vary depending on the predicate.

(36) \[ i \text{ be} \text{ kuan} \] *(a). \[ 3sg \text{ BE tall PAR} \] ‘He won’t grow any taller.’

(37) \[ *i \text{ m}_1 \text{ kuan.} \] \[ 3sg \text{ M tall} \] Intended: ‘He doesn’t want to be tall.’

(38) \[ *i \text{ m}_2 \text{ kuan.} \] \[ 3sg \text{ M tall} \] Intended: ‘He is not tall.’

(39) \[ *i \text{ bian} \text{ kuan.} \] \[ 3sg \text{ BIAN tall} \] ‘He needs not be tall.’

(40) \[ i \text{ iau \ bue} \text{ kuan.} \] \[ 3sg \text{ yet not.yet tall} \] ‘He hasn’t yet grown taller’.

(41) \[ i \text{ bo} \text{ kuan.} \] \[ 3sg \text{ BO tall} \] ‘He is not tall.’
3.3.3 Other negatives.

**The two m’s.** The literature distinguishes between the two m’s in Southern Min (Crosland 1998, among others). The volitional m is conventionally labeled as \( m_1 \), whereas the other function of m is labeled as \( m_2 \). I provide examples in Taiwanese Southern Min.

(42) \( i \quad m_1 \quad khi \quad hak-hau. \) (volitional \( m_1 \))

3sg not.want go school

‘He didn’t/doesn’t want to go to school.’

(43) \( i \quad m_2 \quad si \quad khi \quad hak-hau. \) (pure negative \( m_2 \))

3sg NEG COP go school

‘It is not the case that he went to school.’

The latter negator, namely \( m_2 \), can only occur with a limited number of words, as listed in Table 3.3 (adopted from Crosland 1998: 261).\(^{39}\) Table 3.3 is not an exhaustive list, however.

In brief, an investigation reveals that these verbs comprise mostly psych verbs, stative adjectives and modals. I consider the choice of \( m_2 \) as connected to the stativity and (a)telicity in the verb. More details about the distinction between \( m_2 \) and \( m_2 \) is addressed in chapter six.

---

\(^{39}\) It seems problematic that the pure negator \( m-2 \) is so restricted in its verbal choice. Lin (2004) proposes that \( m-2 \) together with the above verbs are lexicalized as one unit, whereas \( m-1 \) and other negatives remain in the grammatical category. Lin uses “syntactic” instead of “grammatical.” What she meant by ‘syntactic category’ is that the other negatives are free morphemes.
Table 3.3
Words compatible with $m_2$

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td><em>si</em> 是</td>
<td>copula</td>
</tr>
<tr>
<td>b.</td>
<td><em>tsai-iann</em> 知影</td>
<td>‘to know something’</td>
</tr>
<tr>
<td>c.</td>
<td><em>kann</em> 敢</td>
<td>‘to dare to’</td>
</tr>
<tr>
<td>d.</td>
<td><em>tih</em> 指</td>
<td>‘to want something’</td>
</tr>
<tr>
<td>e.</td>
<td><em>thang</em> 通</td>
<td>‘to be permissible’</td>
</tr>
<tr>
<td>f.</td>
<td><em>salsio</em> 相+V</td>
<td>‘to mutually V’</td>
</tr>
<tr>
<td>g.</td>
<td><em>siong sin</em> 相信</td>
<td>‘to believe’</td>
</tr>
<tr>
<td>h.</td>
<td><em>ho</em> 好</td>
<td>‘to be good’ (m6 ho3 ‘to be sick’)</td>
</tr>
<tr>
<td>i.</td>
<td><em>kiann</em> 驚</td>
<td>‘to fear’</td>
</tr>
<tr>
<td>j.</td>
<td><em>tioh</em> 著</td>
<td>‘to be correct’</td>
</tr>
<tr>
<td>k.</td>
<td><em>bat</em> 撲</td>
<td>‘to know a person, a character, the way to a place’</td>
</tr>
<tr>
<td>l.</td>
<td><em>bat</em> 撲</td>
<td>experiential aspect</td>
</tr>
</tbody>
</table>

**Prohibitives.** Li (2007: 147) suggests three common prohibitives used in different dialects of Southern Min: *tai, mai,* and *mmo.* The second and third are more commonly heard in Taiwan. Sentences (44) and (45) show prohibitives; the sentences are mine.

(44)  li  mmo  kong-ue.

2sg  MMO  speak

‘Do not talk./Be quiet.’

(45)  li  mai  luan  kong-ue.

2sg  MAI  mess  speak

‘Do not make things up.’
Mmo is argued to be the fusion of m ‘not’ and hoo ‘good’, and mai, of m and ai ‘love; like’ (Wu 2009). This m is m2. Prohibitive is related to deontic, which topic I address in another subsection.

_Two readings._ In contemporary TSM, one can hear two pronunciations in the same morpheme: _literal vs. colloquial or wendu_ 文讀 vs. _baidu_ 白讀. In principle, the former pronunciation is used in official settings. This phenomenon is commonly found in non-Mandarin dialects. For example, the character 不 is read as put. _Put_ is considered to be the literal reading, as opposed to its colloquial counterpart _bo_. _Put_ is a loan from historical stratification (Lien 2005). Below I provide three examples with the use of put. (46) is from a popular song, and (47) is mostly likely to appear in a formal speech read in TSM. The last example (48) is a poetic line read in TSM. The choice of _put_ over _bo_ is stylistic.

(46) 不見中秋又逢冬

\[ \text{put kian tiong-tshu u hong tang} \]

NEG see mid-Autumn again encounter winter

‘(I) did not see mid-Autumn (reunion) and now it is winter again.’

(47) 不知不覺

\[ \text{put tih put kap} \]

NEG know NEG feel

‘without noticing’

(48) 春眠不覺曉

\[ \text{tsun bian put kat hiau} \]

spring sleep NEG feel dawn

‘I slept so well, without noticing spring dawn.’

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40 A line taken from a Taiwanese popular song _雪中紅_ suat tiong ang.
3.3.5 Negation and Modality.

Previous studies on Southern Min have either focused on negative or affirmative modals/modal expressions, thus separating negation from modality in their discussions.\footnote{1} This study incorporates these two topics. As stated, there are five basic negatives in Southern Min: \textit{be}, \textit{m}, \textit{bian}, \textit{bo} and \textit{bue}, the first three of which are used as negative modals. The last two negatives are aspectual.

The negation of Southern Min modal verbs is rather complex. There are two ways of looking at Southern Min negation. For one, Southern Min modal verbs can be seen as negative auxiliaries. For instance, the volitional \textit{m}_2 ‘not want’ plays a dual role as negation and modality. I call this a dual-function morpheme.

The other way is to consider the pure negative \textit{m}_1 to be the invariant negative particle (like English \textit{not}) from which the other negative forms are derived (Teng 1992; Tang 1994; among others). Below are examples:

\begin{align}
(49) & \quad \text{bo ‘not.have’} = m_2 + \text{affirmative } u \ ‘have’ \\
(50) & \quad \text{be ‘cannot; will.not’} = m_2 + \text{affirmative } be \ ‘can; will’ \\
(51) & \quad \text{the volitional } m_1 ‘\text{not.want’} = m_2 + \text{affirmative } \text{BEH ‘want’}^{42}
\end{align}

In other words, the other negative modals are phonetic fusion of \textit{m} plus their affirmative counterparts (Lin 2004: 115-116). I name this the fusion

\footnote{1} Scholars who have worked on Southern Min modal verbs or modality include, but are not limited to, Zhang (1999), Hsin (1999), and Lien (2008). I would also like to refer my reader to Yu (2007) for a comparison of modal verbs of Mandarin and Southern Min, and Cheng (2003) for a comparison of Mandarin, Southern Min and Hakka.

\footnote{42} \textit{Beh ‘want’} is the affirmative counterpart of the volitional \textit{m}. Lin (2004: 115) argues that there is a phonetically unpronounced BEH. Therefore, the formula \textit{m} = \textit{m} + \text{BEH} is applicable to \textit{m} as well.
hypothesis. This approach sees SM negatives as particles. This analysis sounds appealing; however, it is not perfect. How do we account for the two negatives that are left out, namely *bian ‘not need’ and *bue ‘not yet’, for their morphology or phonology does not look like *m plus their affirmative counterparts? Despite the fact that *bian and *bue both share bilabial features with *m, they do not use the same system, as in (52) and (53). I will show in chapters four through seven that different strategies are used in expressing negation.

(52) *bian ‘need.not’ = m₂ + affirmative *tioh ‘need’
(53) *bue ‘not.yet’ = m₂ + affirmative ? ‘yet’

To conclude, either the dual-function morphology or the fusion hypothesis points to the fact that these negative modals belong to functional categories.

3.4 Aspect and Modality

As stated previously, Southern Min negation is associated with aspect or modality. It is therefore necessary to address this issue in more detail.

Traditionally, tense, aspect and modality are treated together as one major system called TAM. Some scholars use TAME, with E standing for evidential; many however consider evidential to be the same as evidentials are often expressed by means of modals. The term tense-aspect-modality (TAM) is recorded in Givón (1984; 1990). It has been widely used to refer to the above three categories.

43 The ? morpheme may be zero marking or a, which is represented as 矛 and is believed to be inchoative.
Palmer (2003: 5) defines tense as “time of the event or situation referred to”, aspect as “the nature of the event or situation”, and modality as “the status of the proposition that describes the event or situation.” These three systems are highly related in that they are all associated with the verb in a sentence.

Tense is not addressed here, as Chinese is often considered a non-tensed language. Aspect is discussed in chapter seven. What follows is a discussion of modal expressions in typology, followed by the classification of modality.

3.4.1 The typology of modality.

De Haan (2006: 27-69) proposes eight different ways to mark modality, one of which is by modal auxiliary verbs such as in (54) and (55).

(54) John may go to school.
(55) John must go to school.

The second type is by mood. I skip the other means of marking modality as they are less relevant to my research. De Haan defines mood as the grammaticalized expression of modality. Although there is no consensus among linguists about the distinction of mood, the indicative-subjunctive distinction is commonly accepted. The Latin example below is cited in de Haan from Palmer (2001: 133). As seen in (56), the main verb in the matrix clause is marked for the indicative mood, whereas the verb in the subordinate clause is marked for the subjunctive mood.

(56) time-o ne laborem auge-am.
    fear-1sg.IND.PRES  COMP work.ACC  increase-1sg.SUBJ.PRES
    ‘I am afraid that I shall increase my work.’

76
Languages use different devices to express modality. For instance, English makes use of grammatical auxiliaries as well as lexical items, such as adverbs, adjectives, and main verbs (Nuyts 2005: 15). Table 3.4 shows the relations between categories and modality types, which I summarize from Nuyts (2005: 15) and Portner (2007: 154).

Table 3.4
Modality expressed by lexical items

<table>
<thead>
<tr>
<th></th>
<th>dynamic</th>
<th>deontic</th>
<th>epistemic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>adverb</strong></td>
<td>possibly;</td>
<td>(had) better;</td>
<td>maybe; certainly</td>
</tr>
<tr>
<td></td>
<td>necessarily</td>
<td>unfortunately</td>
<td></td>
</tr>
<tr>
<td><strong>predicative</strong></td>
<td><strong>be able</strong></td>
<td>be compulsory;</td>
<td>be probable; be</td>
</tr>
<tr>
<td>adjective</td>
<td></td>
<td>be advisable</td>
<td>certain</td>
</tr>
<tr>
<td><strong>main verb</strong></td>
<td>hope; deplore</td>
<td>require</td>
<td>think; believe</td>
</tr>
<tr>
<td><strong>noun</strong></td>
<td>possibility</td>
<td>necessity</td>
<td>possibility</td>
</tr>
</tbody>
</table>

Take English epistemic modality as an example. We shall see the following possible categories: modal verbs (*may, could*), adverbs (*maybe, surely*), adjectives (*probable, certain*), and full verbs (*think, believe*) (Nuyts 2006: 13). I show English auxiliaries in the next subsection.

3.4.2 Classifications of modality.

I discuss several proposals on modality classifications and explain what I adopt. The classification of modality is extremely complex. As described by Nuyts, “there is no unanimity regarding what the list of participating categories should look like” and also “no unanimity about each of the [categories] should be
characterized in detail” (Nuyts 2005: 7). Even the same author uses modality in various ways. For instance, Palmer (1974: 100-103) and Palmer (1990: 36) hold different views on the classification of modality, as shown in Table 3.5. In Table 3.5, epistemic, deontic and dynamic are the three major modal subsystems in Palmer’s (1990) system.\(^{44}\)

**Table 3.5**

Palmer’s classification of modality

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td>epistemic</td>
</tr>
<tr>
<td>discourse-oriented</td>
<td>deontic</td>
</tr>
<tr>
<td>subject-oriented</td>
<td>dynamic</td>
</tr>
<tr>
<td></td>
<td>opinions of the speaker</td>
</tr>
<tr>
<td></td>
<td>attitudes of the speaker</td>
</tr>
<tr>
<td></td>
<td>the ability or volition of the subject</td>
</tr>
</tbody>
</table>

However, Palmer (2001) further distinguishes *event* modality from *propositional* modality. These two newly introduced categories correspond to the above three types of modality (epistemic, deontic and dynamic), plus evidential, in the following way.

\[(57) \quad \text{event modality} = \text{deontic} + \text{dynamic} \]
\[(58) \quad \text{propositional modality} = \text{epistemic} + \text{evidential} \]

In other words, deontic and dynamic modality is for events, whereas epistemic or evidential is related propositions.

This event versus proposition distinction has its advantages. Event modality is part of the VP with arguments and theta-roles involved, whereas propositional modality simply denotes modality outside of the VP. Below are

\(^{44}\) von Wright (1951: 1-2)
explanations and examples of each subtype (epistemic, deontic and dynamic) modality.

**Epistemic modality.** Epistemic indicates “the estimation [and] chances that the state of affairs applies to the world” (Nuyts 2006: 6). Below are two such examples. *Will* in (59) is a modal verb, whereas *maybe* in (60) is an adverb.

(59)  *Someone is knocking at the door. That will be John.*

(60)  *This manuscript is damned hard to read. Maybe some more light can help.*

Palmer’s (2001: 8) working definition for epistemic modality is “speakers express their judgment about the factual status of the proposition.”

(61)  *Kate may be home now.*

(62)  *Kate must be home now.*

Both *may* and *must* in (61) and (62) are modal verbs. The former expresses possibility and the latter necessity. The speaker’s judgment of the proposition “that Kate is at home” is made clearer through the logical forms as in (61)’ and (62)’ (Palmer 2001: 7).

(61)’  *It is possible/possibly the case that Kate is at home now.*

(62)’  *It is necessarily the case that Kate is at home now.*

**Deontic modality.** Deontic modality denotes “the degree of moral desirability of the state of affairs expressed in the utterance, typically, on behalf of the speaker” (Nuyts 2006: 4-5). This subsystem thus covers what Kratzer (1978: 111) and Palmer (1986: 96-97) list as permission and obligation. Examples are shown in (63) through (65) (Nuyts 2006: 4-5); boldface and parentheses are mine.
(63) We **should** be thankful for what he has done for us, so we **must** find a way to show our gratitude to him. (obligation)

(64) You **may** come in now. (permission)

(65) I **demand** that you come in immediately. (obligation)

As seen, the instances above make use of modal verbs to express modality; yet, one could see the speech act verb ‘demand’ in (65) expresses modality. So, modality is a broader term than modal verbs.

The following two sets of examples from Palmer (2001) provide a contrast to sentences (61) and (62), which are epistemic.

(66) Kate **may** come in now. (permission)

(66’) **It is possible** for Kate to come in now.

(67) Kate **must** come in now. (obligation)

(67’) **It is necessary** for Kate to come in now.

According to Palmer, (66) and (67) expresses “the speaker’s attitude toward a potential future event, *that of Kate coming in*” (2001: 7). (66) is to show permission, while obligation is expressed through the modal **must**. As seen in (66’) and (67’), the complementizer is **for** instead of **that** as in (61) and (62).

This distinction in syntax is connected to the deonticity in the speaker over the event. The CP with **for** as its C is infinitive, which is tighter in relationship with the embedded event ‘Kate comes in’. The same is in the deontic verb ‘want’, which has an infinitival CP as a complement. Thus, the subject in the matrix clause can have influence over the event in the embedded clause. In comparison, the epistemic verb **think** has a looser relationship with its complement.
I wanted [for him to leave.]
*I think for him to leave.

Two other terms are often used in the literature: directive and commissive. For Palmer, deontic modality covers both directives and commissives (2001: 70-71). These two concepts are overlapping. By definition, directives are expressions/words by which “we try to get others to do things” (Searle 1983: 166). Some uses “the morally good possible worlds” to refer to the deontic must (Potner 2007: 154). Directives includes both Permissive and Obligative.


John shall have the book tomorrow.
You shall do as you are told.

Dynamic modality. Dynamic modality is “an ascription of a capacity to the subject-participant of the clause” (Nuyts 2006: 3). Terminology varies greatly among scholars. For the same system, Goossens (1985) uses the term facultative modality and Hengeveld (1988) names it as inherent modality. See (72) as an example where adjective able is used to indicate dynamic modality.

Pete is perfectly able to solve this problem if he wants to.

Palmer (2001: 10) classifies dynamic modality as the conditional factors being “internal” to the relevant individual, as opposed to being “external” for deontic modality. Thus, he also includes volitional into dynamic modality. His examples are (73) and (74). I will show later a different classification by van der Auwera and Plungian (1998).
(73) *John can* speak English. (abilitive)
(74) *John will* do it for you. (volitive)

A quick comparison of these three types of modality can be captured in

(75) *He can’t* be in his office now. (epistemic)
(76) *He can go* now. (deontic: I give permission)
(77) *He can run a mile in five minutes.* (dynamic: he has the ability)
(78) *He can escape.* (dynamic: the door’s not locked)

Note that some authors distinguished (77) from (78) using participant-
internal versus -external (cf. van der Auwara and Plungian 1998).

I have discussed the three-way distinction of modality, mainly adapting
Palmer (2001): epistemic, deontic and dynamic. Other terms, such as *root modality* and *volition/intention*, have also been used in the literature regarding
modality. As pointed out by Nuyts (2006: 7), researchers such as Hofmann (1976)
and Coates (1983) use root modality to cover both deontic and dynamic modality,
as opposed to epistemic.

Palmer (1986) regards volition and intention as a subcategory of deontic,
whereas in Palmer (2001) it is under the category of dynamic modality, as have
seen in (77) above. Sentences (79) and (80) are from Nuyts (2006: 9).

(79) *I want you to tell the truth.* (volition)
(80) *I promise I will never lie to you again.* (intention)
I summarize the nine central English modals in Table 3.5. Examples are from Depraetere and Reed (2006) and Li (2003). The semi-modals such as *have to*, *ought to* or *need* are left out however.

Table 3.6
English modal verbs and their modality

<table>
<thead>
<tr>
<th>modals</th>
<th>examples</th>
</tr>
</thead>
</table>
| *can*  | (a) They say Bill *can* cook better than his wife. (ability; p48)  
(b) *Can* they be serious? (uncertainty; p44)  
(c) Even though this is my rock you *can* use it sometimes. (permission; p55) |
| *could* | (d) *Could* you please make less noise? (ability; p49)  
(e) There *could* be something wrong with the light switch. (uncertainty; p44)  
(f) You *could* answer these letters for me. (permission; p56) |
| *may*  | (g) You *may* be right. (uncertainty; p43)  
(h) You *may* borrow my bicycle if you wish. (permission; p53) |
| *might* | (i) Of course, I *might* be wrong. (uncertainty; p43)  
(j) You *might* try nagging the Abbey National again. (permission; p54) |
| *will*  | (k) John *will* be in his office now. (probability; p47)  
(l) Why won’t anyone believe them (volition) & & |
| *would* | (m) I think it *would* be Turner as well. (probability; p47)  
(n) *Would* you get the Fairground Attraction album (on CD) for me? & & |
| *shall* | (o) We shall be away on holiday for a fortnight from Wednesday 29 August. (epistemic) & &  
(p) You *shall* do exactly as I say. (permission; p61) |
| *should* | (q) The letter *should* be in the mail. (probability; p46)  
(r) Did you know that smiling might make you feel better? Read our article on why you *should* smile to find out even more interesting facts! (root necessity) & & |

---

45 Page numbers from Li (2003) are shown after the category of each example sentence, indicating as “p48,” for example.

46 Examples taken from Depraetere and Reed (2006: 276-277) are marked as & &.
(s) The floor **should** be washed at least once a week. (obligation; p62)

| must | (t) *The Smiths* **must** have a lot of money. (epistemic probability; p45) |
| | (u) *To be healthy, a plant* **must** receive a good supply of both sunshine and moisture. (need; p51) |
| | (v) *You** **must** be back by ten o’clock. (obligation; p58) |

With regards to modal classifications, van der Auwera and Plungian (1998) hold a different view. Like most scholars, they differentiate **possibility** from **necessity**; they however leave out volition. Under each of the categories, they further distinguish participant-internal modality from participant-external modality.

By their definition, the former refers to “a kind of possibility or necessity **internal** to a participant engaged in the state of affairs” and the latter to “circumstances that are **external** to the participant … engaged in the state of affairs and that make this state of affairs either possible or necessity” (van der Auwera and Plungian 1998: 80; boldface is mine). Examples below are from them. 47

(81) *Boris can* get by with sleeping five hours a night. (possibility; internal)
(82) *Boris needs* to sleep ten hours every night for him to function properly. (necessity; internal)
(83) *To get to the station, you can take bus 66.* (possibility; external)
(84) *To get to the station, you have to take bus 66.* (necessity; external)

Below is a set of examples showing that the English modal verb **may** can be used in four different categories (van der Auwera and Plungian 1998: 90).

(85) *She deals with it as best she may.* [participant-internal]
(86) *To get to the station, you may take bus 66.* [participant-external]

47 (83) and (84) are participant-external modal verbs but non-deontic.
(87) *John may leave now.* [deontic]
(88) *John may have arrived.* [epistemic]

I found their classification system easier to follow. I will adopt theirs when discussing Southern Min modals. Putting together their examples, Table 3.7, adapted from Li (2003: 64), provides a clearer view on the two-way distinction.

The highlighted modals are used relatively more frequently in a particular category.

Table 3.7

<table>
<thead>
<tr>
<th></th>
<th>possibility</th>
<th>necessity</th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td><em>may; can</em></td>
<td><em>must; should; will;</em></td>
</tr>
<tr>
<td>Participant-internal</td>
<td><em>can</em></td>
<td><em>need (to);</em></td>
</tr>
<tr>
<td>Participant-external</td>
<td><em>can; may</em></td>
<td><em>have to; must,</em></td>
</tr>
<tr>
<td>(non-deontic)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deontic</td>
<td><em>may</em></td>
<td><em>must; should; shall; ought to</em></td>
</tr>
</tbody>
</table>

bold: prominent markers; non-bold: often used, but not prominent markers

### 3.4.3 Mood.

Finally, we turn to the last category—mood. There are various definitions for mood as well (Nuyts 2006: 8). Some researchers classify mood based on the utterance types, such as declarative, interrogative, imperative, and the like. Others prefer the *realis* vs. *irrealis* distinction or the indicative vs. subjunctive distinction. Still others such as de Haan (2006) consider mood to be a grammatical device to express modality. I side with him.
How does modality interact with mood? Modal verbs are used in declaratives, negation, and interrogatives, which are moods. In Southern Min, negation and modality can be fused into one morpheme, and the necessity modal verbs can be used as imperatives or prohibitives. Also in this language, modality is connected to questions by means of a affirmative-negative matching, which will become clearer in the chapters where modal negatives are discussed.

3.4.4 Aspect.

This subsection addresses different ways of expressing aspect, particularly perfectivity and anterior aspect. Related concepts such as completive and resultative are also introduced here. Chapter seven provides a more thorough discussion of Sinitic aspectual negation.

*Perfective* is defined as a temporally bounded event, as opposed to *imperfective* (Whaley 1997: 210). English makes use of simple past tense to indicate perfectivity of an event. In contrast to perfective, the progressive in English is used to “make reference to the internal temporal structure of an event” (Whaley 1997: 210).

(89)  *I ate.*   (perfective)
(90)  *I am eating.*  (imperfective)

*Anterior aspect* is also known as *perfect*. The terminology, perfect versus perfective, is rather confusing; therefore, anterior aspect is often used. Whaley refers anterior aspect to aspect “signal[ing] a past event that has enduring relevance to a set of reference time” (1997: 211). Below is an example.

(91)  *I have already done the dishes, so now I don’t have to.*
The lexical verb ‘to have’ expresses possession and existence, and it also serves as a grammatical means to mark aspect cross-linguistically. For anterior aspect, English uses ‘have’ together with a past participle, the latter marked as $V_{pp}$. Tense is shown in the auxiliary ‘have’, as in (93).

(92)  

\[
\text{have + } V_{pp} \quad \text{(English anterior aspect)}
\]

(93)  

\textit{By the time John came, I had cleaned the entire house.}

The verbal have is not the only source for anterior, Bybee et al. (1994: 105) propose three lexical sources for anterior aspect. I explain each and relate it to Chinese.48

(94)  

\textquote[be/have]{resultative} > anterior ( > perfective/past tense)

(95)  

\textquote[finish]{completive} > anterior ( > perfective/past tense)

Resultatives show “a state that exists as a result of a past action” (Bybee et al. 1994: 54), and are thus compatible with telic verbs.

The concept of resultative is diachronically based. Traugott (1972) provides evidence for the reanalysis of the OE habb- ‘have; take; get’ into a resultative. The categorial status of the $V_{pp}$ initially in OE is adjectival. Thus, the syntactic boundary should look like (96).

(96)  

\[
\text{have + } [V_{pp} + \text{NP}] \quad \text{Old English}
\]

Conceptually, if one has/possesses something or if something exists, that concept can easily become resultative. Anterior aspect comes about when the

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48 A third type lexical source is ‘come’, but I’ll ignore it here as I don’t find it applicable to the Chinese language.
structure is reanalyzed from (96) to (97), where $V_{pp}$ is no longer a modifier of the nominal phrase.

(97)  [have-$V_{pp}$ + NP]

Resultative can be further grammaticalized into anterior. According to Bybee et al. (1994: 65), resultative focus on “the state resulting from the action” and anterior on “the action itself.” The two concepts can be captured from (98) and (99), respectively.

(98)  *He pushed the door open.* (resultative)

(99)  *He has pushed open the door.* (anterior)

Next, Bybee et al. define completive as “to do something thoroughly and to completion” and their examples are “to shoot someone dead” or “to eat up” (1994: 54). English makes use of lexical verbs like ‘finish’ as its source of *completive*. The *completive* aspect can be observed in (100), where a lexical verb ‘finish’ participates, together with the non-finiteness in the main verb ‘read’.

(100)  *I finished reading…* (Whaley 1997: 213).

Bybee et al. also suggest that completive often has dynamic verbs as their sources and that typical lexical sources are ‘finish’ and ‘to be finished, ready, complete’. They point out the Cantonese auxiliary *yun* ‘finish’ signaling the completion of an action (Bybee et al. 1994: 60). The Mandarin equivalent to *yun* is *wan* 完, as in (101).

(101)  fan   chi-*wan* le.  MSC
rice     eat-finish   LE
‘I ate up/finished the rice.’
Verbs of direction are possible for completive too; see (102) where qi-lai provides telicity to the psych verb xiang ‘think’.

(102) wo xiang-qi-lai le. MSC
1sg think-up.come LE
‘I remembered (now).’

Compleitive can turn into anterior. Bybee et al. (1994: 64, 70) analyze ‘pass by’ and ‘finish’ as the sources to convey anterior in Chinese. I have addressed the grammaticalization of liao 了 from ‘to finish’ into the aspect marker –le in chapter two. I provide two examples below, one of Southern Min and the other of Mandarin.

(103) gua png tsiah liao thiah khi. TSM
1sg rice eat finish then go
‘I will take off after I have finished the meal.’

(104) wo fan chi-le zai qu. MSC
1sg rice eat-LE then go
‘I will take off after I have finished the meal.’

Li, Thompson and Thompson (1982) relate Mandarin sentence-final particle le to a perfective from anterior aspect. The authors believe that liao ‘finish’ first developed into anterior before its use of current relevance of state (often abbreviated as CRS) at the sentence-final position sentence. I show two different le’s in (105) and (106).

---

49 The marker le here indicates a change of state. Its transcription varies from one scholar to another. I simply mark it as LE. Qi-lai 起來 can be read as inceptive ‘beginning to...’.

50 There are other words in Middle Chinese that express ‘to complete, to finish’,
(105) wo gaosu le ta. (perfective)
   3sg tell PFV 3sg
   ‘I told him.’

(106) wo gaosu ta le. (anterior)
   1sg tell 3sg CRS.
   ‘I have told him.’

Another source of anterior from completives suggested by Bybee et al.
(1994: 64) is ‘to pass by’ in Cantonese, however, with no examples provided. Its
equivalent in Mandarin is the experiential marker –guo 過. Before guo came into
existence, ceng 曾 ‘once’ was largely used (Shi and Li 2004).

(107) ta qu-guo Shanghai. (anterior)
   3sg go-EXP Shanghai
   ‘He has been to Shanghai.’

(108) ta ceng qu Shanghai. (anterior)
   3sg once go Shanghai
   ‘He has been to Shanghai.’

   Likewise, Southern Min uses a preverbal marker bat 識, often with –kue
   ‘pass by’. Guo or kai in these examples show a reanalysis from V to ASP.

(109) ta bat khi-kue Siong-hai. TSM
   1sg ever go-EXP Shanghai
   ‘He has been to Shanghai.’

such as yi 已 (cf. Sun 1996: 86). The final particle le in Mandarin has a different
counterpart in Southern Min, for which a is used. The TSM counterpart
sentence is given below.

gua kah i kong a.
1sg with 3sg tell CRS
‘I have told him.’
The difference between resultative and completive is conceptualized below, based on Bybee et al. (1994).

(110) Sources of resultative and completive

Stative verbs: ‘be/have’ > resultative
    > anterior/perfect > perfective
Dynamic verbs: ‘finish, pass by’ > completive

Completion can be expressed by means of lexical and grammatical words across languages. Chinese makes use of both resultative and completive, while English adopts the former method.

Mandarin has fairly abundant lexical sources for resultatives or completives, many of which are becoming more dependent on the main verb, on the way to become grammatical markers. For instance, in (111), kai is the resulting state of the action tui ‘to push’. Kai can be a verb too, as in (112).

(111) men tui kai le. MSC
door push open LE
‘The door was pushed open.’
(112) qu kai men! MSC
go open door
‘Go get the door.’

Verbs as such are called phase markers by Chinese scholars. The markers are largely from unaccusative verbs. Carrying some lexical meanings, the phase markers such as luo ‘fall’ in (113) and hao in (114) are between full-fledged verbs and grammatical markers.

51 Phase markers indicate verbal inner aspect or lexical aspect, equivalent to Aktionsart. See Li and Thompson (1981: 65-66) and Sun (2006: 54).
(113) shuye diao luo le man-di. MSC
leave drop fall LE entire-floor
‘The leaves fell all over on the ground.’

(114) wo zuoye xie hao le. MSC
1sg homework write good LE
‘I am done with my homework.’

3.5 Conclusion

This chapter covers typological negation and the negation system of Southern Min. Modality and aspect are also discussed because Southern Min negatives are also modals or aspectual markers.

The following four chapters discuss Southern Min negation, in random order, beginning with the abilitive e/be pair in Chapter Four, the volitional beh/m pair in Chapter Five, the necessity pair tioh/bian in Chapter Six, and the two aspectual negatives (bo and buê) in Chapter Seven. Terminology introduced in this chapter will be revisited.
Chapter 4

THE ABILITIVE MODALS E AND BE

The primary focus of this chapter is the grammaticalization of e and be in Southern Min. I argue that the original verb e/be has become grammaticalized into a modal verb, being used to express dynamic ability, deontic possibility and epistemic probability. This phenomenon is also found in much evidence cross-linguistically, such as in English can. I account for this type of language change using the minimalist approach. Also addressed are Hakka and Mandarin data.

4.1 Introduction

The negative morpheme be has been argued to be the fusion of the negative m ‘not’ and its positive counterpart e (Li 2007: 146; Lien 2008: 2). Different Chinese characters have been given to be. Whereas Lien uses 袋 as a representation for bel/boe, Li uses bel/bue 勿, which character combines the negative 勿 with the modal 會 ‘can; will’.

This chapter is organized as follows: I discuss the synchronic status of el/be in section 4.2, followed by its diachrony in section 4.3. I account for the grammaticalization of el/be in section 4.4, using Minimalist Economy Principles. This chapter closes with a typological comparison.

Chapters four through six are organized in a similar fashion, given that three Southern Min modal pairs are discussed: abilitive e/be in this chapter, volitional beh/m in chapter five, and necessitive tioh/bian in chapter six. Modal paradigms are investigated in addition to corpus analyses in these chapters. The other two aspectual negatives: u/bo ‘have/not.have’ and bue ‘not.yet’ are placed
together in chapter seven, where Southern Min negation paradigms are reviewed to prepare the reader for chapter eight on the reanalysis of negatives as interrogatives.

In these chapters, I make use of the Southern Min story series (Hu 1992-2007) for contemporary Taiwanese Southern Min (TSM) data, most of which include Chinese characters. Wherever necessary, I add examples from my personal knowledge and also consult other speakers. My examples are presented without characters to distinguish from those from the corpus.

4.2 Synchrony of \textit{e/be}

Although previous research on the affirmative \textit{e} has been fruitful (cf. Huang 2007), there is no corpus analysis of \textit{be}. I examine the occurrence of \textit{be}, \textit{be-hiau}, \textit{be-sai}, \textit{be-tang}, and \textit{be-ing}, and compare my findings with those of \textit{e}.

Table 4.1 shows the categorical status of the negative \textit{be} in modern TSM. The table reveals that \textit{be} is typically not a verb. The abilitive \textit{be-hiau} is both a verb and a modal. The permissive \textit{be-sai, be-tang}, and \textit{be-ing} are modals without lexical verb counterparts. All are used as negatives, but the category of interrogative only applies to \textit{be}. I discuss each immediately following.

Table 4.1
Categorial status of \textit{be}

<table>
<thead>
<tr>
<th></th>
<th>verb</th>
<th>TAM</th>
<th>NEG</th>
<th>QM</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{be}</td>
<td>(✓)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>\textit{be-hiau}</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>\textit{be-sai; be-tang; be-ing}</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.2.1 e/be as a verb.

Yang (2001) provides examples where e (the affirmative counterpart of be) serves as a verb, as shown in (1). Yang claims that this usage can be found in the Quan sub-dialect of Min.

(1) 伊解英文。 (Yang 2001: 286)
  
    i  e  ing-bun.
    3sg  can  English
    ‘He understands English’.

However, neither e or be is treated as a full-fledged verb in the TSM corpus I used. Thus, (2) is considered ungrammatical.

(2) *i  e/be  ing-bun.
  3sg  can/cannot  English
  Int.: ‘He (does not) understand(s) English’.

Li (2007) also does not list be as a lexical verb. Additionally, Lien (2008) found no single verbal instance of be from a large-scale TSM corpus. 52 My analysis on be is also consistent with theirs.

This change in e from a lexical verb to a modal follows the pattern of English can. The results are not exactly the same, however. For instance, a doubling can be observed to be accompanied with e, such as e-hiau. This doubling hiau 晓, meaning ‘to know; to understand’, is a near synonym of e.

The new disyllabic e-hiau yields the meaning, ‘to comprehend’, and is used as a verb in (3) and (4).

52 Li’s research is based on his fieldwork on Southern Min in Fujian, China, whereas Lien analyzes modern TSM corpora.
(3) i e-hiau/ be-hiau ing-bun.
3sg can-know/ can’t-know English
‘He (does not) understand(s) English’.

(4) 這我袂曉，你去叫別人。

tsit  gua  be-hiau,
this 1sg  not.know
  li  khi  kio  pat  lang.
  2sg  go  ask  other  person
‘As for this, I know nothing about it; go and ask someone else.’

Be-hiau in (5) is an adjectival stative verb.

(5) 較憨較袂曉。

khah  gong  khah  be-hiau.
more  stupid  more  incapable
‘(someone) is less smart and less capable.’

4.2.2 e/be as a modal.

As shown below, e receives three modal interpretations: dynamic, deontic and epistemic.\(^{53}\)

<table>
<thead>
<tr>
<th>Usage</th>
<th>category</th>
<th>notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>e(-hiau)</td>
<td>dynamic modal</td>
<td>The form e-hiau is less ambiguous and thus preferred over the monosyllabic e.</td>
</tr>
<tr>
<td>e-sai; e-tang; e-ing</td>
<td>deontic modal (permissive)</td>
<td>The double modal combination of e-sai/e-tang/e-ing does not have a lexical counterpart in verbs.</td>
</tr>
<tr>
<td>e</td>
<td>epistemic modal</td>
<td>When used in a declarative sentence, e can be ambiguous between dynamic or epistemic use.</td>
</tr>
</tbody>
</table>

\(^{53}\) Lien (2008) classifies the three types of modality of be, which correspond well to those of Tsao (1993) on e: dynamic, deontic and epistemic, respectively. I follow these scholars’ classification.
1. *e/be as dynamic ability*. The first category is the dynamic *elbe*. Both *e* and *e-hiau* are dynamic modals. When used alone, *e* can be a dynamic/abilitive modal.

(6) i e kiann a.  
3sg able walk PAR  
‘He can walk (now).’

In addition to its lexical verbal usage in (3), *e-hiau* can be used as a modal, as in (7). The instances in (6) and (7) could be used in cases where one re-gains his capability. For instance, this person may have temporarily lost the capability of walking due to an accident, but it could also be a newly learned ability of ‘walking’.

(7) i e-hiau kiann a.  
3sg able walk PAR  
‘He can walk (now).’

The two modals, *e* and *e-hiau*, are not always interchangeable. For instance, (8) and (9) have distinct meanings: *e* is epistemic, but *e-hiau* is abilitive.54

(8) i e khui tshia lai. (epistemic)  
3sg FUR drive car come  
‘He will drive (to get here).’

(9) i e-hiau khui tshia. (dynamic)  
3sg able drive car  
‘He knows how to drive a car.’

In brief, *e* is ambiguous as shown above, between prediction and abilitive, whereas *e-hiau* only denotes the abilitive reading. This shows grammaticalization, 

---

54 I will discuss later in this chapter that the shared morpheme *e* does not mean the same as English epistemic *can*.  
97
as a reanalyzed word e-hiau has clearer semantic features than its origin e whose semantics has bleached.

Both pre-verbal and pre-resultative positions are possible for be-hiau.

(10) 含老師這都快解說啦
ham lau-su tsit long be-hiau kai-sue la
even teacher this FOC not.able explain PAR
‘This, even the teacher is not able to explain it.’

(11) 學慣學快暈
oh ma oh be-hiau.
learn and learn not.able
‘(Someone) is unable to learn.’

Like e, the negative be also can be epistemic or abilitive. Below are examples of the negative be.

(12) 毋過緊煞快緊
m-ko ai kin suah be kin
but need fast then not.able fast
‘But (they) have to move fast but they were unable to.’

(13) 煞快記得來煮這個中晝飯啦
sua be ki-tit lai tsu
then not.able remember come cook
tsit e tiong-tau-png la
this CL middle-day-meal PAR
‘(They) then forgot to make lunch.’ (unable to remember)
Examples (14) and (15) are instances where be negates the resulative of the main verb. Interestingly, be in this position is almost always abilitive. Unlike the preverbal elbe, there is less ambiguity (16).

(14) 想快出這個答案
    siunn be tshut tsit e tap-an
    think not.able out this CL answer
    ‘(someone) cannot think of this answer.’

(15) 連三頓飯亦食快飽
    lian sann tng png ia tsiah be pa
    FOC three meal rice also eat not.able full
    ‘(The cat) can’t even have enough food to eat.’

(16) *siunn be tshut tsit e tap-an
    think not.able out this CL answer
    Int. ‘(someone) will not think of this answer.’

2. e/be as deontic necessity. The second category of elbe is deontic. The monosyllabic e/be cannot indicate permission; it needs another morpheme.

There are three reanalyzed deontic variations: e-sai, e-tang, or e-ing, as in (17).

(17) li e-sai/e-tang/e-ing tsiah a.
    3sg can eat PAR
    ‘You can/may eat now.’ (permission)

---

55 This construction is sometimes called post-verbal negation although the term is rather confusing.

56 Be in (14) and (15) can be read as pure negation too.
The three renewals all indicate permission as their original meanings. For instance, *sai* 使 meant ‘to demand; to cause’, *thang* 通 meant ‘to pass through’, and *ing* 用 meant ‘to designate; to use’. These are now bound morphemes.

Despite the fact that the three modals in (17) can all be used as deontic, speakers of TSM prefer one over another. Huang’s (2007) corpus analysis points to an interesting fact that *e-tang* (about 500 tokens) figures more prominently than the other two, namely *e-sai* and *e-ing* (approximately 200 tokens for each).

My corpus analysis of *be* shows both similarities and differences, compared to Huang’s; see (18) and (19) as examples. However, the preference finding is different from Huang’s: *be-sai* outnumbers the other two negative modals.

(18) 我無生你就卜共我娶細姨哦？彼袂當！

<table>
<thead>
<tr>
<th>gua</th>
<th>bo</th>
<th>senn</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>NEG</td>
<td>birth</td>
</tr>
<tr>
<td>li</td>
<td>tioh</td>
<td>beh</td>
</tr>
<tr>
<td>2sg</td>
<td>then</td>
<td>want</td>
</tr>
<tr>
<td>he</td>
<td>be-tang!</td>
<td></td>
</tr>
</tbody>
</table>

‘Because I can’t give birth, you then want to get concubines. That is not allowed!’

(19) 快用得心急啦

<table>
<thead>
<tr>
<th>be-ing-tit</th>
<th>sim</th>
<th>kip</th>
<th>la</th>
</tr>
</thead>
<tbody>
<tr>
<td>can.not</td>
<td>heart</td>
<td>anxious</td>
<td>PAR</td>
</tr>
</tbody>
</table>

‘(One) cannot be impatient.’

---

57 Lien (1997) analyzes *e-tang* as a fusion from *e-thang-tit* 會通得, literally ‘can-obtain-pass through’.

58 Huang seems to treat these three interchangeable. Zhang (1999), however, claims that *e-sai* and *e-tang* are semantically different. Zhang (1999: 81-82) refers to Teng (1980), addressing a subtle difference: *e-sai* is associated with permission by law and *e-tang* by capacity.
Interestingly, 袂當 e-tang not only expresses deontic modality but is also used as a dynamic modal; see (20). This usage is however absent in the other two counterparts, namely 袂用 be-ing and 袂使 be-sai.

(20) 鹿仔走袂當過去 (dynamic)
lok-a kiann **be-tang** kue-khi
deer walk cannot cross-come
‘The deer is unable to walk across (to somewhere).’

3. *elbe* as epistemic probability. The third use of *elbe* is epistemic.

(21) i bin-a2-tsai e lai Tai-pak.
3sg tomorrow FUR come Taipei
‘He will come to Taipei tomorrow.’

(22) 應該啊袂擱來漏氣呀才著
ing-kai a **be** koh lai lau-khui tsiah-tioh
should PAR NOT.FUR again come lose then-right
‘It should be that (someone) will not lose face again.’

Interestingly, *lai* ‘to come’ as in (22) is often accompanied with *be* to express futurity. *Khi* ‘to go’ is used in third person situations; see (23). Typically, when *be* is used together with the deictic *lai* ‘come’, *be* is only interpreted as epistemic.

(23) i **be** khi kah lang kong.
3sg not.FUR go with person speak
‘He will not tell anyone.’

Note that the gloss of *elbe* is will(not), but not ‘can(not)’. *E* expresses futurity ‘will’ instead of deduction ‘may/can’. I come back to this in section 4.5.
4.2.3 The ambiguous *elbe*.

*E* alone in modern TSM is never associated with deontic meanings (Lien 2008; Huang 2007). However, as previously stated, *e* can be read either ability or futurity. For example, (24) has two interpretations.

(24) i e kiann-loo lai.
   3sg  E  walk-road  come
   a. ‘He can walk here (now).’ (ability)
   b. ‘He will come here on foot.’ (futurity)

Based on my fieldwork, the abilitive reading (24a) is less preferred. The epistemic future reading wins out over the dynamic abilitive one. This coincides with Huang’s (2007) analysis of *e*. He found a pattern, given in (25), for the occurrence and frequency of the modal *e* in modern TSM (2007: 96). The data show that the epistemic use of *e* accounts for 80 percent in his modern TSM corpus. The overlapping or layering in use is not unusual in the process of grammaticalization.

(25) epistemic (80.24%) ; dynamic ability (8.38%); generic (10.78%) 59

4.2.4 *be* as an interrogative.

As noted, negatives are often used as interrogatives in the Chinese language. Despite the fact that TSM *e* can be used alone or with *-hiau* or *-sai* in a declarative sentence to indicate different modality types, as shown in (26) through (28), the typical corresponding interrogative is *be* without an additional morpheme.

59 I do not discuss the generic category here. Southern Min uses *elbe* in sentences such as ‘Birds can fly’/‘Birds fly.’
This, however, does not reveal the whole story of *be* as an interrogative. The topic of *be* being used in questions is discussed in chapter seven together with other negatives.

To conclude, *elbe* is no longer a full-fledged verb in modern TSM. Despite the fact that *e-hiau* can be a lexical verb, it is losing its verbhood and primarily read as a dynamic modal. There are three deontic modals: *e-tang*, *e-sai*, and *e-ing*, each preferred by different TSM speakers. The monosyllabic *e* is primarily epistemic, but at times abilitive. Table 4.3 provides my conclusions.

Table 4.3
Modality in *be*

<table>
<thead>
<tr>
<th>verb</th>
<th>Mod</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ability</td>
<td>deontic</td>
</tr>
<tr>
<td><em>be</em></td>
<td>√</td>
<td>√ (primary)</td>
</tr>
<tr>
<td><em>be-hiau</em></td>
<td>√</td>
<td>√ (primary)</td>
</tr>
<tr>
<td><em>be-tang; be-sai; be-ing</em></td>
<td>√</td>
<td></td>
</tr>
</tbody>
</table>
4.2.5 Other categories of *elbe*.

I would also like to discuss two new issues discovered in my corpus analysis. *Be* can also be used in suggestions, as in (29) and (30), but such usage is not found in the affirmation *e*.

(29) 你袂曉尋您阿姐仔？
li   be-hiau   tshue   lin   a-tsi-a
2sg  be-hiau   look.for your sister
‘Why don’t you look for your older sister?’

(30) 煞袂曉掌頭仔愛 tok4 起來
sua   be-hiau   tsing-thau-a   ai   tok   khi-lai
then  be-hiau   finger   must   chop   -up-come
‘Why don’t you chop off your fingers?’

This type of question, in spite of its expectation of an assertive answer, reveals a connection between negatives and interrogatives; the reanalysis from negatives to interrogatives is evident in synchronic data.

The other issue is when *be* shows volition; (31) and (32).

(31) 我一定袂來反對
gua it-ting   be   lai   huan-tui
1sg definitely not.FUR come oppose
‘I will not have an opposing opinion.’/
I am willing not to go against your ideas.’

(32) 你袂曉想講從做囡仔
li   be-hiau   siunn   kong   tiong   tsue   gin-a.
2sg not.able-able think say again do child
‘You will not want to be a child again.’
As a matter of fact, there is an extra modality marking in the above two sentences: the adverb \textit{it-ting} ‘definitely’ and the modal \textit{siunn}, both of which express volition, a point I return in chapter six on \textit{beh} ‘want’ or ‘will’.

The above instance is connected to the fact that TSM \textit{e} can mean \textit{will}. The English possibility paradigm has \textit{can} in all the sub-categories (epistemic, abilitive and deontic). Southern Min abilitive \textit{e(-hiau)} and deontic \textit{e-sai} are within the possibility paradigm defined by van der Auwera and Plungian (1998); however, the epistemic \textit{e/be} is not placed in this paradigm. \textit{E} means ‘will’, which indicates prediction and volition under certain contexts. I address volition in chapter five.

4.3 Diachrony of \textit{e/be}

There have been several studies on \textit{e} from historical perspectives. Mei (1999) and Yang (2001), among others, trace the origin of the SM word \textit{e} as \textit{解}.\textsuperscript{60, 61}

Yang (2001) gives an historical account for \textit{解}. According to her, the original meaning for \textit{解} is ‘to cut off bull horns with two hands’, and it is a pictophonetic character in Chinese (Yang 2001: 265). She then demonstrates eight semantic uses of \textit{e}, with five relevant to the modern meanings of \textit{e}.\textsuperscript{62}

\textsuperscript{60} Note that some scholars may use the Chinese character \textit{會} to replace \textit{解}, as the word \textit{會 hui} in Middle Chinese functions very much the same as \textit{e} in Southern Min. Yang (2001) claims that \textit{解} was colloquial, and \textit{會} was used in formal documents.

\textsuperscript{61} Not every word in SM can be traced to its origin. Scholars working on this topic include, but are not limited to, Mei 梅祖麟 (1999) and Yang 楊秀芳 (2001).

\textsuperscript{62} The example sentences are taken from her paper, while the transcriptions and translations are mine.
4.3.1 The history of *e*.

1. *e* = ‘to take something apart’. The character first appeared in oracle bone scripts, meaning ‘to dissect’. The first example with 解, however, appeared in *Zhuangzi* (368-286 BCE) as ‘to use a physical instrument to take something apart’. 63

(33) 廉丁為文惠君解牛。 (Yang 2001: 266, (2))

Pao.Ding wei Wenhui jun jie niu
(name) PREP (name) lord dissect ox

‘Cook Pao Ding was cutting up an ox for Lord Wen Hui.’

2. *e* = ‘to explain in words’. Yang (2001) claims that this second meaning is very likely derived from the original usage, but with the object of dissection changing from concrete objects to abstract ‘words’. Example (34) appears in Xun Zi’s (313-238 BCE) works.

(34) 閉約而無解。 (Yang 2001: 280, (50))

bi yue er wu jie
close agreement and not explain

‘They have come close to an agreement, but there is no resolution.’

3. *e* = ‘to understand; to know’. Yang believes that this meaning came from the item noted above, i.e. ‘to explain in words’ becomes ‘to understand’, as in (35), which is found in *Zhuizi Yulei* dating back to the 12th and 13th centuries.

(35) 有所不解，因而紀錄。 (Yang 2001: 284)

you suo bu jie, yiner jilu.

---

63 Following conventions, I use modern Mandarin pronunciation for all transcriptions of examples in historical texts.
exist PRON not understand therefore record
‘If there is something which is not resolved, then it should be noted.’

4. \( e = \text{‘capable’}. \) Yang explains that this meaning of 解 involves ‘capability’ for “doing,” as opposed to the previous one which means ability for “things to be understood”. This instance is also from Zhuzi.

(36) 有人…不解讀書。 (Yang 2001: 285, (71))
exist person not capable read
‘There are some who… do not know how to read.’

5. \( e = \text{modal ‘can’}. \) The last developed usage of 解 is its modality. Yang distinguishes this modal use into three sub-uses: abilitive, deontic and epistemic. Sentences (37)-(39) provide examples of each. 64

(37) 菊解制頹齡。 dynamic (Yang 2001: 286, (74))
chrysanthemum can ameliorate decline age
‘Chrysanthemums can ameliorate the decline due to my age.’

(38) 誰使女解緣青冥。 deontic (Yang 2001: 287, (79))
who cause 2sg permit fate blue vastness
‘Who causes you to untangle the skein of your fate and enter the blue vastness?’

(39) 無人解愛蕭條境。 epistemic (Yang 2001: 287, (81))
exist love萧条境
‘There are some who... do not know how to read.’

64 Examples (37)-(39) are poetic lines from Tao Yuanming 陶淵明 (365-427 CE), Han Yu 韓愈 (768-824 CE), and Bai Juyi 白居易 (772-846 CE). I am transliterating these sentences using MSC Pinyin out of convenience only.
no person FUR love desolate environment

‘No one will love in a desolate environment.’

To summarize, Yang (2001) claims that, by the Southern Song Dynasty (1127-1279 CE), the above five uses of e co-existed and the modal use of e had stabilized. She postulates a grammaticalization path for 解 e as follows (Yang 2001: 285):

(40) 解 e: ‘to explain in words’ > ‘to understand’ > ‘capable’ > modal ‘can’

In modern TSM, the monosyllabic e is unable to receive the above meanings. We observe e with a renewal (-hiau or -sai) in today’s TSM speakers. I discuss the latter two usages in the following two sections. I review related findings in Huang (2007) and provide my interpretation of them in terms of grammaticalization.

4.3.2 The emergence of e-hiau.

First, hiau 曉 ‘to understand’ provides a key to interpreting the grammaticalization of e. The use of disyllabic e-hiau in modern TSM is not accidental. Both e and hiau are near synonyms, meaning ‘comprehend; know’. Huang (2007) observes a coexistence of the lexical verb e and other combinations such as e-hiau 解曉 and the reversed hiau-e 曉解 in Zhuzi. Huang notes that another form 曉得 hiau-tit , literally ‘understand-obtain’, is also documented in the same text. I associate the significance of his findings with regard to grammaticalization below. The frequency of each entry in Zhuzi yulei is illustrated in Table 4.4, adapted from Huang (2007: 124-126).
Table 4.4
Frequency of e-related words in Zhuzi Yulei

<table>
<thead>
<tr>
<th></th>
<th>Number of tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td>解 e</td>
<td>14</td>
</tr>
<tr>
<td>解曉 e-hiau</td>
<td>2</td>
</tr>
<tr>
<td>曉解 hiau-e</td>
<td>6</td>
</tr>
<tr>
<td>曉 hiau</td>
<td>over 1000</td>
</tr>
<tr>
<td>曉得 hiau tit</td>
<td>200</td>
</tr>
</tbody>
</table>

The data presented in Table 4.4 indicate that e in Zhuzi Yulei shows a different paradigm than that of modern TSM.

First, e rarely occurred as a verb at that time. It is consistent with Yang’s (2001) findings: e was well established as a modal between the 12th and 13th centuries. There must have been change in e regarding its verbhood. Second, hiau alone was the most dominant verb that expressed ‘to know’ or ‘ability’; modern TSM –hiau is however a bound morpheme.

Based on Table 4.4, hiau, a near synonym of e, might have been competing with e and taking the role of the original lexical verb e. In Table 4.4, we also see three combinations: e-hiau, hiau-e, and hiau-tit, with the last one surpassing the other two competing forms in frequency. The disyllabic verb 曉得 does not exist in modern TSM, but e-hiau has continued its use to this date.65

A skeptical reader may argue that the disyllabic words may have sounded the same but been recorded in different characters. I do not deny this possibility as

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65 Yet, 曉得 xiao de is used in modern Mandarin with a different meaning: ‘to know (how to)’. What is more interesting is that Hakka uses hiau-tet as a dynamic (modal) verb expression modality (see the comparison section of this chapter).
Chinese characters are not phonetic-based. Nonetheless, the fact that morpheme doubling did appear suggests a feature loss in one of the morphemes, resulting in grammaticalization. Note that tit 得 ‘to obtain’ is also a synonym of e and hiau. There are at least three morphemes (e, hiau, and tit) at play in this text.

The words in Table 4.4 from Zhuzi behaved as full verbs or modals before the emergence of a new paradigm, where some of them became extinct and others were reanalyzed. However, scholars hold different views on this. For instance, Yang (2001) claims that e and hiau in the combination e-hiau in this text were both verbs, whereas Huang (2007) considers e-hiau to be a modal at that time.

Either way, there must have been a transition stage before e underwent the loss of semantic features and hiau came to assist as a renewal. We see e-hiau being used as both a lexical verb and a modal today.

A corpus analysis of modern TSM reveals distributional characteristics of e-hiau. A striking fact is that e-hiau shows rare lexical usage, accounting for only about 1% of in Huang’s (2007) data (498 tokens). Suffice it to say that e-hiau is losing its verbhood and is signaling a change toward modal auxiliary behavior.

Recall that when e was still possibly a verb, its status as a modal was also established in the 12th and 13th centuries. In contemporary TSM, e no longer acts as a lexical verb, however. These above facts provide evidence for two grammaticalization paths of e.

(41) V ‘know; comprehend’: e > e-hiau
(42) V: e > V: e-hiau > Mod: e-hiau ‘capable’
4.3.3 The emergence of e-sai.

I discuss e-sai in place of all three: e-sai, e-tang, and e-ing. The development of the three disyllabic deontic modals is relatively new.

Huang (2007) found only one instance of e sai and two of e ing in Zhuzi yulei. He claims that e was used with another verb sai 使 or ing 用 to mean ‘able to use’, which meaning is different from the modern meaning. He may mean that the lexical sense was still strong in sai and ing. That is, these originally lexical morphemes become attached to e when e lost its semantic features.

Huang (2007: 144) concludes that these multi-syllabic deontic models did not come into use until the 20th century and a development path looks like (43).

(43) e-hiau (abilitive) >> e-sai (permissive) >> e-tang; e-ing (permissive)

4.3.4 Closing remarks.

To sum up, the abilitive e-hiau and the deontic e-sai come from the same origin e, and so does the epistemic e. The major difference is that the epistemic e does not change its form, while the dynamic or deontic usage has a renewal, making it disyllabic: e-hiau or e-sai. The diachronic development of e suggests a feature loss in e accompanied by several renewals.

4.4 Grammaticalization of e and be

This section discusses the reanalysis of the multi-syllabic words, such as the dynamic abilitive e-hiau and the deontic permissive e-sai. Following

\[66 \triangleright \triangleright \text{indicates time order instead of A deriving from B.}\]
Minimalist Economy Principles and the cartographic approach described in chapter two, I provide theoretical accounts for the diachronic development of \( e \).

### 4.4.1 E in Different Contexts.

As discussed, \( e \) has undergone a series of reanalyses. Recall that there are three types of modality of \( e \): epistemic futurity, dynamic ability, and deontic permission. In TSM, \( e \) is typically epistemic, \( e\)-hiau is abilitive, and \( e\)-tang, \( e\)-sai, and \( e\)-ing are deontic modals. I review different uses of \( e \) in brief.

Table 4.5

<table>
<thead>
<tr>
<th>TSM ( e ) in different contexts</th>
<th>possibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td>( e ) 解‘will’ (future; prediction)</td>
</tr>
<tr>
<td>participant-internal</td>
<td>( e)-hiau 解曉 (ability)</td>
</tr>
<tr>
<td>Participant-external; deontic</td>
<td>( e)-sai 解使; ( e)-ing 解用; ( e)-tang (permission)</td>
</tr>
</tbody>
</table>

(44)  i kinn-ni  e  pit-iap. (epistemic; prediction)  
3sg this.year  FUR graduate  
‘She will graduate this year.’

(45)  i  e-hiau kong  ing-bun. (dynamic; ability)  
3sg know speak English  
‘She can speak English.’

(46)  lausi kong i kinn-ni  e-sai  pit-iap. (deontic; permission)  
teacher say 3sg this.year can graduate  
‘The teacher says that she can/may graduate this year.’
I do not gloss *e* in (44) as ‘can’ or ‘may’. To express *can* (or *may*) in the epistemic sense, the adverbial expression *ko-ling* 可能 is used. *Ko-ling* is the literate pronunciation of TSM, which is the same as *keneng* ‘maybe; possibly’ in MSC.

(47)  
\[
\begin{array}{llll}
3sg & ko-ling & e & pit-iap. \\
\end{array}
\text{(epistemic; probability)}
\]

‘She may graduate this year.’

4.4.2 V-*tit* as a cycle.

First, I would like to address a morphological issue, where *tit* 得 is often found attached to *elbe*. Scholars have pointed out that the deontic *e* is optionally followed by *tit* 得, whose original meaning is ‘to obtain’.

(48)  
\[
\begin{array}{llll}
3sg & e-sai & (tit) & khi \\
\end{array}
\text{(tit) tai-pak. Yang (2001: 289)}
\]

‘He can go to Taipei.’

(49)  
\[
\begin{array}{llllllll}
1sg & be-ing & tit & tshut-lai & hia & ku \\
\end{array}
\text{(SVC) TSM (Lien 2008: 11)}
\]

‘I can’t be out for so long. (I need to go now).’

The use of *tit* is worthy of attention. As noted in chapter three, 得 (*de* as Mandarin pronunciation) as modality has been attested in Classical Chinese appearing in verb series. For instance, Sun (1996) suggests a grammaticalization path as (50) for *de*.

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67. The use of 得 may be manifest in one Sinitic variation but not in another; see further discussion in the comparative studies section.

68. Some scholars use the term *serial verb construction* (SVC).
得 de: ‘obtain’ > ‘attain’ > ‘possible’ (Sun 1996: 143)

Wu (2006: 57) traces the lexical use of de back to the pre-Qin era (two centuries BCE), but claims that its aspectual usage did not evolve until the Tang dynasty (618-907 CE).

(51) V + de > V-de, where –de is to mark aspect

Wu (2006) and Yang (2001) propose that the grammaticalization of tit may have taken place earlier than that of e. Before the Song dynasty, pre-verbal modals such as neng 能, ke(yi) 可(以), and de 得 co-existed with V + (bu) de, as in (52). This means that the post-V de has lost its semantic features.

(52) neng/ke(yi)/de+ V + (bu) de (Wu 2006: 54-55)

A close look-up shows a similar pattern in TSM e/be V-tit; see (53).

(53) e/be + V + (-tit).

A relevant discussion here is the occurrence of tit with e/be. Lien (2010) argues that tit 得 (i.e. V-tit) is a case of post-verbal modality. He concludes that when a loss of modality in tit takes place, the pre-verbal e/be is attached to V-tit.

Below I show a grammaticalization path, based on his findings.

(54) V + tit > V-tit > e/be + V-tit > e/be + V-∅

This development of tit in (54) apparently follows the general grammaticalization chain, from a full-fledged verb, a clitic, and to zero. I see (54) as a cycle.

69 The term phase marker is also used to mean lexical aspect, aka Aktionsart.
Unlike Wu (2006), Lien (2010) regards *tit* as denoting modality in this position. Historically, both the first verb and *tit* initially are both lexical verbs (*V + tit*). At the second stage, the semantics of *tit* gets weakened, becoming a modal. I represent it in (54) as *V-tit*.

The third stage in (54) is when *-tit* is losing its modality, the modal *elbe* began to appear before *V-tit*, resulting in *e-V-tit*. I call *elbe* renewals. The post-modal *tit* can then be eliminated. Therefore, the verbal string becomes *elbe + V*. The above phenomenon is typically seen as a linguistic cycle.

Modifying Lien’s conclusion, I analyze *tit* as telic and *elbe* as the renewal in the modal string *elbe-hiau-tit*.

### 4.4.3 Reanalysis of *e-hiau*.

I show that *e* was a lexical verb and *e-hiau* is a reanalysis of two verbs: *e* and *hiau*. As evident in the historical data, *e* originates as a lexical verb, featuring ‘to know; to comprehend’ (55).

(55) 薰也解，酒也解。 SM (Yang 2001: 286)

```
hun ia e, tsiu ia e.
cigarette also able alcohol also able
‘(He) not only smokes but drinks.’
```

70 I side with Lien although I also believe that *de* can be aspectual.

71 The translation would be ‘He can not only smoke but drink’, but I modify it and ignore the modal ‘can’ in the translation.
The tree diagram is illustrated as (56)\textsuperscript{72}.

(56) \(e\) as a full-fledged verb

\[
\begin{array}{c}
\text{VP} \\
\text{i ‘he’} \\
\text{V} \quad \text{hun} \\
\text{e} \quad \text{‘cigarette’}
\end{array}
\]

In accordance with the Economy Principle, I postulate a bundle of semantic features in \(e\), as in (57). This is also evident in typology; see section 4.5.

(57) \(e\): \{know; comprehend; able to do; able to use; permission; futurity\}

1. \textit{Reanalysis of hiau-tit} \(\text{曉得}\). Recall that Huang (2007) notes the co-occurrence of \(hiau\text{-}tit\), \(e\text{-}hiau\), and \(hiau\text{-}e\) in \textit{Zhuzi}, where these words were used interchangeably.

I first show the reanalysis of \(hiau\text{-}tit\), \textit{with –tit} presumably the same as \textit{de} \(\text{曉得}\). Features of the morphemes are given below the tree.\textsuperscript{73}

---

\textsuperscript{72} The tree doesn’t show the topicalization of the logical object \textit{hun} ‘cigarette’. I simply place \textit{hun} in its base-generated position. The adverbial \textit{ia} ‘also’ is omitted in the tree too.

\textsuperscript{73} The position of Spec is ignored for convenience.
(58)  hiau and tit as individual lexical verbs

\[
\begin{array}{c}
\text{VP} \\
\text{VP} \quad \text{VP} \\
\triangle \quad \triangle
\end{array}
\]

\begin{align*}
\text{hiau:} & \quad \text{[know; comprehend]} \\
\text{tit:} & \quad \text{[obtain]}
\end{align*}

I suggest that these verbs appeared as serial verbs. Over the course of time, hiau-tit became lexicalized as one unit. In Zhuzi, hiau 聞 was a lexical verb and not used as a modal (cf. Huang 2007). As in (51), tit has undergone grammaticalization, and one of its usages is as lexical aspect. I therefore postulate tit as marking telicity in hiau-tit. I assume an inner aspect phrase between vP and VP (chapter two).

(59) -tit as aspect

\[
\begin{array}{c}
vP \\
\text{hiau-tit} \quad \text{Asp/ModP} \\
\quad \text{VP} \\
\quad \text{VP}
\end{array}
\]

\begin{align*}
\text{hiau:} & \quad \text{[comprehend]} \quad \text{(semantic features)} \\
\text{tit:} & \quad \text{[iF: aspect]}
\end{align*}

\[\text{\footnotesize 74 I use the models of Baker and Stewart (1999) and of Stewart (2001) for serial verbs.}\]
I analyze *hiau-tit* ‘know’ as occupying little v. It is further reanalyzed in the ModP.

Huang (2007) argues that *hiau-tit* disappeared and did not survive in modern TSM. As discussed in (54), the unit *hiau-tit* is combined with *e* and further reanalyzed as *e-hiau-tit*.

Next, I investigate how *e-hiau-tit* possibly developed.

(60)  *e* and *hiau-tit* as in a sequence

```
VP
   VP  VP
     △  △
   e    hiau-tit
```

*e*: [comprehend]

*hiau-tit*: [comprehend]

*E* and *hiau-tit* may have initially occurred in a sequence as (60). Yet, when *e* is reanalyzed as a modality marker, the structure changes to (61). The next step is (62), where *e-hiau-tit* becomes a new reanalysis in the modal head position.

(61)  *e* as a renewal

```
vP
   vP  vP
     e  △
   hiau-tit
   [ i-F]
```
(62)  \textit{e-hiau-tit} as Mod

\begin{center}
\begin{tabular}{c}
ModP \\
\hline \\
\textit{e-hiau-tit} vP \\
\hline \\
\textit{hiau-tit}
\end{tabular}
\end{center}

The tree in (61) shows the lexical verb of \textit{hiau-tit} 點得, whereas (62) represents \textit{e-hiau-tit} as a modal. I side with Yang (2001), who considers \textit{hiau-tit} to be a verb in \textit{Zhuzi}. \textit{Hiau-tit} is not preserved in TSM, but in modern Hakka, \textit{hiau-ti} 點得 is used as a lexical and modal verb, meaning ‘can, capable of’.

I also found supporting evidence in Huang (2007: 127), where the use of \textit{hiau-tit} has a pre-modal as in the text \textit{Zhuzi}. This combination can be conceptualized as (63), where \textit{hiau-tit} serves as a verb and the pre-verbal morpheme expresses modality.

(63)  \textit{ling} 能\textit{su}/需\textit{iiao} 要 + \textit{hiau-tit} + NP\textsuperscript{75}

Huang suggests that the instances of \textit{e-hiau} in the historical text always occur with -\textit{tit}. However, it may also be that \textit{hiau} first appears with \textit{tit}, and the modal \textit{e} was reanalyzed and merged into the lexicalized item: \textit{e-hiau-tit}.

2. \textit{Reanalysis of hiau-e}. Huang (2007: 125) notes that in \textit{Zhuzi}, \textit{hiau-e} does not have an obligatory \textit{tit}, whereas \textit{e-hiau} is always accompanied by -\textit{tit}. This finding together with the development of \textit{tit} is crucial in the reanalysis of \textit{e}.

\textsuperscript{75} \textit{Ling} is possibility, and \textit{su/iiao} are necessity modals.
Hiau is a near synonym of e 解. As stated in the diachrony section of this chapter, the lexical use of hiau was much more prevalent, and the modality system in e was well established in the same historical text Zhuzi. This means that for some speakers the lexical e was losing its semantic features, which triggered the appearance of hiau.

For the abilitive hiau-e ‘can’ order, e is aspectual just like tit ‘obtain’, and hiau is a renewal.

(64) e as a lexical verb

```
VP
  /
 /  
V  e
```

e: [understand; know] (semantic features)

(65) loss of features in e; hiau as a renewal

```
vP
  /
 /  
Asp/ModP
  /
  /
  e  VP
     /
    hiau
```
The advantage of my analysis is that it also accounts for the fact that *hiau*-e didn’t occur with *tit* because *hiau*-e is already aspectual, which does not necessitate a telicity marker *tit*.

3. **Reanalysis of *e-hiau***. I show a possible analysis in (67).

(67) *e* and *hiau* appear in a verb sequence

```
  VP
   |
  VP  VP
   |   |
  *e* ‘able’ *hiau* ‘able’
```

Initially, the lexical semantics are equally weighted in *e* and *hiau*. The intermediate stage is when *e* is in the little *v*: the lexical verb *e* becomes reanalyzed as a abilitive modal, sitting in *v*.

---

76 The notion that *e-hiau* is accompanied by *tit* is not accurate, given that *hiau-tit* is mostly likely one unit before *e* occurred in the string *e-hiau-tit*. 121
(69) 我想你那會那麼虛華。

```
gua siunn be-hiau li na e hiani hihua.
1sg think not.able 2sg how FUR that ostentatious

‘I can’t understand how you can be so ostentatious.’
```

I suggest that the reanalyzed e sits in v, and the renewal hiau makes it a head in the V.

(68) feature loss in e

```
vP
   
   e VP
   [i-F]
   V
   hiau

[comprehend]
```

A renewal hiau as an abilitive modal is the key to interpreting the grammaticalization of e. Note however that the reanalysis process under Economy is not accomplished through one generation.

The loss of features also accounts for the vagueness of e, in that e may have undergone another feature loss process in a higher head position, that is: [i-F] > [i-F], the latter [i-F] resulting in an epistemic reading in e. I discuss this in section 4.4.5. Note that [i-F] indicates features loss and the features are different.

---

77 The sentence is a line from a popular Taiwanese song. I analyze e-hiau ‘able to comprehend’ as a verb here in a sequence with siunn ‘think’. Both abilitive and epistemic e/be are used in this line. The characters assigned to each are not random, as song writing does not follow a transcription system.
Briefly, e began as a lexical verb, meaning ‘know, comprehend’. Over the course of time, e is taken out of the lexicon with fewer or different features. That is e began to lose its semantic features, leading e to be reanalyzed. Gradually an additional synonym hiau ‘to know’ came into being as a renewal of abilitive e. When e-hiau becomes base-generated in the modal head, the reanalysis in a new grammar is completed.

4.4.4 Reanalysis of e-sai as deontic. 78

As noted, sai 使, thang 通 and ing 用 were lexical verbs, each of which means ‘make’, ‘pass’ and ‘use’, respectively. The new deontic modal paradigm in TSM is that e is accompanied by either one of these three bound morphemes, to form a multi-syllabic modal.

Under Economy Principles, the loss of permissive features in e results in a necessity of a renewal such as sai to mark deonticity. E-sai is then reanalyzed as one unit in the grammar of the new generation. We thus observe e-sai in TSM. I do not discuss in detail the reanalysis process of e-sai, to which I assume a resemblance of e-hiau applies.

One last issue is that the deontic modal string e-X-tit is still undergoing changes in modern TSM. Lien (2010) claims that the tit 得 is often fused, which I present as follows:

(70)  e-ing-tit > e-ing-Y, where Y can be li, leh, cit, e or 

78 According to van der Auwee and Plungian (1998), the deontic doublings may also belong to their participant-external non-deontic sub-category. I do not intend to go into details for this issue. I focus on the reanalysis of e from abilitive to deontic (participant-internal to participant-external in their terms).
I show some examples below in (71)-(73) from the corpora I make use of.

(71) 安呢袂用 li0
    an-ne  be-ing  li
this-way  not.allow  PAR

‘It cannot be done this way.’

(72) 無共敎袂用咧
    bo  kah  ka  be-ing  leh
NEG  PREP  teach  not.allow  PAR

‘(We) must teach him.’

(73) 袂用 e0 啦，我卜合你鬥陣啦
    be-ing  e  la,  gua  beh  ham  li  tou3-tin  la.
not.allow  PAR  1sg  want  with  2sg  be-together  PAR

‘I cannot agree/No way. I want to be with you.’

My corpus findings on be show that fusion often takes place when tit is placed at the end of the sentence, accounting for 65-73% of the e-ing-X and e-sai-X data. Presumably, the sentential final position makes tit less noticeable phonologically and thus it is where semantic features are gone eventually.

4.4.5 Reanalysis of e as an epistemic modal.

Let us examine the third category of e. Recall that e can be ambiguous between an abilitive and epistemic reading. There are two grammars. In one grammar, where speakers exclusively use the monosyllabic e as epistemic, e is base-generated in Mod; e has [i-F: ‘will’].

79 While Lien and I use the same corpus, I analyze be and tit.
On the other hand, $e$ has two separate entries for some speakers. Under the minimalist approach, the same morpheme $e$ is hypothetically taken from the lexicon with different features. When $e$ is taken out of the lexicon with the features [i-F: ability, futurity], the learner sees it as abilitive first. When $e$ moves to a higher Mod head, it is epistemic (futurity); see (75). I am agnostic about this futurity $e$ future moving up to T.

(75) The unspecified case of $e$

---

80 I only present one ModP projection for convenience. I adopt the two ModPs (chapter two), but do not put T, as most accept that the Chinese language does not express tense through grammatical means.
4.4.6 Concluding Remarks.

To sum up, *e* ‘know’ originated in the big V as a full-fledged verb, and was reanalyzed as occupying the little v when it became grammaticalized. With the occurrence of *hiau*, a renewal, we see *e-hiau* as indicating abilitive modality.

Not only is *e* reanalyzed from a V to a modal, expressing ability, but it also undergoes a similar path to express deonticity. Possible renewals are *sai*, *tang* and *ing*. Thus, the multi-syllabic modals *e-sai*, *e-tang* and *e-ing* are used to express permission or deontic possibility.

Finally, *e* is no longer in the VP. This *e* is not attached by any morpheme. *E* with an ability meaning shows that *e* has reanalyzed into a modal, whereas the so-the epistemic possibility *e* exhibits further grammaticalization, located higher up in the tree.

Theoretically, van Gelderen’s (2008; 2011) feature economy predicts such a change with some modifications. Renewals are evident in the grammaticalization of *e*. However, the root morpheme *e* never disappears; rather, it combines with a renewal and forms a doubling: abilitive *e-hiau* or deontic *e-sai*. English however uses a single modal *can* for all the various types of modality: ability, permission and probability.

The literature on typological modality (Bybee et al. 1991, among others) suggests a path as V > ability > possibility. The unidirectionality of grammaticalization is apparent by the fact that *e* is reanalyzed in each stage “higher up in the tree” (van Gelderen 2004; Roberts and Roussou 2003).
4.5 Comparative Studies

I first address a typological account on the grammaticalization of abilitive sources. I then compare Southern Min e with English can; Mandarin and Hakka are also investigated. Nonetheless, I do not attempt to discuss all modals of these Sinitic language varieties in this dissertation. My comparison focuses particularly on divergence as well as issues less addressed in the literature. 81

4.5.1 Cross-linguistic data.

A similar typological pattern to Southern Min e/be can be found in other languages as well. For instance, Bybee, Perkins, and Pagliuca (1994: 188) point out two routes for the grammaticalization of ability concepts as follows: 82

(76) ability > root possibility > epistemic possibility
(77) ability > root possibility > permission

This is also evident in Southern Min e. Historically, the category of e changes from the verb of ‘knowing’, to the verb of ‘being able to comprehend’, and to the modal ‘can’ with abilitive, deontic and epistemic denotations in Zhuzi.

As addressed in Section 4.4, the monosyllabic abilitive e has lost its semantic features, leading to the emergence of a reanalyzed form e-hiau. The deontic sense in e also becomes weakened to the point that it is accompanied by another verb sai, forming e-sai. E maintains the same form for its epistemic use. The

81 I refer my reader to previous studies such as Hsieh (2002) for a more comprehensive modal system in Mandarin, and to Huang (2007) for a comparison between Mandarin 会 hui and Southern Min 解 e, to Hsin (1999) and Zhang (1999) for Southern Min modality, and to Lieu (2000) for Hakka modals.

82 Chapter three defines root modality.
permissive use *e-sai* does not seem to be historically derived from abilitive *e-hiau*. All of these show a divergence among the three types of modality in *e*: abilitive, deontic and epistemic.

The lexical sources of ‘ability’ often come from verbs like *finish, know* (how to), *get, obtain,* or *arrive* (Bybee et al. 1994: 188). This is also true in the Southern Min case. There are three such morphemes involved in dynamic abilitives: 解 *e*, 曉 *hiau* and 得 *tit* in TSM. *Hiau* ‘to know; to understand’ is a near synonym of 解 *e*. The third morpheme 得 *tit* means ‘to get; to obtain’, which often appears after the verb.

### 4.5.2 The English *can*.

The development of modern English *can* is analogous to Southern Min *e*. English *can* has an origin in Old English as a lexical verb: *cunnan* ‘know; be able’.

(78) hwæt þær foregange, oððe hwæt þær æfterfylige, we ne *cunnun*. Bede ‘What came before, or what comes after, we do not *know.*’ (Lightfoot 1979: 98)

(79) *ne con* ic noht singan. Bede ‘I cannot sing.’ (Lightfoot 1979: 99)

As *can* is no longer a verb in modern English, (77) is thus ungrammatical.

(80) *He can* Hakka.

Int.: ‘He knows about Hakka./He understands Hakka.’

As Lightfoot notes, “*cunnan* (> NE *can*) used to mean ‘to have the mental or intellectual capability to, to know how to’” (Lightfoot 1979: 100). *May* needs attention too, as *may* and *can* both are used as possibility modals. Lightfoot points

---

83 得 means ‘to get; to obtain’; see Sun (1996: 108-162) for its grammaticalization.
to another interesting fact: in contrast to cunnan, magan meant ‘to have the physical capability to’, yet a permission reading has developed for modern may (Lightfoot 1979: 100). This shows that in English abilitive and permissive modality are connected. Similarly, MSC epistemic ke.neng 可能 ‘may; maybe’ and permissive ke.yi 可以 share ke 可.

The English possibility modals are shown below, within which can and may are almost interchangeable.84

Table 4.5
English possibility modality paradigm

<table>
<thead>
<tr>
<th></th>
<th>possibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td>may; can</td>
</tr>
<tr>
<td>participant-internal</td>
<td>can</td>
</tr>
<tr>
<td>participant-external (non-deontic)</td>
<td>can; may</td>
</tr>
<tr>
<td>deontic</td>
<td>may</td>
</tr>
</tbody>
</table>

An brief overview is demonstrated in (81)-(84), where the English modal can is used for four types of modality (Palmer 2001: 10).85

(81) He can’t be in his office now. (epistemic)
(82) He can run a mile in five minutes. (dynamic; participant-internal)
(83) He can escape. (dynamic; participant-external non-deontic)
(84) He can go now. (permissive; participant-external deontic)

84 Collins (2009) argues that may is replacing can for deontic uses in American English.

85 Sentences are Palmer’s; however, the classification is based on van der Auwera and Plungian (1998).
4.5.3 Dynamic abilitives.

I show next how abilitive modals in modern Chinese languages differ from one another. I also examine English *can*. Let us discuss the lexical uses first.

\(E\) is not a lexical verb in TSM; (85) is not found in my corpus.\(^{86}\)

(85) \*i e/be keh-ue. Min

3sg can/cannot Hakka

Int.: `He understands/does not understand Hakka`.

Example (86) illustrates abilitive verbs in the three Sinitic languages.\(^{87}\)

(86) i e-hiau; be-hiau keh-ue. TSM

ki voi; m-voi kak-ka-fa. Hakka

ki hiau-tet; m-hiau(-tet) hak-ka-fa. Hakka

ta1 hui; bu-hui kejiahua. MSC

3sg know Hakka

`He understands/speaks Hakka`.

Southern Min uses a disyllabic *e-hiau* as its dynamic lexical verb. Hakka has a different system, which patterns with MSC. The Hakka lexical verb *voi* can be used the same way as MSC *hui*; however, another verb *hiau-tet* functions the same in Hakka. *Hui* and *voi* can still be used as verbs. The verbal use in MSC and Hakka differs from English *can* and TSM *e*, neither of which is a verb.

Nevertheless, Hakka *voi* is equivalent to MSC *hui* 會 and TSM *e* 解 in modality. In spite of same semantics, they have different origins.

---

\(^{86}\) Yang (2001), however, argues for the survival of lexical uses in *e* in some Min sub-dialects.

\(^{87}\) For convenience, I leave out the positive/affirmative comparison for the rest of the examples.
Lieu (2000) argues that Hakka *voi* is not phonologically associated with Mandarin *hui*. Yang (2001) analyzes the writing of 解 and 會 as used in colloquial and formal documents, respectively. Lien (1997: 174), however, claims that 會 is a loan character for the meaning of Southern Min *e* 解. This means that these morphemes may come from different historical or linguistic strata. Yang (2001) suggests that TSM abilitive *e* has preserved the use of 解, while other dialects including MSC *hui* and Hakka *voi* have adopted the modal 會.

Unlike TSM abilitive *e-hiau* and permissive *e-sai*, *hui* and *voi* did not develop into multiple syllabic modals. Also note that the negative form for each language is different (86). While TSM uses *be* as the negative counterpart of *e*, Mandarin and Hakka use *bu* or *m* to negate their modals.

We now turn to abilitive modality among the three languages. The disyllabic *e-hiau* is used in TSM. Hakka, however, uses both *voi* and *hiau*. MSC again uses a monosyllabic *hui*. They are equivalent to English abilitive modal *can*. The modal use in these languages resembles their lexical verb counterparts in (86).

(87)  

<table>
<thead>
<tr>
<th></th>
<th>e-hiau</th>
<th>kong</th>
<th>keh.ue.</th>
<th>TSM</th>
<th></th>
<th>voi/hiau</th>
<th>kong</th>
<th>hak.ca</th>
<th>Hakka</th>
<th></th>
<th>hui</th>
<th>shuo</th>
<th>ke.jia.hua.</th>
<th>MSC</th>
<th></th>
<th>3sg</th>
<th>know</th>
<th>speak</th>
<th>Hakka</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>i</td>
<td></td>
<td></td>
<td>TSM</td>
<td>ki</td>
<td>voi/hiau</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>hui</td>
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<tr>
<td></td>
<td>ki</td>
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<td>voi/hiau</td>
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<td>hui</td>
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<td></td>
<td>ta1</td>
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<td></td>
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<td></td>
<td>hui</td>
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<td>hui</td>
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<td></td>
</tr>
</tbody>
</table>

*He can speak Hakka.*

Note that Hakka and MSC are at intermediate stage where *voi/hui* can be inserted in V (86), or in Mod (87).

MSC has another abilitive *neng*, but its semantics differs from *hui*, and *neng*...
In Hakka, *hiau-tet* is another form other than *voi* for abilitive modality.

(88) 佢曉得看地理  Hakka; Lieu (2000: 36)

\[ ki \quad hiau-tet \quad khon \quad thi-li. \]

3sg can see geomancy

‘He can understand geomancy.’

It is not surprising for *hiau-tet* to be used as ‘capability’, as we recall the different abilitive verbs discussed in *Zhuzi yulei*: *hiau* *hiau-tit* (TSM pronunciation) is one of them. Different historical strata reflect in the three Sinitic languages of modern times. In addition to phonology, each language variation may have adopted different morphology or syntax.\(^89\) *Hiau* also serves as a modal.

(89) 佢曉聽頭牲講話啦  Hakka; Lieu (2000: 36)

\[ ki \quad hiau \quad then \quad theu-sang \quad kong-fa \quad la \]

3sg can listen livestock speak PAR

‘He can understand what the livestock speaks.’

However, the use of *hiau* in Hakka differs from that of TSM or MSC.\(^90\)

(90)  *i hiau (曉)  kong keh.ue.  TSM
*ta xiao (曉)  shuo ke.jia.hua.  MSC

can’t be lexical. Nothing hinges on this, as the primary topic of this dissertation is negation and my research on modality is only descriptive.

\(^89\) The choice of *e-hiau* in Min or *hiau-tet* in Hakka is an example of morphological differences, but initially it may be related to syntax in verb series (SVC) such as *解-曉* and *曉-得*; see section 4.3.

\(^90\) *xiaode* is used differently in MSC than Hkka *hiau-tet* ‘able.to’.

\[ wo xiaode zhe jian shi. 我曉得這件事。 \]

1sg know about this CL matter

‘I know/knew about this matter.’
3sg  can  speak  Hakka
Int.: ‘He can speak Hakka.’

4.5.4 Hakka deontic.

This section contributes to our knowledge about Hakka deontic modals, given that previous research has not fully addressed this topic from a historical or typological perspective.

Unlike TSM, Hakka deontic modals are not derived from an ability source such as voi. Nevertheless, the shared root is permission-related morphemes.

There are at least five permissive negative deontic modals in Hakka: mo-ho 無好, m-tet 毋得, sii-m-tet 使毋得, m-sii-tet 毋使得, and tso-m-tet 做毋得 ‘cannot’, as in Table 4.6.91

<p>| Table 4.6 |</p>
<table>
<thead>
<tr>
<th>Hakka permissive deontic modals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>affirmative</strong></td>
</tr>
<tr>
<td>無好 mo-ho ‘not-good’</td>
</tr>
<tr>
<td>使得 sii-tet</td>
</tr>
<tr>
<td>使得 sii-tet</td>
</tr>
<tr>
<td>做得 tso-tet</td>
</tr>
</tbody>
</table>

I address some interesting observations from the above table. First, mo or m are negative markers of the permissive modals.92 There is no positive form for the

---

91 I analyzed sii-tet and m-sii-tet as an affirmative and negative deontic pair and tet being omitted in some cases although Lieu (2000: 30) claims that m-sii has no affirmative counterpart in Hakka. For the clitic-like tet, see Sun (1996) on Chinese 得 de and Lien (2010) on TSM 得 tit.
first two entries; *ho* or *tet* individually is not an affirmative modal in Hakka.\(^93\)

Next, there are two orders for *m*: *m-sii-(tet)* or *sii-m-(tet)*.

Also, Hakka relies on *tet*, initially meaning ‘to obtain’, for both abilitive and permissive uses. As noted previously, the bound morpheme *tet* in these words used to be a full-fledged verb. Recall that *hiau-tet* is used as an abilitive (modal) verb in Hakka, which suggests that *tet* alone may have once been used as abilitive and/or permissive modal. This then leads to a postulation that *tet* follows the same grammaticalization path as TSM *e*. Their features are like (91) and (92).

\[\begin{align*}
(91) & \text{TSM } e \& \text{解: [ability; permission; futurity]} \\
(92) & \text{Hakka } \text{tet} \& \text{得: [ability; permission]} \\
\end{align*}\]

The last items, *sii-tet* 使得 and *tso-tet* 做得, are interesting. I first examine the third entry in the table: *sii-tet*. Hakka *sii* 使 ‘to make; to order’ shares the same origin as *sai* in TSM permissive *e-sai*. Yet, the morphology of these two languages differs. *Sii* is the first element in Hakka *sii-tet*, whereas *sai* is a renewal in in TSM *e-sai*.\(^94\)

\[\begin{align*}
(93) & \text{ *sii* ‘make’ + *tet* ‘to obtain’ > *sii-tet* (Hakka permissive modal)} \\
(94) & \text{ *e* ‘know’ + *sai* ‘make’ > *e-sai* (TSM permissive modal)} \\
\end{align*}\]

\(^{92}\) The Hakka *mo* functions like Southern Min *bo*; chapter seven.

\(^{93}\) Yet, *ho* ‘good, alright’ can be used to allow/agree with somebody to do something.

\(^{94}\) TSM *e* is the root, while *tet* is the root in Hakka.
There are two negative counterparts for sii-tet: sii-m-tet or m-sii-tet, where the negative morpheme is either an infix or prefix. Examples of the use of sii-(m)-tet are as follows (Lieu 2000: 40):

(95)  **sii-tet** chia ngai hiet jit jia mo? Hakka
     can borrow lsg rest one night Q
     ‘Is it possible for me to take a rest here for a night?’

(96)  lia kai van **sii-m-tet** piang phet o. Hakka
     this CL bowl cannot throw PHET PAR
     ‘It is not possible (for you) to throw away this bowl.’

Historically, sii ‘to make’ and tet ‘obtain’ may have been individual lexical verbs in a sequence, and the infixal negation m may have appeared before the prefix m, based on Shi’s (2002) analysis.95

(97)  **sii m tet** > **m sii-tet**

I also investigate tso-tet 做得. The reanalysis of tso-tet is similar to that of sii-tet. Tso 做 means ‘to do’; therefore, tso-tet means ‘allowed to do something’.

(98)  tso ‘to do’ + **tet** ‘to obtain’ > tso-tet ‘allowed (to do something)’

The negative counterpart for tso-tet is either tso-m-tet or m-tso-tet; this resembles the previous Hakka deontic modal sii-tet.

(99)  tso 做 ‘to do’ + **m** + 得 **tet** ‘to obtain’ > tso-m-tet: ‘not allowed’

Examples are provided below in (100) through (102).

(100)  ngai m-hi **m-tso-tet**. Hakka; Hashimoto (1973)
     1sg not.go not.possible

---

95 I return to this topic in word order change of negation; chapter seven.
‘That I don’t go is not allowed.’ (I must go.)

(101) **m-tso-tet** sit to.  Hakka; Hashimoto (1973)

not.allow eat too.much

‘(You) are not allowed to eat too much.’

(102) **tso-m-tet** ngip hi?  Hakka; Lo (1988)

not.allow come in

‘(I am) not allowed to come in?’

Table 4.7 summarizes the system just discussed.

<table>
<thead>
<tr>
<th>verb</th>
<th>Dynamic abilitive</th>
<th>Epistemic futurity</th>
<th>Deontic permission</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>voi</strong> ‘know’</td>
<td><strong>voi</strong> ‘can’</td>
<td><strong>voi</strong> ‘will’</td>
<td><strong>sii-tet</strong> ‘can’</td>
</tr>
<tr>
<td></td>
<td>**hiau(-tet)’can’</td>
<td></td>
<td>**tso-tet’can’</td>
</tr>
</tbody>
</table>

There are two sub-systems of Hakka modals: **voi** and **V-tet**. Recall that when acting as a lexical verb, **voi** means ‘know’. **Voi** can also be used as abilitive ‘can’; **voi** can express futurity ‘will’. However, **voi** does not yield deontic modality; the **V-tet** system is used, instead, such as **sii-tet** or **tso-tet**. Note that **V-tet** also expresses ability, as in **hiau-tet**. Yet, **tet** in abilitive **hiau-tet** is optional but is obligatory in the deontic permission **sii-tet/tso-tet**.

Table 4.8 shows the negative counterparts of the modals in Table 4.7. As seen, the negative **m** is used for both **voi** and **V-tet** systems in Hakka.
Table 4.8
Hakka negative possibility modals

<table>
<thead>
<tr>
<th>verb</th>
<th>modal</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-voi</td>
<td>Dynamic abilitive Epistemic futurity Deontic permission</td>
</tr>
<tr>
<td>m-voi</td>
<td>m-voi</td>
</tr>
<tr>
<td>m-hiau; m-hiau-tet</td>
<td>m-voi</td>
</tr>
<tr>
<td>sii-m-tet; m-sii-tet</td>
<td>tso-m-tet; m-tso-tet</td>
</tr>
</tbody>
</table>

Two more issues need to be addressed in Table 4.8. The first topic centers around the use of one deontic modal over another. The literature has treated sii-tet and tso-tet as alternatives. Interestingly, there were only three examples with sii-tet and nine instances of sii-m-tet in Lieu’s (2000) corpora, where 303 tokens of Hakka modals from his fieldwork were recorded, and where voi accounts for the largest portion. While Hashimoto (1973) and Lo (1988) list both uses (sii-tet and tso-tet), Lieu (2000) does not address the use of tso-tet or tso-m-tet.

My Hakka consultants do not use the sii-tet/sii-m-tet set as modals. Sii ‘use’ is still used as a verb.

(103) qien sii 使/rhung 用 m det. Hakka
money use NEG able
‘The money, you cannot use it.’

One consultant pointed out the slight phonological difference in det. This reflects the degree of grammaticalization, in that det 得 has not become a fixed unit with the verb sii or rhung ‘to use’ and the negation m. Det is different from tet in the negative abilitive modal sii-m-tet ‘can.not’. The online dictionary of Hakka shows that sii-tet is used in one sub-dialect (Xixian 四縣) whereas tso-tet is
used in another (Hailu 海陸). It was consistent with my findings, as my consultants speak Hailu Hakka.

The other point is the affixation of negation. My consultants did not use the prefix \( m \) version; the infinal \( tso-m-tet \) is the only option. Diachronically, infinal negation is developed earlier than the pre-fixal type.  

In some cases, the fronting of \( m \) may not have taken place in syntax, thus making the infinal \( (tso-m-tet) \) the only option in morphology when these morphemes became one unit. This fact results in parametric differences among the Sinitic languages in their modal morphology. As explained, this morpho-syntax is only parametric, since the morphemes used in each language share the same or a similar origin.

### 4.5.5 A comparison of deontic modals.

Before moving to a larger scale of comparison among the three languages, I first address the fact that the pattern in Hakka deontic pair \( sii-tet/m-sii-tet \) can also be found in the other two languages, which I summarize in Table 4.9.

Table 4.9  
A comparison of permissive deontic modals

<table>
<thead>
<tr>
<th>TSM</th>
<th>Hakka</th>
<th>MSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>會使(得)</td>
<td>\textit{e-sai-(tit)}</td>
<td>使得 \textit{sii-tet}</td>
</tr>
<tr>
<td>決使(得)</td>
<td>\textit{be-sai-(tit)}</td>
<td>毋使得 \textit{m-sii-tet}</td>
</tr>
</tbody>
</table>

---

96 The online Hakka dictionary: [http://hakka.dict.edu.tw/hakkadict/index.htm](http://hakka.dict.edu.tw/hakkadict/index.htm)

97 Same as Footnote 87.
Two morphemes are crucial in Table 4.10. As previously discussed, 得 can be the source of abilitives. 使 means ‘to make’ and is pronounced as sai, sii, and shi in Southern Min, Hakka and Mandarin, respectively.

I first address the affixation of tit, tet or de, three of which share the same character 得. Historically, this morpheme as a lexical verb means ‘to get, to obtain’. De has undergone changes (Sun 1996; Wu 2006). In its modern use, de behaves like a clitic.\(^98\)

Below I first investigate Southern Min data. As noted, e 解 ‘know; comprehend’ and tit 得 ‘obtain’ are sources of ability in typology. TSM has two abilitive modals: e-hiau and e-hiau-tit although tit is often dropped. The same affixation applies to its deontic modal alternatives: e-sai and e-sai-tit.

In the middle column of the table, we see the Hakka modal sii-tet 使得. TSM and Hakka are alike in composing their deonticity. One similarity is that the deontic use of TSM e and Hakka tet develops from their abilitive origins. The apparent difference lies in affixation. TSM has sai 使 as a renewal attaching to e, making e-sai, whereas Hakka uses sii 使 as a prefix in sii-tet.

\(^98\) The word 得 in Mandarin is now used as a potential complement. Del/Bu is placed postverbally but it precedes the resultative complement; see examples below. This special word order certainly has to do with the diachrony of 得 (Sun 1996; Wu 2006).

(i) zhongwen bu nan, wo xue de lai.
   Chinese NEG difficult 1sg learn DE come
   ‘Chinese is not too difficult to learn.’

(ii) zhongwen hen nan, wo xue bu lai.
   Chinese very difficult 1sg learn NEG come
   ‘Chinese is too difficult to learn.’
Another difference between TSM and Hakka is the additional preverbal *e* in TSM *e*-sai-tit, probably due to the loss of features in the post-verbal element *tit* (Lien 2010). In contrast, there is no such prefix in Hakka.

We now turn to MSC in the rightmost column of Table 4.8. MSC has a comparable term 使不得 *shi.bu.de*, with no affirmative like *使得 shi-de*. 99, 100

(106) 使不得給她太大的壓力。 MSC

```
shibude  gei  ta  tai  da  de  ya.li
cannot  give  3sg   too   big   GEN  pressure
```

‘(We/You) cannot give her too much pressure.’

(107) 這萬萬使不得。 MSC

```
zhe  wanwan  shibude.
this  definitely  cannot
```

‘This (definitely) cannot be done this way.’

In brief, we learn that the MSC phrase 使不得 *shi.bu.de* patterns like its counterpart be-sai and sii-m-tet in TSM and Hakka, respectively. 101 The literature, however, has not addressed this topic. Rather, much has been written about MSC modals such as hui 会, neng 能, and keyi 可以, which are in general equivalent to

99 The affirmative form shi-de in Mandarin is causative. To express ‘you can give her pressure’, the modal keyi is used.

100 Note that for my MSC consultants, shi.bu.de is too formal or old-fashioned. Some have rarely heard of the use of (107) in everyday speech.

101 The deontic shi.bu.de 使不得 is less colloquial than the other modals that express permission such as bu.ke.yi 不可以 or bu.eng 不能 ‘cannot’
the permissive deontics of TSM or Hakka. I show MSC modal system in Table 4.10. However, I do not intend to include all complexity.\textsuperscript{102, 103}

Table 4.10
Mandarin possibility modal systems

<table>
<thead>
<tr>
<th>verb</th>
<th>modal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>dynamic abilitive</td>
</tr>
<tr>
<td>hui</td>
<td>hui</td>
</tr>
<tr>
<td>neng</td>
<td></td>
</tr>
<tr>
<td>keyi</td>
<td></td>
</tr>
</tbody>
</table>

In a nutshell, the morphology of Hakka deontic modals provides evidence of diachronic similarities among the Chinese languages. Despite that the three languages make use of a different morphology to mark deonticity, their sources and grammaticalization paths are similar. Three patterns are found:

(108) \[ V \rightarrow V-V_2, \text{ where } V_2 \text{ is a renewal, e.g. } sai \text{ in TSM deontic } e\text{-}sai \]

(109) \[ V_1 + V_2 \rightarrow V\text{-clitic, where } tit \text{ is the clitic, as in Hakka deontic } tso\text{-}tet \]

(110) \[ V_1 + \text{Neg} + V_2 \rightarrow V\text{-Neg-V as a compound; e.g. } Hakka \text{ } sii\text{-}m\text{-}tet \text{ and } MSC \text{ } shi\text{-}bu\text{-}de \]

\textsuperscript{102} I refer my reader to Lin (2003) on Mandarin and Hsin (1999) on Southern Min for further readings.

\textsuperscript{103} When \textit{neng} 能 is used as deontic, it can only be used in the negative form \textit{buneng}. Other alternatives are \textit{bu-xing} 不行 \textit{bu-cheng} 不成. The three morphemes are typically not used as modals:

\textit{*ni neng/xing/cheng likai le. 2sg can leave PAR Int.: ‘You can leave now.’}
4.5.6 Deontic modals.

Finally comes a review of the deontic modals in the three Sinitic languages. As discussed, *e-sai* 解使 is a deontic modal in Southern Min, much like the English permissive *can*. However, Hakka *voi* 會 does not express deonticity. Similarly, there is no permissive deontic modality in MSC hui 會. Instead, *keyi* 可以 is a possible candidate.¹⁰⁴

(111) li e-sai li.khui a. TSM
    ngi *voi hang.khōi leh. Hakka
    ni3 *hui/keyi li.kai le. MSC
    2sg can leave PAR

‘You can leave (now).’

4.5.7 Epistemic modals.

The last category I shall also address is epistemic modality. The epistemic use of *e* is similar to that of Mandarin hui 會 and Hakka voi 會.

(112) suissi e loh hoo. Southern Min
    suissi voi lok shui. Hakka
    sue.shi hui xia yu. Mandarin
    any.time FUR fall water

‘It will rain any time soon.’

Below are two more examples for Hakka epistemic voi or m-voi.

(113) tsii jiu sa-shiak voi jie lok loi. Hakka
    just have grit FUR toss fall come

‘There will be grit thrown down.’ (Lieu 2000:57)

¹⁰⁴ The negator *bu* 不 is typically used for modals in MSC, and thus the negative counterpart of *ke.yi* is *bu-ke.yi.*
(114) phet-sa jian m-voi shiau la. Hakka
others just NEG-FUR laugh PAR
‘(You) will not be laughed at by others.’ (Lieu 2000:57)

Interestingly, the epistemic sense of voi comprises the largest portion of Lieu’s (2000) corpora, accounting for 80% of his voi tokens. Recall that TSM e is mainly used as epistemic too. The grammaticalization pace of both languages is comparable.

I summarize my findings in Table 4.11. The morphemes of e, voi, and hui are used in Southern Min, Hakka and Mandarin, respectively.\textsuperscript{105}

Table 4.11
Possibility modals in Southern Min, Mandarin and Hakka

<table>
<thead>
<tr>
<th>verb</th>
<th>dynamic</th>
<th>epistemic</th>
<th>deontic</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>--</td>
<td>can</td>
<td>will</td>
</tr>
<tr>
<td>TSM</td>
<td>e-hiau</td>
<td>e or e-hiau</td>
<td>e</td>
</tr>
<tr>
<td>MSC</td>
<td>hui</td>
<td>hui</td>
<td>hui</td>
</tr>
<tr>
<td>Hakka</td>
<td>voi</td>
<td>voi</td>
<td>hiau</td>
</tr>
</tbody>
</table>

There are some similarities and differences. The similarity is that the epistemic modals are all monosyllabic in the three Sinitic languages. I compare each modal system below.

\textsuperscript{105} This table only shows the previously noted abilitive modals in the three languages. The fact that MSC hui and Hakka voi are not used as deontic does not mean that these two languages do not have deontic modals.
TSM is special in its full range of sub-categories, as seen in Table 4.11. TSM has e ‘know; comprehend’ as a lexical source and exhibits three major types of modals: abilitive, deontic and epistemic, with renewals observed in its abilitive and deontic modal uses such as e-hiau and e-sai. As for negation, be is the negative counterpart of e. The negative marker bu ‘not’ is used in MSC, and m ‘not’ for Hakka.

Unlike TSM, Hakka deontic modals are not morphologically associated with the abilitive voi. In Mandarin there are only two types of usage in hui: dynamic and epistemic.¹⁰⁶ Likewise, Hakka uses voi for these two. In other words, deontic modality is lacking in Mandarin hui and Hakka voi. These two languages use other words for deontic modals. In contrast, English can covers the three types.

In addition to voi, hiau-tet, is another candidate for Hakka abilitive modals. Their negative counterparts are m-voi and m-hiau-tet, respectively. Similar to Hakka m, MSC makes use of a grammatical marker bu to express negation of its modals, such as bu-hui 不會 ‘not-able’ and ‘will.not’.

As seen, there is not necessarily a one-to-one relationship in modal expressions among the investigated languages; nevertheless, their grammaticalization path is nearly identical and the lexical sources are typologically similar. The English possibility modal system shares similarities with TSM e in that can originates as a verb, meaning ‘know’ and the modal can is used in three types of modality: abilitive, permissive and epistemic. However, can

¹⁰⁶ There are other modals in MSC, but I do not intend to cover them all.
as epistemic is not the same as TSM e ‘will’ as well as its counterparts voi and hui in the other two Sinitic languages.107

4.5.8 Differences in word order.

The last topic covered in this comparison section is word order of the modals. First, let us examine abilitive modals. Like English can, the Sinitic abilitive modals appear before the verb.

(115) abilitive modals; pre-verbal
   i be kiann a. TSM
   ki m-voi hang leh Hakka
   ta bu-hui zuolu le MSC
   3sg cannot walk PAR
   ‘He can’t walk any longer.’

However, there is another word order for abilitive modals. The negative is placed between the verb and the resultative complement; negation only scopes over the resultatives.108

(116) abilitive modals; between V and resultative
   i kiann be ting-tang a. TSM
   ki hang m tet leh. Hakka
   ta zou bu dong le. MSC
   3sg walk not move PAR
   ‘He can’t walk any longer.’

107 As will be introduced in the next chapter, the epistemic use of TSM e/be is used as English ‘will’ rather than ‘can’.

108 I use zuolu instead of zuo in (115) simply because zuo can also mean ‘to leave’, which will result in another reading ‘He will not leave’.
Despite the fact that the examples (115) and (116) can express a loss of walking ability, only the latter can mean that a person can’t walk, for instance, due to temporary fatigue.

Also, note that the structure of MSC example in (116) is not \( V + bu-hui + \) resultative; the abilitive modal hui has to be eliminated, leading to a \( V-bu-\) resultative string. The negative bu here is not a pure negative; it is associated with abilitive modality. Same as the Hakka m. That is, bu or m in this specific construction carries both negation and modality.\(^{109}\)

There are also two word orders for deontic modals. They can be preverbal or occupy the final position of a sentence.\(^{110}\)

(117) deontic modals; pre-verbal

\[
\begin{array}{lll}
\text{li} & \text{be-sai} & \text{bo} \\
\text{gni} & \text{tso-m-te} & \text{m} \\
\text{ni} & \text{bu-neng} & \text{bu} \\
\end{array}
\]

TSM

\[
\begin{array}{lll}
\text{tsiah} & \text{png.} & \text{sit} & \text{fan.} \\
\text{m} & \text{sit} & \text{fan} \\
\text{bu} & \text{chi} & \text{fan} \\
\end{array}
\]

MSC

\[
\begin{array}{lll}
2\text{sg} & \text{not.possible} & \text{NEG} \\
\text{eat} & \text{rice} \\
\end{array}
\]

‘You cannot not eat/You must eat.’

(118) deontic modals stranded

\[
\begin{array}{lll}
\text{li} & \text{bo} & \text{tsiah} & \text{png} \\
\text{gni} & \text{m} & \text{sit} & \text{fan} \\
\text{ni} & \text{bu} & \text{chi} & \text{fan} \\
\end{array}
\]

TSM

\[
\begin{array}{lll}
\text{be-sai.} & \text{tso-m-tet.} & \text{bu-neng.} \\
\text{Hakka} & \text{Hakka} & \text{MSC(?)} \\
\end{array}
\]

\[
\begin{array}{lll}
2\text{sg} & \text{NEG} & \text{eat} & \text{rice} \\
\text{not.possible} \\
\end{array}
\]

‘You cannot not eat/You must eat.’

\(^{109}\) This modality \textit{bu/m} is in contrast to the traditional view that \textit{bu/m} are pure negatives for stative verbs and modals.

\(^{110}\) Note that single negative sentences do not work as well as the double negative ones, shown above, particularly the word order in (118). I leave the question as to why for future research.
The pre-verbal modal verb position and the fronting of the clause are both observed. However, preferences differ among three languages. In (118), the Southern Min and Hakka data are just as good as their preverbal counterparts of (117); however, the MSC example *bu-neng* 不能 in (118) is less preferred. My consultants chose other words such as *bu-keyi* 不可以, *bu-cheng* 不成 or *bu-xing* 不行, for the stranded modal cases.\(^{111}\)

There is only one word order for epistemic modals. The epistemic *e* in TSM is always preverbal and so are Hakka *voi* and MSC *hui*.

(119) i
be tso kong.ko. TSM
ki m-voi tso kong.ko. Hakka
ta bu-hui zuo gong.ke. MSC
3sg not.FUR do homework
‘He will not do his homework.’

Note that there is an ability interpretation in Hakka and MSC (119) as ‘He doesn’t know how to do his homework’, given that Hakka *voi* and *hui* are less grammaticalized than *e*. To get the ablitiive reading, TSM *be-hiau* is used.

However, with an additional *qu* ‘go’ between the modal and the verb *zuo* in the MSC example, *hui* only means ‘will’. The deictic *qu* reinforces the futurity reading.\(^{112}\) The same applies to TSM and Hakka (120), as *be* and *m-voi* also serve as futurity.

\(^{111}\) *Bu-cheng* and *bu-xing* are not modal verbs.

\(^{112}\) MSC directional words *lai* ‘come’ and *qu* ‘go’ express futurity just like the English infinitive *to*, but the use of *lai/qu* as ‘to’ is restrictive. The same applies to the other two languages under investigation.
4.6 Conclusion

This chapter covers a comprehensive list of topics regarding $e$ and its negative counterpart $be$ in Southern Min from both synchronic and diachronic perspectives. Southern Min $e$ originates as a lexical verb ‘to know, to comprehend’, which is often one of the sources for ability-related modals cross-linguistically. The other modals derived from $e$ include abilitive $e$-hiau, and deontic $e$-tang, $e$-ing or $e$-sai. The negative of $e$ is $be$, which is believed by many to be the fusion of $m$ ‘not’ and the affirmative modal $e$.

In this chapter I first reviewed previous research on $e/be$ and then presented my corpus analysis on $be$ in order to prepare my reader for the theoretical account for the grammaticalization of $e/be$. Based on the diachronic development, I explain the grammaticalization of Southern Min abilitive $e/be$ modal pair using Minimalist Economy Principle, particularly feature loss, which results in the reanalysis of an element in a higher head position. Last, I provide a sentence-to-sentence comparison of possibility-based modals (ability, permission, and probability) among the three Sinitic languages, focusing on parametric divergence that is under-researched.

Much morphology and syntax is observed in the Southern Min $e/be$ pair in its formation of abilitive and deontic modals. Also witnessed yet less addressed in
the literature is the rich historical stratification in the morpho-syntactic process of TSM abilitive *e/be* and its Hakka counterparts. This polysyllabic phenomenon is distinctive from other Sinitic languages, particularly MSC, which basically utilizes monosyllabic modals. For example, MSC doesn’t have the combinations of *jiexiao* 解曉 or *xiaode* 曉得 as abilitive modals. Neither does MSC use *jieshi* 解使 or *shide* 使得 for deontic modals.

The epistemic paradigm is not as simple as it first looks: TSM *e*, Hakka *voi* and MSC *hui*. These abilitive modals do not behave the same as English *can*. *Can* moves quite freely between epistemic, abilitive, and deontic interpretations, and may be interchangeable with *may* in some cases. Sinitic abilitive modals typically are used for ability and permission, but also extends its uses to futurity, the latter use of which is equivalent to English *will*.

My major contributions in this chapter are as follows: I discuss a full range of reanalyses found in Southern Min abilitive *e/be* pair. I provide a theoretical ground for the multi-morphemic modals derived from *e/be*. I suggest a different gloss for epistemic *e/be* in TSM as FUR. I show how the Hakka deontic paradigm relates to the other two Sinitic languages from a historical respective. I include modality and negation into morphology.
Chapter 5

THE VOLITIONAL MODALS BEH AND M

This chapter centers around the grammaticalization of the volitional modal pair beh and m, meaning ‘want’ and ‘not.want’, respectively. Multiple categories can be applied to beh/m, ranging from lexical verbs, modals (both deontic and epistemic), to discourse markers. The Economy Principles are adopted to account for linguistic change in beh/m. Results show that the Sinitic languages have similar grammaticalization processes for volition markers.

This chapter is divided into five parts: I first provide basic information about the affirmative/negative volitional pair beh/m. Section 5.2 discusses the synchronic status of beh/m, followed by its diachronic development in Section 5.3. I account for the grammaticalization of beh/m in Section 5.4. The last section covers key parametric differences for the volition markers among three Sinitic languages. English will and want are also discussed.

5.1 Introduction

Southern Min negative m has received extensive attention in the literature. A fascinating fact about this morpheme is that m bears both volition and negation; however, m can also be a pure negator; compare (1) and (2).

(1) i beh/m tsiah png.
    3sg want/not.want eat rice
    ‘He wants/doesn’t want to eat (meals).’

113 Note that the title “volition” is used for convenience, as we shall see in this chapter that more categories are applied to beh/m.
‘It is not the case that he doesn’t want to eat (meals).’

Whether there are two $m$’s or only one $m$ remains debatable. Some linguists (Teng 1992; Tang 1994; Lin 2004) suggest that $m$ is the default negative in Min, and other forms are the result of the phonetic fusion of $m$ and another element. Others propose that there are two $m$’s (Li 1971; Lin 1974). In this study I assume that $m_1$ is the negative modal of beh ‘want’, whereas $m_2$ is a pure negator.

Before I conduct a more in-depth investigation of volition beh/$m$ in Southern Min, I provide English data below, some of which will be further visited in the section of comparative studies. The concept of desire expresses “internal volitional conditions in the agent with respect to the predicate action” (Bybee et al. 1998: 178). The authors provide an example from Coats (1983: 212), where would means ‘wanted to’.

(3) *Juan Ortiz called to them loudly in the Indian tongue, bidding them come forth if they would* save their lives.

Tracing further back, Bybee et al. (1998: 178) suggest the diachrony of modern English want as: Old Norse ‘to lack or miss’ > ‘need’ > ‘desire’ (since 18th century). Interestingly, English will is also from a ‘desire’ source in Middle English.
5.2 Synchrony of beh/m

Both beh and m have been discussed in the literature (Lien 2008; Chang 2009). I focus on what has not been addressed or has received less attention. A negator can be added to beh ‘want’, giving rise to the negative bo-beh/bo-ai ‘not-want’. Another modal auxiliary ai 愛 (originally, ‘desire; love’) is discussed here, as it is also used in the volition paradigm. Table 5.1 shows the categorical status of the negative m in modern Taiwanese Southern Min. For instance, m is not a verb and another option bo-beh or bo-ai is used both as a verb and a modal. All the three words on the leftmost column are also used to express negation, but only m can be used as yes/no interrogative markers.

Table 5.1
Categorial status of m

<table>
<thead>
<tr>
<th>Verb</th>
<th>TAM</th>
<th>NEG</th>
<th>QM</th>
</tr>
</thead>
<tbody>
<tr>
<td>m ‘not.want’</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>bo-beh ‘not-want’</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>bo-ai ‘not-want’</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Traditionally, m ‘not.want’ and its positive modal counterpart beh ‘want’ form a systematic pair to denote volition. However, asymmetry is observed in the contemporary TSM corpora.

5.2.1 beh/m as lexical verbs.

There are three key points in the lexical use of volition in contemporary Southern Min. I have observed an interesting asymmetry between beh and m in their usage as a verb. In (4), beh is a verb, meaning ‘to want’, while the negative
\( m \) does not serve as a verb. Instead, a negation \( bo \) and verb \( ai \) are used to contrast with the affirmative volitional verb \( beh \), as shown in (5).

(4) \( \text{3sg want apple not.want tangerine} \)

\text{Int. ‘He wants apples, but not tangerines.’}

(5) \( \text{3sg want apple not want tangerine} \)

‘He wants apples, but not tangerines.’

There are other changes in the lexical verb \( beh \) too, to which I will come back in section 5.3, when diachrony of \( beh/m \) is addressed.

5.2.2 \( beh \) as a modal.

The affirmative modal \( beh \) is multi-functional as opposed to the negative \( m \).

Lien (2008) suggests three meanings for \( beh \): (a) ‘want’ as in (6), (b) ‘approach’ as in (7), and (c) ‘approximate’ as in (8). Lien points out that \( tih \) \( beh \) in (7) and \( beh \) \( oa \) in (8) clarify ambiguity.

(6) \( \text{beh tshoa boo. TSM; Lien (2008: 1)} \)

\( \text{want marry wife} \)

‘(He) wants to get married.’

(7) \( \text{tih beh am a. TSM; Lien (2008: 1)} \)

\( \text{about approach dark PAR} \)

‘It’s approaching dusk.’

(8) \( \text{beh (oa) tsap kin. TSM; Lien (2008: 1)} \)

\( \text{approximate close ten half-kilogram} \)

‘It’s almost 5 kilograms.’
The use of *beh* is not this simple, however. *Beh* can also be used for immediate future ‘going to’; see (9), which is modified from (6). Note that there are two changes: the semantics of *beh* and the additional *a*, which marks inceptiveness.

(9) *i* *beh* tshoa boo a.
    3sg going.to marry wife PAR
  ‘He is going to get married.’

Chang (2009: 70) associates the future sense in *beh* with an inanimate sentence subject and glosses it as ‘will’. I disagree with this analysis. Example (9) shows that *beh* can be used with a human subject *i* ‘he’, and ‘will’ does not show the immediate feature of *beh*. With the marker *a*, *beh* is forced to read as future. Sentence (9) shows how aspect interacts with modality.

*Beh* can induce a necessity reading too, as in (10).

(10) ma m tsai *beh* to tsit hang sing pan.
    also NEG know need which one CL first do
  ‘I don’t know which I need to do first.’ (Chang 2009: 73)

In addition to *beh*, *ai* 覺, originally ‘love’, is also used as volitional. *Beh* and *ai* are often interchangeable, but they differ both in category and interpretation, less so in syntax.

Briefly, whereas *beh* has epistemic readings, *ai* doesn’t, as in (7)’.

(7)’ *(tih) *ai* am a. TSM; Lien (2008: 1)
    about approach dark PAR
    int. ‘It’s approaching dusk.’
On the other hand, *ai* yields deontic necessity ‘should, ought to, must’, but *beh* doesn’t, as in (11).

(11) li ai tshoa boo.
    2sg ought.to marry wife
    ‘You ought to get married/have a wife (speaking to a male).’

Two other forms, *siunn-beh* 想欲 and *siunn-ai* 想愛 (literally think-want/think-like), are also heard among speakers of modern TSM.

(12) *siunn-beh* ‘think-want’/ *siunn-ai* ‘think-desire’ > ‘want’

Table 5.2 summarizes a list of words derived from *beh* or *ai*. I adopt van der Auwera and Plungian’s (1998) modal classification. Note that *ai* overlaps in both ‘need’ and ‘want’ systems, which I address in chapter six.

Table 5.2
The distinction between *beh* and *ai*

<table>
<thead>
<tr>
<th></th>
<th><em>beh</em></th>
<th><em>ai</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td><em>beh</em> ‘going to’</td>
<td></td>
</tr>
<tr>
<td>participant internal</td>
<td>*(siunn-)*beh ‘want’</td>
<td><em>ai</em> ‘want’</td>
</tr>
<tr>
<td></td>
<td>*(siunn-)*ai ‘want’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*[ai ‘need’]</td>
<td></td>
</tr>
<tr>
<td>participant external</td>
<td>*[beh]</td>
<td>*[ai ‘need’]</td>
</tr>
<tr>
<td>(non-deontic)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*[beh]</td>
<td>*[ti(oh-)*ai ‘should, must’]</td>
</tr>
<tr>
<td>participant external</td>
<td>*[beh]</td>
<td>*[ti(oh-)*ai ‘should, must’]</td>
</tr>
<tr>
<td>(deontic)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.2.3 *m* as a modal.

Lien (2008) suggests that *m* is volitional when followed by a dynamic verb or a stative verb, as in (13) and (14). (Translation and glosses are mine.)
(13) 卜食搁毋討趁。  Lien (2008, p.11, (125))
beh tsiah ko m to-tan.

want eat but unwilling earn

‘(He) wants to make a living but is unwilling to make effort.’

(14) 你攏毋對我好。  Lien (2008, p.11, (128))
li long m tui gua hoo.

2sg LONG not.willing PREP 1sg good

‘You are not willing to treat me well.’

Lien notes that *m* can be substituted for by *bo-beh* or *bo-ai*. A closer look reveals that the disyllabic negatives each consist of a negative and a desiderative modal. A phonetic fusing of *bo-ai* (*bai*) can also be used; see (16).

(15)  *bo-beh* = bo ‘not’ + beh ‘want’
(16)  *bo-ai* = bo ‘not’ + ai ‘desire; love’ > *bai*

These three negative modals (*m*, *bo-beh* and *bo-ai*) are thus competing forms (Lien’s term) in modern TSM, although they are not completely interchangeable. I provide two examples below. The following question to be asked is how the three negative modals differ.

(17)  i beh khi Taipak. (affirmative)

3sg want go Taipei

‘He wants to go to Taipei.’

(18)  i m/bo-beh/bo-ai khi Taipak. (negative)

3sg not.want go Taipei

‘He doesn’t want to go to Taipei.’
To show the differences, Lien (2008: 13) demonstrates the occurrence of the three alternative negative volitional modals, which I summarize in Table 5.3. The left-most column shows the verbs following the negative marker.

Table 5.3
The competing forms for ‘not.want’ in TSM

<table>
<thead>
<tr>
<th></th>
<th>monosyllabic</th>
<th>disyllabic</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m</td>
<td>bo-beh</td>
<td>bo-ai</td>
</tr>
<tr>
<td>食 tsiah ‘eat’</td>
<td>12 (67%)</td>
<td>2 (11%)</td>
<td>4 (22%)</td>
</tr>
<tr>
<td>持 tih ‘to get’</td>
<td>6 (43%)</td>
<td>7 (50%)</td>
<td>1 (7%)</td>
</tr>
<tr>
<td>共 ka ‘with’</td>
<td>27 (54%)</td>
<td>8 (16%)</td>
<td>15 (30%)</td>
</tr>
<tr>
<td>去 khi ‘to go’</td>
<td>19 (70%)</td>
<td>3 (11%)</td>
<td>5 (19%)</td>
</tr>
</tbody>
</table>

I discuss three topics left unaddressed by Lien (2008). First, m still remains as the most frequently used negative volitional modal, based on Lien’s data.

Frequencies however vary depending on the verb. For instance, the distribution of m tih and bo-beh tih (the 2nd entry) is approximately of ratio 1 to 1 in his data.

I provide examples below to demonstrate the alternatives. Recall the lexical ‘want’; contrasting examples in (4), m cannot appear alone as a verb.

(4) i beh lingo; *m kam-a.  
3sg want apple not.want tangerine  
Int. ‘He wants apples, but not tangerines.’

(19) and (20) show that both m tih and bo-beh tih are equally acceptable.

(19) i beh (-tih) lingo, m tih kam-a.  
3sg want get apple not.want get tangerine  
‘He wants apples, not tangerines.’
Although the percentage of another alternative bo-ai with tih is relatively low (7\%) in Table 5.3, bo-ai-tih in (21) sounds as good as (19) and (20) for my consultants. One consultant pointed out that when tih is not attached in the second phrase, bo-ai sounds better than bo-beh.

Second, according to my consultants, m and bo-beh/bo-ai are not entirely interchangeable. One needs further information to know which word is more appropriate. For instance, in (22), with m, the sentence means that someone does not have the intention of eating beef.

The above can be also used in a complaint, where someone doesn’t eat beef although his mother cooks beef well. The sentence can also give rise to a habitual reading, indicating that this person chooses not to eat beef, such as for religious beliefs; ‘he doesn’t eat beef’. Bo can be used to replace m, as in (23).

(20) i beh (-tih) lingo, bo-beh (-tih) kam-a.  
3sg want get apple not.want get tangerine  
‘He wants apples, not tangerines.’

(21) i beh(-tih) lingo; bo-ai (-tih) kam-a.  
3sg want (-get) apple not.like(-get) tangerine  
‘He wants apples, not tangerines.’

(22) i m tsiah gu-ba.  
3sg not.want eat beef  
‘He doesn’t intend to eat beef.’

(23) i bo tsiah gu-ba.  
3sg not eat beef  
‘He doesn’t eat beef.’
With *bo-beh* as in (24), the meaning is similar to that of (22), but for a particular instance. For example, today for a particular meal, a person does not feel like having beef.

(24) i jit tng bo-beh tsiah gu-ba.

\[3sg \text{ this meal not-want eat beef}\]

‘He doesn’t intend to eat beef for this meal.’

Lastly, when *bo-ai* is used, the ‘liking’ of *ai* is very strong for several of my consultants. Example (25) means that a person tends to avoid eating beef for preference reasons, perhaps because beef to this person is not tasty.

(25) i bo-ai tsiah gu-ba.

\[3sg \text{ not.like eat beef}\]

‘He doesn’t like to eat beef.’

The above-mentioned slight differences among (22)-(25) can be explained by the fact that the positive counterpart *beh* and the word *ai* ‘love; like; desire’ are undergoing change as well. Consequently, some ambiguity may arise as in (26). *Beh* shifts between desire and futurity, the latter of which is more grammaticalized.

(26) gua bo beh khi Taipak. TSM; Wu (2009: 26)

\[1sg \text{ not BEH go Taipei}\]

a. ‘I don’t want to go to Taipei.’ (Wu’s translation)

b. ‘I’m not going to Taipei.’
To disambiguate between the interpretations, *siunn* ‘think’ is often added to make the volitional reading more clear; see (27). *Siunn* forces a volitional reading.

(27) gua  bo  **siunn**-beh  khi  Taipak.

1sg  NEG  think-want  go  Taipei

‘I don’t want to go to Taipei.’

The two interpretations of *bo-beh* in (26) echoes Chang’s (2009) findings about the grammaticalization of *beh*: its loss of volition and gain in futurity. Crucially, when the meaning of *beh* shifts, the system of its negation *m* changes accordingly.

The shift can also be observed in questions. For example, in (28), the affirmative volitional modal *beh* is used in questions, and *m* is used to negate *khi ‘go’ in the answer in (28a).\footnote{The question marker *bo* in (28) is not canonical; typically, *m* is chosen over *bo*. We thus see multiple ways in the answer.} *M* can appear alone as an answer, but *bo-beh* cannot, as shown in (28b) and (28c). While *bo-ai* can be used as an answer, *bo-beh* has to be accompanied by the verb *khi ‘go’; see (c) and (d). This means that *bo-beh* is less modal-like.\footnote{Note that a TSM modal can serve as an answer.}

(28) li  **beh**  khi  Taipak bo?  Wu (2009: 34)

2sg  want  go  Taipei  Q

‘Do you want to go to Taipei?’

a.  **m**  khi.

  not.want  go

  ‘I don’t want to go.’

b.  **m.**

  not.want

  ‘I don’t want to.’
c. *bo-beh./ bo-beh khi.  
not-want/ not-want go
'I don’t want to go.'

d. bo-ai (khi).
not-want  go
'I don’t want to.'

5.2.4 The pure negative \textit{m}. 

Among the five basic negative elements in TSM, \textit{m} is unique in its \textit{m}_1 versus \textit{m}_2 distinction. The pure negative \textit{m} is often labeled as \textit{m}_2 in the literature, as opposed to \textit{m}_1 ‘not.want’, discussed previously. There has been a lot of discussion on \textit{m}_2 and its verbal selection restrictions. For instance, Li (2007) suggests that \textit{m}_2 is used to negate a fact or status. Crosland (1998: 261) demonstrates that only a limited number of verbs occur with \textit{m}_2 (chapter three).

Lien (2008) shows that there are three major categories with which the pure negative \textit{m}_2 is compatible. I chose examples from Lien, shown in (29)-(32) for further explanations; transcriptions and translation are mine. These three are in principle parallel to those in Crosland’s (1998) system.

1. \textit{m} with stative verbs: 赤 \textit{si} ‘be’, 著 \textit{tioh} ‘correct’, or 知 \textit{tsiann} ‘to know’

(29) siah \textit{m} tioh khi a. 寫毋著去啊 Lien (2008: 9, (108))
\begin{align*}
\text{write} & \quad \text{NEG} \quad \text{correct go} \quad \text{PAR} \\
\text{(someone) wrote (something) incorrectly.}'
\end{align*}

2. \textit{m} with the experiential marker \textit{bat}

(30) 師傅仔根本毋捌共講過這句話 Lien (2008: 10, (118))
\begin{align*}
su-fu-a kun.bun & \quad \text{m}-\text{bat} \\
\text{master basically} & \quad \text{NEG-EXP} \\
\text{ka} & \quad \text{kong} \quad \text{kue} \quad \text{tsit} \quad \text{ku} \quad \text{ue.} \\
\text{PREP} & \quad \text{say} \quad \text{EXP} \quad \text{this} \quad \text{CL} \quad \text{sentence} \\
\text{‘Our master did not ever say such a thing.’}
\end{align*}
3. *m* with modals, such as 通 *thang* ‘can’, 肯 *khing* ‘willing’, or 敢 *kann* ‘dare’\(^{116}\)

(31) 千萬毋通用手去摸     Lien (2008: 10, (119))
    tsian.bam **m**-thang tiong tsu khi bong.
certainly NEG-allow use hand go touch
‘Definitely do not touch (this) with (your) hands.’

(32) 伊麼毋敢倒轉去     Lien (2008: 10, (120))
    i ma **m**-kann to tnn khi.
    3sg PAR NEG-dare back return go
‘He did not dare to return (home).’

We need to treat *m* in the above modal cases, as the pure negative *m*\(_2\), in
that the following combinations are simply unavailable.

(33) *beh-tang* intended: ‘allow’
    *beh-kan* intended: ‘allow’
    *beh-kenn* intended: ‘willing’ (*beh* is the affirmative counterpart of *m*.)

It is problematic that *m*\(_2\) only negates a limited selecting verbs. As a pure
negator, *m*\(_2\) should be relatively free with whatever accompanies it. Another
puzzle is that if *m*\(_2\) is pure negation for modals in TSM, why is *bo-beh* or *bo-ai*
with a different negative *bo* also possible? I address this topic in chapter seven,
when *bo* is discussed.

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\(^{116}\) *Khing* and *kann* are modals in TSM; the translation is for semantics only.
5.2.5 Other categories.

This section addresses other uses of \( m \) and beh. \( M \) can also be found in the CP level, such as to confirm, to call attention or to assert. There is no specific meaning in \( m \) in (34); \( m \) may be translated as ‘and this is it’ or ‘you know’. I am agnostic about if this \( m \) is the same morpheme.

(34) 啊就彼个囝仔掠去關啊毋
    a-to hi e gin-a liah khi kuain a m
    PAR that CL kid catch go prison PAR M
    ‘That..it is that the kid was sent to prison, you know.’

Also, one can find \( m \) attached to a modal or adverb for emphatic purposes.

Examples are (35) through (37).

(35) tsit.si sit tsi m bian uan.than.
    temporarily lose hope M need.not sadden
    ‘You need not feel saddened due to your temporary loss of hope.’

(36) 你做人的牽手，
    li tso lang e kuan-tshiu, ang-sai
    2sg do person GEN wife husband
    翁婿若有做啥物毋著的代誌，
    na u tso m-tioh e tai-tsi,
    if ASP do not-correct REL thing
    你母就小可共伊苦勸一下
    li m-tioh sio-khua kah i khoo-khng tsit-e
    2sg M-tioh a bit PREP 3sg advise a bit
    ‘As a wife, your husband, if he does something wrong, you should give him a bit of advice.’

(37) 啊毋才轉世來予彼个先生做子毋
    a m-tsiah tsuan-se
M in (35)-(37) does not give rise to a negative reading. Lien (2008) suggests the use in (35) as negative concord. I, however, argue against his negative concord proposal; see chapter six.

Now, we examine beh. Beh can be a C. Examples (38) and (39) show how the conditional beh ‘if’ is used. Note that beh is often used in the form na-beh 若 and/or together with a copula si.

(38) beh gua tsiah sann kang to thiam a. Chang (2009: 76) if 1sg eat three day then tired PAR
‘If it were me, I’d get sick after eating (…) for three days.’

(39) na-beh(-si) gua, (gua) tsiah sann kang to thiam a. if-if(-COP) 1sg, 1sg eat three day then tired PAR
‘If it were me, I’d get sick after eating (…) for three days.’

na 若 and beh 卜 can be separable as in (40), where we also see a contrast between bo-ai and the pure negative m2.

(40) 有人若講卜
u lang na kong beh exist person if say want/if 叫你做啥物工課，
kio li tso siann-mih khang-khue, ask 2sg do what work
你就無愛做，毋願意啊，
li tioh bo-ai tso, m-guan-i a. 2sg then NEG-want do NEG-willing PAR
‘If someone asks you to do some work, you often do not want to do, with no intention (at all).’

5.2.6 Concluding remarks.

In conclusion, beh and m are a volitional pair, meaning ‘want’ and ‘not.want’.

Beh has a near synonym ai, which functions as a substitute in some cases, but not always. Southern Min distinguishes m₁ from m₂, with m₁ serves as volition negation ‘not.want’ and m₂ as a pure negative. However, m₂ only occurs with copular and stative verbs or modals. In addition to m, two other forms, bo-beh and bo-ai, are used as negative volitions. Finally, m also functions as a discourse marker, and beh can appear as a conditional complementizer, often in the form of na-beh ‘if-if’.

5.3 Diachrony of beh/m

This section begins with the origin of beh and m, followed by a review of previous studies on the affirmative beh and its near synonym ai, meaning ‘love, desire’ originally. Corpus data are examined to provide additional evidence to argue against existing findings.

5.3.1 The origin of beh/m.

1. on beh. The affirmative beh ‘want’ is from a different origin than 欲 and 要. The MSC Pinyin for the latter two morphemes are yu and yao. The historical text Zhuzi yulei consists of six volitional verbs as in Table 5.4.¹¹⁷ As

¹¹⁷ The number of tokens is in brackets; I added modern TSM pronunciation and English translations.
seen in the transcription, no word in this table shares a similar pronunciation as 
*beh* in modern TSM.

Table 5.4
Volitional verbs in *Zhuzi* (adapted from Wu 2004a: 74-76)

<table>
<thead>
<tr>
<th>肯 [56] khang ‘be willing’</th>
<th>要 [212] iau ‘want’</th>
</tr>
</thead>
</table>

The table shows that *iok* 欲 and *iau* 要 comprise of the most frequently used volition words in this text. TSM *beh* is not close to either in terms of pronunciation. Also, in modern TSM, the morpheme 欲 in 欲望 iok-bong ‘desire’. Nonetheless, the character 欲 is suggested by Taiwan Ministry of Education to represent *beh*, for semantic reasons. Yet, another character 卜 may be chosen by scholars too.

Chang (2009: 57; footnote 5) clarifies that *beh* is not a cognate to the Chinese 欲 or 要 ‘to desire, to want’. What is the source of *beh*? There are two lines of postulation (Chang 2009: 79). One postulation points to a result from dialectal contact. The other possibility is that *beh* is a borrowing.

2. *on m* 毋 The character 毋, pronounced as *wu* in modern Mandarin, is often chosen by scholars to represent the concept of Southern Min *m* ‘not.want’. However, I didn’t find any entry from the available sources that corresponds to volition for 毋. Pulleyblank (1995) notes the *m/w* initials in negation modality. As

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118 The writing for Mandarin Chinese is 慾望.
m does not have a vowel, any m/w negative in archaic Chinese can be a candidate for m; however, none of the m- negatives in his list means ‘not want’.

The dictionary Shuowen defines 毋 as ‘to stop (it)’, and thus it can be used for advising or prohibitives, ‘not to; do not’.\textsuperscript{119} This prohibitive 毋 may carry deonticity, but it is not volition. In other cases 毋 is a negator, equivalent to bu 不 ‘not’, or to wu 無 ‘not have’.

The morpheme 毋 is not a common negative in MSC, as it is mostly used in frozen expressions (41). The prohibitive 毋 does not survive to this date, either.

\begin{verbatim}
(41)  wu  yong  zhi  yi  毋庸置疑
       NEG  use/need  place  doubt
‘without doubt’
\end{verbatim}

One of the dictionary definitions for 毋 is ‘nobody’; see (42). This instance is interesting, as the English negative not comes from ‘no creature’.

\begin{verbatim}
(42)  jun  zhong  wu  sheng,  
       place  center  not.have  sound
     wu  gan  ye  xing
     nobody  dare  night  walk
‘There is no sound (somewhere), and nobody dares to walk at night.’
\end{verbatim}

The last use of 毋 from the dictionaries appears in the beginning of a sentence and it does not carry semantics. This point is crucial as we have seen m

\textsuperscript{119}《說文》：“毋，止之也。人 人女，有奸之者。”
as emphatic without a specific meaning. This phenomenon is also found in TSM
\textit{be} (chapter 4) and \textit{bo} (chapter 7).

5.3.2 Development of \textit{beh}.

The morpheme \textit{beh} is by no means an unfamiliar topic for researchers.

Many have worked on either the categorial status or the diachrony of \textit{beh}, such as Cheng (2003), Chang and Chen (2003), Lien (2008), and Chang (2009). I use
Chang’s (2009) summary, illustrated in Table 5.5, as an overview of the
diachrony of \textit{beh} (classifications are hers; highlights mine.) Chang provides good
examples; I however look at the categorial shift of \textit{beh} and its system of
affirmation and negation.

Table 5.5
Diachronic development of \textit{beh} (Chang 2009: 77)

<table>
<thead>
<tr>
<th></th>
<th>16-19\textsuperscript{th} cy.</th>
<th>late 19\textsuperscript{th}-early 20\textsuperscript{th} cy.</th>
<th>1995-1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>\textit{want} of an entity</td>
<td>46 (6.3%)</td>
<td>43 (11.6%)</td>
</tr>
<tr>
<td>2.</td>
<td>\textit{want} for something to happen</td>
<td>440 (60.3%)</td>
<td>240 (64.5%)</td>
</tr>
<tr>
<td>3.</td>
<td>future</td>
<td>65 (8.9%)</td>
<td>35 (9.4%)</td>
</tr>
<tr>
<td>4.</td>
<td>necessity</td>
<td>76 (10.4%)</td>
<td>14 (3.8%)</td>
</tr>
<tr>
<td>5.</td>
<td>proximative</td>
<td>11 (1.5%)</td>
<td>8 (2.2%)</td>
</tr>
<tr>
<td>6.</td>
<td>conditional</td>
<td>85 (11.6%)</td>
<td>23 (6.2%)</td>
</tr>
<tr>
<td>7.</td>
<td>others</td>
<td>7 (1%)</td>
<td>9 (2.4%)</td>
</tr>
<tr>
<td>Total</td>
<td>730</td>
<td>372</td>
<td>204</td>
</tr>
</tbody>
</table>

The table shows that \textit{beh} has been used for various meanings during the
three time periods chosen by Chang, with her 1995-1997 representing modern
The use of *beh* has shifted from one period to the next, yet the modal usage of *beh* (item 2) has remained the most prominent. *Beh* as a verb ‘to want something’ (item 1) has become less frequently used in modern days, but its use as futurity marking ‘going to’ (item 3) has been maintained. The decrease in the use of necessity *beh* (item 4) is associated with the rise of necessity *ai*, whose development is discussed immediately after this subsection. The conditional use (item 6) of *beh* ‘if’ has dropped throughout the past five decades.

Lien (2008) uses modern Taiwanese Southern Min databases for an investigation of *beh*. The categories covered for modern *beh* in the two scholars’ work are much alike, except that Chang adds necessity and conditional usages.

Table 5.6 shows that negation of *beh* is shaped in different forms.

<table>
<thead>
<tr>
<th></th>
<th>affirmative</th>
<th>negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>volition</td>
<td><em>beh</em> ‘want’</td>
<td><em>m</em> ‘not want’; <em>bo-beh</em> ‘not-want’</td>
</tr>
<tr>
<td>necessity</td>
<td><em>beh</em> ‘need’</td>
<td><em>bian</em> ‘need.not’</td>
</tr>
<tr>
<td>futurity</td>
<td><em>beh</em> ‘going.to’</td>
<td><em>bue</em> ‘not.yet’</td>
</tr>
<tr>
<td>conditional</td>
<td><em>na-beh</em> 若欲 ‘if’</td>
<td>--</td>
</tr>
</tbody>
</table>

For instance, the negation for volitional *beh* ‘want’ can be either *m* ‘not.want’ or *bo-beh* ‘not-want’, but other uses of *beh* cannot be negated the same way. For instance, *bue* is the negation of future *beh*, and *bian* ‘not.need’ serves as the negation for necessity *beh*. 

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The negation system of beh is demonstrated in the table. First, beh and m are initially considered to be affirmative and negative volition counterparts (Li 2007 and Lü 2003), and now bo-beh ‘not.want’ comes into the system. I have explained this phenomenon in previous sections.

Secondly, tioh ‘need’ and bian ‘need.not’ are a necessity pair (chapter six), but now beh can have bian as negation. In other words, the paradigm of volition (beh/m) is interacting with that of necessity (tioh/bian).

(43) beh/bian  pan  to  tsit  hang?
need/need.not  deal.with  which  one  CL
‘Which one does (not) have to be dealt with?’

Thirdly, ‘future’ beh cannot be negated by m or bo-beh. A possible candidate is bue, which is an aspectual negative morpheme for perfective; see (44) and (45).

(44) thinn  beh  kng  a.  天卜光矣
sky  around  brighten  PAR
‘It’s around daybreak.’

(45) thinn  (iau)  bue  kng.  天猶未光
sky  yet  not.yet  brighten
‘It’s still dawn.’

The above three examples point to an existing asymmetry between the affirmation and negation systems; I demonstrated in Table 5.7. The original affirmative-negative counterparts are highlighted. No research has addressed this asymmetry before.
Table 5.7
The complex of *beh* and its negation

<table>
<thead>
<tr>
<th>modality</th>
<th>affirmative</th>
<th>negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>volition</td>
<td><em>beh</em> ‘want’</td>
<td><em>m</em> ‘not.want’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>bo-beh</em> ‘not.want’</td>
</tr>
<tr>
<td>necessity</td>
<td><em>beh</em> ‘need’</td>
<td><em>m-beh</em> ‘not-need’</td>
</tr>
<tr>
<td></td>
<td><em>tioh</em> ‘need’</td>
<td><em>bian</em> ‘need.not’</td>
</tr>
<tr>
<td>futurity</td>
<td><em>beh</em> ‘about to, going to’</td>
<td><em>m-beh</em> ‘not-about to’</td>
</tr>
<tr>
<td></td>
<td>--</td>
<td><em>bue</em> ‘not.yet’</td>
</tr>
</tbody>
</table>

5.3.3 Development of *ai*.

The morpheme *ai* 愛 is now taking some of the same roles as *beh* in contemporary Taiwanese Southern Min. *Ai* originates as the word for ‘love’ in Classical Chinese; see (46).  

(46) 愛人者人恆愛之 (孟子 Mengzi; the 4th cy. BCE)

\[
\begin{align*}
\text{ai} & \quad \text{ren} \quad \text{zhe} \quad \text{ren} \quad \text{heng} \quad \text{ai} \quad \text{zhi} \\
\text{love} & \quad \text{person} \quad \text{NML} & \quad \text{person} \quad \text{forever} & \quad \text{love} & \quad \text{PRON} \\
\text{‘He who loves others is constantly loved by them.’}
\end{align*}
\]

While the lexical use (both verb and noun) of *love* in *ai* has been preserved to this date, *ai* can also express modality: volition and deontic necessity. The development of *ai* can be captured in Table 5.8.

---

120 Translation is James Legge’s; glosses are mine.
Table 5.8
Diachronic development of *ai* (Chang 2009: 65)

<table>
<thead>
<tr>
<th></th>
<th>16-19th cy.</th>
<th>late 19th-early 20th cy.</th>
<th>1995-1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>love/like/hope</td>
<td>184 (92.9%)</td>
<td>127 (76.5%)</td>
<td>63 (30.3%)</td>
</tr>
<tr>
<td>prediction</td>
<td>13 (6.6%)</td>
<td>1 (0.006%)</td>
<td>--</td>
</tr>
<tr>
<td>necessity</td>
<td>1 (0.005)</td>
<td>38 (22.9%)</td>
<td>145 (69.7%)</td>
</tr>
<tr>
<td>Total</td>
<td>198</td>
<td>166</td>
<td>208</td>
</tr>
</tbody>
</table>

As seen, the *love/like/hope* sense of *ai* is decreasing in numbers through the course of time, from 93%, 77%, to 30% in contemporary TSM. About 70% of tokens of *ai* in the most recent data (dated 1995-1997) are used in the necessity sense. The prediction notion by Chang is futurity. *Ai* is no longer used to express future. I show examples from Chang below for each use in Table 5.8. \(^{121}\)

1. ‘*love/like/hope*’

(47) 阮是愛月來到只  Chang (2009: 60); 1615 AD
    guan  si  ai  gueh  lai  kau  tsia
    1sg   COP  love  moon  come  arrive  here
    ‘I came here because I love the moon.’

2. *future*

(48) 啞公莫急, 愛易老  Chang (2009: 61); 1566 AD
    a-kong  mok  kip,  ai  i  lo.
    grandpa  NEG  hurry  will  easy  age
    ‘Sir, don’t be in such a hurry. (Otherwise), (you) will get old easily.’

Note that Chang cites Bybee et al. (1991: 32) about the future sense in SM volition. She relates the prediction use of ‘will’ to futurity in *ai* and *beh* (Chang 2009: 61-62, 70-71).

\(^{121}\) I provide TSM transcription for (47)-(51) and (59).
(49)  *beh*/ai*:* ‘want’ > intention > prediction [+future] (Chang 2009: 55)

3. **necessity**

The necessity use of *ai* is important. I use Chang’s examples in (50)-(52) to show its diachronic development.

(50)  治家法各愛尊卑 Chang (2009: 63); 1566 AD

*ti ke huat kok ai tsun pi*

manage family rule each need superior inferior

‘(When speaking of) rules to keep a family, (an important rule is that) the inferior need to respect the superior.’

(51)  君子報冤愛三年 Chang (2009: 64); late 19th-early 20th cy.

*kun-tsu po-uan ai sann ni*

gentleman revenge need three year

‘It takes a gentleman three years to take revenge.’

(52)  後日愛上班 Chang (2009: 64); modern TSM

*au-jit ai siong-pan*

the.day.after.tomorrow need work

‘(He) has to work the day after tomorrow.’

Chang states that (52) may yield a liking reading although she does not explain why. Her other examples of *ai* ‘need’ such as (53) are interesting data.

(53)  牽許台車愛保養費 ne Chang (2009: 64); modern TSM

*khan hit tai tshia*

drag that CL car

‘(If you) buy that car,’

*tioh ai poiong hui ne!*

need need maintenance fee PAR

‘you will need to pay for the maintenance fee!’
Note that example (53) has double necessity marking: *tioh* and *ai*.

Wherever *tioh* ‘need’ and *ai* co-occur, *ai* can only express necessity, a topic to which I come back in chapter six.

I now address the negation of *ai*. In modern times, the negative *bo* is to negate *ai* only in the sense of ‘want’; the negation of necessity *ai* is *bian* ‘not.need’. Again, this asymmetry has not been discussed in the literature.

Table 5.9
Affirmative and negative uses of *ai*

<table>
<thead>
<tr>
<th></th>
<th>affirmative</th>
<th>negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>volition</td>
<td><em>ai</em> ‘want’</td>
<td><em>bo-ai</em> ‘not-want’</td>
</tr>
<tr>
<td>necessity</td>
<td><em>ai</em> ‘need’</td>
<td><em>bian</em> ‘need.not’</td>
</tr>
</tbody>
</table>

Finally, let us investigate the relationship between *ai* and *beh*. Chang (2009: 78) suggests that *ai* and *beh* are complementary. She points out that necessity accounts for the major use of *ai*, and that *beh* is not often used as necessity; rather, *beh* is mainly for volition. Her claim for the complementary distribution between *ai* and *beh* is too simple, given that both *ai* and *beh* still overlap in volition.

To conclude, I add the morpheme *ai* to Table 5.7 (on *beh*), resulting in a more complex system (Table 5.10).
Table 5.10
The complex *beh* and its negation

<table>
<thead>
<tr>
<th>modality</th>
<th>affirmative</th>
<th>negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>volition</td>
<td><em>beh</em> ‘want’</td>
<td><em>m</em> ‘not.want’</td>
</tr>
<tr>
<td></td>
<td><em>ai</em> ‘want’</td>
<td><em>bo-beh</em> ‘not.want’</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>bo-ai</em> ‘not-want’</td>
</tr>
<tr>
<td>necessity</td>
<td><em>beh</em> ‘need’</td>
<td><em>bian</em> ‘need.not’</td>
</tr>
<tr>
<td></td>
<td><em>ai</em> ‘need’</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>tioh</em> ‘need’</td>
<td></td>
</tr>
<tr>
<td>futurity</td>
<td>--</td>
<td><em>bue</em> ‘not.yet’</td>
</tr>
<tr>
<td></td>
<td><em>beh</em> ‘going to’</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>ai</em></td>
<td></td>
</tr>
</tbody>
</table>

### 5.3.5 Development of *beh-ailai-beh*.

Historically, the volition negatives (*bo-beh* and *bo-ai*) have appeared in the 16-17th century Min play *Lijing ji*. There are six instances of *bo-beh* and 30 of *bo-ai*. Out of the six cases of *bo-beh*, only one use is connected to volition ‘want’; the other five are for discourse marking, in which cases *bo* and *beh* are not a phrase.

(54)  *bo* ‘or; otherwise’ + *beh* ‘if’

*Bo-ai*, on the other hand, shows two instances of ‘love’ usage and the rest carry a sense of ‘liking’. In other words, *ai* is still associated with ‘desire/love’ meaning in the text dated in the 16-17th century. This means that the volition sense of ‘want’ in *ai* has not yet evolved. From these facts, I assume that the negative forms *bo-beh* and *bo-ai*, as opposed to *m* ‘not.want’, are developed later.

In the next section, I investigate other volitional uses.

### 5.3.5 Development of *beh-ailai-beh*.

Recall that *bo-beh* and *bo-ai* ‘not-want’ are competing forms of *m* ‘not.want’ in volition. *Beh* and *ai* seem to be interchangeable. Below I show evidence to
support this analysis and to associate it with the grammaticalization of volitional modals in Southern Min.

Examining synchronic TSM data, I found instances of both beh-ai and the reverse order ai-beh, with the former (38 tokens) outnumbering the latter (11 tokens).

(55) 你卜愛啥，我予你
   li  beh-ai  siann,  gua  hoo li.
   2sg  want/need  what  1sg  give  2sg
   ‘What do you need/want? I’ll give it to you.’

(56) 愛卜娶某的人家己去尋對象
   ai-beh  tshua-boo  e  lang
   want  get.married  REL  person
   ka-ki  khi  tshue  tui-siong
   self  go  look.for  partner
   ‘For those of you who want to get married, go look for your significant other by yourselves.’

The first order beh-ai is associated with two deontic meanings: volition and necessity. 30 out of 38 instances of beh-ai mean ‘want’ in the beh-ai with a nominal phrase construction; see (55). Five out of the eight remaining cases are used as modal auxiliary ‘want’: beh-ai + VP. The other three sentences express beh-ai as necessity, an example of which is given in (57).

(57) 伊講卜愛較緊 e
   i  kong  beh-ai  kah  kin  e.
   3sg  say  must  more  quick  PAR
   ‘He said it had to be quick.’
On the other hand, the second order ai-beh mainly expresses modal ‘want’ (58).

(58) tse ai-beh cuann kong. 這愛卜 cuann9講?
    this want how say
    ‘What do you want me to explain?’

Back to the categories of ai, ai can be used in both volition and necessity meanings, with various forms, as shown in Table 5.11.

<table>
<thead>
<tr>
<th></th>
<th>lexical</th>
<th>modal</th>
</tr>
</thead>
<tbody>
<tr>
<td>ai</td>
<td>volition</td>
<td>‘love’, ‘want’</td>
</tr>
<tr>
<td>beh-ai, ai-beh</td>
<td>volition</td>
<td>‘want’</td>
</tr>
<tr>
<td>(tioh-)ai</td>
<td>necessity</td>
<td>--</td>
</tr>
</tbody>
</table>

One may ask how has ai used in earlier days? Interestingly, the historical Min play Lijing ji records the use of ai-beh, but not beh-ai. The use of ai-beh in this text is mainly for ‘want’, with only few instances (34 tokens) out of the 338 tokes of ai. Below is an example of ai-beh.

(59) 心中愛卜共你相結義 Chang (2009: 60); 1566-1884 CE
    sim tiong ai beh kah ni
    heart center love wants with 2sg
    siong kiat-gi
    each.other become.sworn.brothers
    ‘I’d love to become a sworn brother of yours from the heart.’

From these facts, I postulate that beh-ai or ai-beh is relatively more recent forms to express ‘want’. This path follows grammaticalization, as one morpheme
becomes reanalyzed from a lexical to a functional category, moving from semantics to interpretable features, [i-F], another near synonym appears as reinforcement or renewal, such as \textit{beh} and \textit{ai} for each other.\footnote{I do not mean that modals don’t have semantics. The term “semantic features” are used to associate semantic bleaching from lexical use of verbs/nouns to a grammatical category.}

In the previous chapter, the ability \textit{e-hiau} ‘can’ and the deontic possibility \textit{e-sai} (i.e. the permissive ‘can’) are observed. More such as the \textit{tioh-ai} (literally ‘need-need’) doubling in the paradigm of deontic necessity will be discussed.

To conclude, despite that Chang (2009) briefly notes a compound \textit{beh-ai} as ‘want’ in contemporary Taiwanese Southern Min, but nothing hinges. I compared modern data with the 16\textsuperscript{th}-17\textsuperscript{th} century Min play texts, coming up with a conclusion that \textit{beh-ai} and \textit{ai-beh} are the byproduct of the diachrony of \textit{beh} and \textit{ai}. The choice of \textit{beh-ai} over \textit{ai-beh}, or vice versa, may have to do with sub-dialects, also noted by Cheng (2003). My consultants and I favor \textit{beh-ai} over \textit{ai-beh}.

\textbf{5.3.6 Development of \textit{beh-tih}.}

The following paragraphs attribute to syntactic changes in the lexical verb \textit{beh} ‘to want’. For some speakers, \textit{tih} \textit{挃} ‘to obtain’ is usually added between \textit{beh} and the nominal phrase, as shown in the first part of the sentence in (60), where \textit{beh-tih} and \textit{m-tih} are matched.

\begin{equation}
\begin{array}{l}
3\text{sg} \hspace{1cm} \textit{beh} \hspace{1cm} (-tih) \hspace{1cm} \textit{lingo}, \hspace{1cm} \textit{m} \hspace{1cm} \textit{tih/*(-tih)} \hspace{1cm} \textit{kam-a.}
\end{array}
\end{equation}

\begin{center}
\begin{tabular}{llllll}
\textit{want} & \textit{get} & \textit{apple} & \textit{not.want} & \textit{get} & \textit{tangerine}
\end{tabular}
\end{center}

\begin{center}
\textquote{He wants to get apples, but not tangerines.}
\end{center}
While *beh* is relatively freer (it can occur with or without –*tih*), *m* has to be accompanied by –*tih*. This again indicates that *m* is not a full-fledged verb, on the one hand. On the other hand, under the circumstances in which –*tih* is attached to *beh*, *beh* can be a verb or a modal. Semantically and syntactically, *beh* loses its verbhood when another morpheme –*tih* is added, as in (60).

As *beh* is more likely to be used as a modal, based on previous literature, I examine the use of *beh | 乀* together with *tih* 得 ‘to obtain’. Surprisingly, there are only ten tokens of *beh-tih* in the contemporary Southern Min corpora. Below are two examples of such. In all cases containing *beh-tih*, a nominal phrase is often followed. This means *beh-tih* is a verb.

(61) 卜得彼的錢

\[
\text{beh tih i e tsinn.}
\]

*want get 3sg POSS money*

‘wanting his money’

(62) 如果伊若是卜得著這塊地裡, 卜發展

\[
\text{ju-ko i na-si}
\]

*if 3sg if-COP*

\[
\begin{align*}
\text{beh} & \hspace{1em} \text{tit} \hspace{1em} \text{tioh} \hspace{1em} \text{tsit} \hspace{1em} \text{te} \hspace{1em} \text{te-li}, \\
\text{want} & \hspace{1em} \text{get} \hspace{1em} \text{attach this CL land} \\
\text{beh} & \hspace{1em} \text{huat-tian} \\
\text{want} & \hspace{1em} \text{develop}
\end{align*}
\]

‘If he wants this piece of land for development’

Below is the search result for another writing 卜挃 *beh tih*. There are only 23 tokens of *beh-tih*, a fairly small number in the contemporary TSM corpora. My assumption for the less frequent co-occurrence of *beh* and *tih* is that *beh-tih*,
literally ‘want to get’, is more specific. There may be other factors such as age or regional differences, which is however beyond the scope of this study.

Diachronically, the combination of 卜得 also appears in *Lijing ji*. One out of the eight instances contains the ‘obtain’ reading; see (63). The other seven are the same line as (64), where 得 tih can be read as either ‘obtain’ or telicity.

Sentence (64) is interesting, as 卜 can be read as either ‘want’ or ‘if’. Tih ‘obtain’ adds telicity to the verb ‘know’. As noted previously, the conditional complementizer is one of the categories developed later for *beh*.

(63) 再卜得桃是來年 S. Min; 16th-17th cy.

tsai beh tit tho si lai ni
again about/want obtain peach COP comingyear
‘The next time to obtain peaches will be next year.’

(64) 爹媽若卜得知 S. Min; 16th-17th cy.
tia-ma na beh tit tsai
parents if if obtain know
‘If (my) parents know this, …’

If we look further back, only two instances of *yaode* 要得, literally ‘want-obtain’, *Zhuzi yulei* were attested, compared to *yao* 要, which consists of 212 tokens (Wu 2004a: 74-75). I show one example below; translation and transcription are mine. Recall that 要 is the writing for Chinese ‘want’, and 卜 often serves as a substitute for Min ‘want’. 123

(65) 他只是要得恁地虛靜 (13th cy.; Wu 2004a: 75)
ta zhi-shi yao-de zhendi xuxing

123 MSC transcription is provided for (65).
3sg only-COP want-obtain freely peace
‘He only wants to obtain a peaceful mind.’

The relatively rare use of tih with beh in the historical texts reveals that beh was stronger in its verbhood at the time than its contemporary use. The attachment of renewal –tih to the morpheme beh typically in present-TSM further indicates that beh is experiencing grammaticalization from a full-fledged to a modal auxiliary.

5.3.7 Development of siunn-beh/siunn-ai.

There are various ways in English to express volition, including desire, feel like, long for, love, want, would like and so forth. Likewise, siunn beh 想欲 or siunn ai 想愛 (siunn literally ‘think’) is also heard among speakers of Taiwanese Southern Min, along with the use of beh-ai or ai-beh. Out of 1350 tokens of siunn想 ‘think’ in the contemporary TSM corpora, siunn-beh ‘want’ accounts for 119 tokens and siunn-ai for 9 tokens.

Let us look further into examples with siunn-beh. First, the volitional beh can be replaced by siunn-beh ‘think-want’, the latter of which is however used as a modal in most cases. Below is a case where siunn-beh is used as a lexical verb, the only case out of the 119 siunn-beh tokens in the contemporary TSM corpora.

The rest of siunn-beh are modals; see (67)-(68).

(66) 心肝想卜彼間廟
sim-kuann siunn-beh hit king bio.
mind think-want that CL temple
‘ Someone wants that temple. /(Someone’s) mind is on that temple.’
Second, the conversation lines in (67) show that *beh* and *siunn-beh* are interchangeable expressions. *Siunn-beh* in (68) can be translated as ‘in order to’.

(67) 想卜過來共提安呢，

`siunn-beh` kue-lai kah the an-ne

think-want cross-come PREP get PAR

卜過來共提啦，

`beh` kue-lai ka the la.

want come PREP get PAR

‘thinking of coming to get (it)…wanting to get (it)’

(68) 去日本讀冊，想卜做醫生

`khi` Jit.pun thak-tshet, `siunn-beh` tso i-sing

go Japan study think-want do doctor

‘Going to Japan to study, and wanting to become a doctor’

Example (69) shows that *siunn-beh* can take an adjectival complement.

(69) 你有想卜好額無？

`li` u `siunn-beh` hoo-iah bo?

2sg ASP think-want rich Q

‘Do you want to become rich?’

The other use, *siunn-ai*, differs more in semantics than in syntax in comparison with *siunn-beh*. Not only does *siunn-ai* place more limitation on the verb following it, but it is not used as often. For example, *siunn-ai* is usually followed by a verb such as ‘eat’, ‘sleep’, or ‘laugh’ in the corpora; see (70) as an example. This means that the desire meaning is still preserved in *ai*.

(70) 我想愛食竹筍仔啦

`gua` siunn-ai tsiah tik-sun-a la.
1sg think-desire eat bamboo.shoots PAR
‘I feel like eating bamboo shoots.’

However, one common characteristic for siunn-beh and siunn-ai is that they are mostly used as modals, thus less compatible with nominal complements. The combination of siunn-beh-ai is also possible.

(70)’ gua siunn-beh-ai tsiah tik-sun-a la.
1sg think-want-desire eat bamboo.shoots PAR
‘I feel like eating bamboo shoots.’

I have so far addressed the possible candidates for volition ‘want’ in TSM: beh, ai, beh-ai, ai-beh, siunn-beh, siunn-ai, and perhaps siunn-beh-ai. Their categorial status or compatible complement is not exactly the same, nor is their semantics, which involves different degrees of volition. I provide two examples below; however, I do not intend to delve into this puzzle in this dissertation.

(71) li u beh khi Taipak bo?
2sg ASP BEH go Taipei Q
a. ‘Are you going to Taipei?’ (futurity)
b. ‘Do you want to go to Taipei?’ (volition)

(72) li u siunn-beh/siunn-ai khi Taipak bo?
2sg ASP think-want go Taipei Q
‘Do you want to go/think of going to Taipei?’ (volition)

We turn to the discussion of negation. As noted previously, beh ‘want’, siunn ‘think’, and ai ‘desire’ are often combined to form disyllabic volitional modals. Given that bo-beh and bo-ai are used among speakers of TSM, bo-siunn-
beh or bo-siunn-ai should be possible as well. Below is one example from the corpora.

(73) 較早要的囝仔伴
khah-cta sng e gin-a-phuann
early play REL childhood-friend
攏麼無想卜合伊耍啊
long ma bo siunn-beh hah i sng a
all PAR NEG think-want PREP 3sg play PAR
'His childhood friends no longer want to play with him.'

I found no bo-siunn-ai in the corpora, but one of my consultants provided a sentence below.

(74) gua tsit-ma bo siunn-ai tsiah mi.
1sg now NEG think-desire eat noodle
‘I don’t feel like having noodles now.’

Note that bo in the cases just discussed above in (73) and (74) is used as a pure negator; however, m₂ has been widely considered a generic/pure negator for stative verbs in Southern Min, just like Hakka m or Mandarin bu. What is going on here on bo? I leave this topic in chapter seven, where the grammaticalization of bo is investigated.

5.3.8 Concluding remarks.

To sum up, beh and ai are used together to represent volitionality although they have different sources. The grammaticalization paths for beh and ai look like (75) and (76).

(75) beh: ‘like/want’ > ‘intend to’ > ‘going to/about to’
(76) ai: ‘love’ > ‘want’ (volition); ‘need’ (necessity)
Table 5.12 summarizes my findings for beh/ai and their negation. The complexity first comes from the cross-categorical modality in beh or ai, going vertically (to participant internal/deontic from epistemic, in the case of beh) and horizontally (volition to necessity, in the case of ai), based on van der Auwera and Plungian’s (1998) modal system. 124

Table 5.12
beh/ai in TSM

<table>
<thead>
<tr>
<th></th>
<th>volition</th>
<th>necessity</th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td>beh ‘going to’</td>
<td>[tiann-tioh ‘must’]</td>
</tr>
<tr>
<td>participant internal</td>
<td>(siunn-)beh ‘want’</td>
<td>ai ‘need’ [tioh ‘need’]</td>
</tr>
<tr>
<td></td>
<td>ai ‘want’</td>
<td></td>
</tr>
<tr>
<td>participant external</td>
<td></td>
<td>[((tioh-)ai ‘need’/*should/ought to’]</td>
</tr>
</tbody>
</table>

In the affirmative paradigm, another morpheme may be used to shift one category to a different one. One example is the epistemic tiann-tioh ‘must’, which is a combination of tiann 定 ‘definitely’ and tioh 著 ‘need’ (initially ‘to attach’). Another case is the deontic necessity tioh-ai 著愛 ‘need’, where ai is cross-listed in volition ‘want’ and necessity ‘need’. With the additional tioh, the participant-internal meaning of ‘need’ is no longer available in tioh-ai. Details about the words in the brackets are provided in chapter six.

Secondly, negation of beh is also complex. Overall, other than the fused form m, volitional modals have developed their independent negation marking, using the negative bo, such as bo-beh, bo-siunn-beh or bo-siunn-ai ‘not-want’.

124 I use the terms vertically and horizontally to explain the interactions.
When it comes to the necessity modals, negation may be from another system, such as ai ‘need’ vs. bian ‘need.not’, the latter of which has an affirmative counterpart tioh ‘need’, however.

Next, the cross-categorical modal verbs are also intertwined with tense, such as beh, which can mean both ‘want’ (volitional) and ‘going to’ (futurity). The newly developed compounding forms, such as beh-ai, ai-beh, and siunn-beh, are more specific than beh in expressing volitional modality. The deontic necessity in beh is much less preferred than ai.

Lastly, a near synonym ai is more specific than beh, and may serve as a substitute for beh ‘want’ from time to time. Beh-ai ‘want-want’ is used more often than ai alone. Likewise, within the necessity system of ai, the same change occurs: the morpheme tioh is often accompanied by reinforcement ai ‘need’ to ensure necessity. The doubling phenomenon, which occurs in TSM positive modals, indicates a move from semantic to interpretable features in the morpheme involved. This feature loss-regain phenomenon is part of grammaticalization.

5.4 Grammaticalization of beh/m

I explain the grammaticalization of beh/m using the Minimalist Economy Principles to account for the verb serials in the TSM affirmative-negative volitional words. Also accounted for is the categorial shift in beh and m.
Table 5.13
TSM volitional paradigm

<table>
<thead>
<tr>
<th>Affirmative volition ‘want’</th>
<th>Negative volition ‘not want’</th>
</tr>
</thead>
<tbody>
<tr>
<td>beh(-ai); ai(-beh); siunn(-beh/-ai)</td>
<td>m</td>
</tr>
<tr>
<td>bo-ai, bo-siunn-ai, bo-siunn-beh</td>
<td></td>
</tr>
</tbody>
</table>

5.4.1 beh: V > T.

While beh ‘want’ can be lexical and modal, its negative m ‘not want’ is only modal in contemporary TSM. Based on its historical development, beh has the following features.\(^{125}\)

(77) beh: [desire/liking, intention, volition, proximity]

The change from V to T in beh takes shape in two ways. One is when beh changes from a lexical verb to a modal auxiliary ‘want’, and the other is beh as indicating temporal proximity ‘going to’.\(^{126}\)

The Economy Principles provide a good device to explain the reanalysis from v to V in syntax. The framework of grammaticalization also speaks for the reanalysis, “up the tree”, phenomenon (van Gelderen 2004).

First, I assume that the semantic features of desire/like sets beh in the V (I ignore the VP shell for now). When beh gradually loses its lexical features, it becomes reanalyzed higher in the modal head, carrying [i-F: volition].\(^{127}\)

---

125 Some may see the features in (77) as denotations. I however use the term feature in the same way as Feature Economy.

126 Note that TSM beh ‘want’ is not the same as English want.

127 I use [i-F] only to represent that the verbhood of beh is lost; I do not meant that
(78) Reanalysis of *beh* as a modal

```
ModP
         /
        /
   [IF: volition] VP
          /
         beh [desire/like]
```

When the V position is empty after *beh* is reanalyzed, another stronger semantic verb (e.g. *ai*) fills in, thus giving rise to a doubling *beh-ai* ‘want’; see (79). *Ai* presumably is base-generated in V, and moves to v.

(79) Reanalysis of the lexical *beh-ai*

```
ModP
         /
        /
   beh [IF: volition] VP
          /
         ai [desire/like]
```

(80) 

```
i beh-ai kam-a.
  3sg want-want tangerine
  ‘He wants/wanted tangerines.’
```

modals carry no semantics.
The choice of *ai* is not random, given that *ai* is a near synonym of *beh*. Also, the ordering can be vice versa. That is *ai* can be placed in the ModP head, inverting *beh*, and thus make another format: *ai-beh*.\(^{128}\)

I assume that moving from V to T the volitional modal *beh-ai* follows the same grammaticalization path as *beh* in Figure 5.1.\(^{129}\) Thus, *ai* is left-adjoined to *beh*, forming a disyllabic modal verb *beh-ai*. The V position can be filled by a verb such as *tih* ‘to obtain’ as in (82), which takes a nominal phrase.

(81)  Reanalysis of modal *beh-ai*

```
  ModP
   /
  beh-ai
    /
[iF: volition] VP
```

(82)  i  **beh-ai**  tih  kam-a.

3sg  want-love  get  tangerine

‘He wants/wanted tangerines.’

The verb head can possibly be occupied by another volitional synonym if we begin with *siunn* ‘think’ and stack *beh* and *ai* below in the linear order. Other combinations include *siunn-beh* with a verb *ai* or *siunn-beh-ai* plus another verb.

---

\(^{128}\) For this order, I assume that *beh* is a verb for some speakers. As my consultants and I do not have *ai-beh* in our lexicon, this issue needs further researching.

\(^{129}\) I use T in a general term. That is, I see Mod or Asp as in the T. adopting the notion that Chinese does not express tense by grammatical means, I simply ignore TP in the tree.
(83)  i siunn-beh-ai tsiah kam-a.  
    3sg want eat tangerine  
    ‘He wants to eat tangerines.’

For this order, I assume that siunn ‘think’ is in another (higher) ModP, given that think is epistemic (I adopt the cartography of two ModPs; chapter two). The composition of siunn-beh or siunn-ai is possibly different from that of beh-ai or ai-beh. I postulate that siunn-beh is a reduced form of two verbs from a matrix and subordinating clause containing a complementizer kong. The evidence comes from (84).

(84)  gua siunn kong beh ka i khi.  
    1sg think say want PREP 3sg go  
    ‘I wanted to go with him.’

When the C kong, literally ‘say’, is reduced, siunn and beh become adjoined, both of which are further reduced into one unit. Siunn-beh is more likely to be a case of lexicalization; nothing hinges on this.

(85)  [VP siunn] [CP kong [TP beh...]]  
    > [VP siunn [TP beh...]]  
    > [TP siunn-beh...]

I have shown possible developmental paths for verb doublings in Southern Min. To summarize, the serial doubling or tripling can be accounted for by means of the Economy Principles. In the Southern Min cases presented here, the first element loses semantic features becoming [i-F] (interpretable features), but the second element (often newer) has semantic features. Evident is that beh-ai has a stronger sense in ai ‘desire’ than beh. The word siunn-beh ‘want’ has a core focus
on beh ‘want’ than siunn ‘think’. This in a way indicates that the first (often older) verb is weakening and likely has [i-F] as a modal auxiliary, instead. As is evident diachronically, beh as ‘want’ appeared before ai, and when ai later became grammaticalized from to volition ‘want’, beh-ai or ai-beh came into existence.

The above paragraphs discuss the use of beh as a volitional modal. I assume it is located in the lower TP, closer to the VP, as volition is participant-internal and highly connected to agency of the (animate) grammatical subject. I assume that this lower ModP is closer to the VP. There should be different projections for the two types of T (beh as modal and future): the former is more verb-like, whereas the latter is tense-like. So, ‘future’ beh occupies a higher position.

We shall proceed to discuss the projection for the other T (beh as future). As mentioned, beh as temporal proximity cannot be negated by m or bo-beh. The negation of this beh is the aspectual bue ‘not yet’. In a way, this beh may be in T, assuming a split TP, accommodating T, Mod and Asp.130

(86) thinn beh am a.
    sky about.to dark PAR
   ‘It’s getting dark.’
(86’) *thinn mbo-beh am a.
   sky not.going.to/not-going.to dark PAR
   intended: ‘It is not going to get dark.’
(87) thinn iau bue am.
    sky yet not.yet dark
   ‘It has not become dark yet.’

130 I do not intend to answer the question whether or not ‘future’ beh is a modal, moving to T. Under the general notion that Chinese does not express tense by means of T, I leave this topic open now.
I assume that the temporal \textit{beh} is higher than the volitional ModP, based on the English data. See the relative position of deontic and epistemic modals in (88) and (89). These show that when aspect is involved such as (89), a modal is most likely to be read as epistemic. Hsin (1999) has also noted the same in TSM.

(88) \textit{She should eat beef.} (deontic)

(89) \textit{She should be eating beef.} (epistemic)

Along the same lines, \textit{beh} in (90) is higher than the progressive aspect \textit{tih}, thus this temporal \textit{beh} should be reanalyzed higher than its volitional counterpart.

(90) 天欲慢慢哪 \textit{tih} 變暗 a.

\begin{verbatim}
thinn \textbf{beh} bangbangna \textbf{tih} binn am a.
sky \textbf{beh} slowly ASP become dark PAR
\end{verbatim}

‘It’s going to slowly get dark.’

Another reason to assume a higher position for the temporal \textit{beh} is from (91). There are two \textit{beh}’s in (91), where the temporal \textit{beh} and the volitional \textit{beh} occupy a different position. I tentatively assign T and Mod to each.

(91) \textit{i beh ma.siong siunn-\textit{beh} li.khui.}

\begin{verbatim}
3sg \textbf{going.to} immediately \textbf{want} leave
\end{verbatim}

‘He is going to want to leave right away.’

The sentence (91) is not ungrammatical, but (92) is more likely uttered by speakers of TSM.$^{131}$

(92) \textit{i e ma.siong \textit{siunn-\textit{beh}} li.khui.}

\begin{verbatim}
3sg \textbf{will} immediately think-want leave
\end{verbatim}

‘He will want to leave right away.’

\begin{footnotesize}
\footnotesize
$^{131}$ The interaction between the paradigms of \textit{beh} and of \textit{e} is demonstrated in the next subsection.
\end{footnotesize}
Briefly, the V to T in *beh* can be conceptualized as follows:

(93)  

\[ \text{beh: V (volitional verb)} \]

\[ > \text{Modal (volitional modal)} \]

\[ > \text{Tense (future)} \]

**5.4.2 *m*: V > T > C.**

The grammaticalization of *m* resembles that of *beh*, but differs in the fact that *m* is further reanalyzed in the CP layer. I assume that *m* is a fused form of negation and volition. Tang (1994) treats *m\textsubscript{1}* as a fusion from *m\textsubscript{2}* and *beh*, just like the other negatives; (94) and (95). Under such a proposal, *m\textsubscript{2}* is treated as a pure negator; the phonetic twins *m\textsubscript{1}* and *m\textsubscript{2}* have different semantics.

(94)  

\[ m\textsubscript{1} \text{‘not.want’} < m\textsubscript{2} + beh \text{‘want’} \]

(95)  

\[ be \text{‘cannot’} < m\textsubscript{1} + e \text{‘can’} \]

I focus on the volitional *m\textsubscript{1}* ‘want’. There is no evidence for which character is used for *m* in Chinese, but the combination of a negative and a volitional verb such as (96) can be found in historical texts.

(96)  

\[ \text{ji suo bu yu, wu shi yu ren.} \]

\[ \text{self SUO NEG want NEG do PREP person} \]

‘Don't do unto others what you don't want others do to you.’

Recall that the lexical use of *m* is not attested in contemporary TSM, but its affirmative counterpart *beh* is. If *m* were a lexical verb before, the tree should look like (97).
The negative $m$

```
(97) NegP
    /|\
   / | \
  /  |  \
 m [NOT] VP
    /|\  \
   / | \
  /  |  \
    # [WANT]
```

The competing negative *bo-beh* or *bo-ai* ‘not-want’ has two projections (NegP and ModP); see (98).

(98) The negative *bo-beh*

```
(98) NegP
    /|\
   / | \
  /  |  \
 bo VP
    / |\  \
   / | \
  /  |  \
   beh
```

The VP projection changes to ModP for the modal use of $m$ or *bo-beh*. The reanalyzed $m$ in the CP layer can at least take two directions: one is in questions and the other is in discourse, with $m$ being in the left periphery of an utterance marking speakers’ mood.

One special note about $m$ in C is that $m$ has to check its modality in the ModP, as the question marker $m$ often matches with the affirmative *beh* ‘want’, as in (99). This matching mechanism is also observed in other interrogatives.
(99)  i  beh  khi  m?  TSM
   3sg  want  go  Q
   ‘Does he want to go?’

How is matching in (99) presented? I adopted a modified cartography as

(100), where ModP\(_1\) accommodates epistemic modals, AspP is in between, and

ModP\(_2\) is for volitional *beh*.

(100)  *m* in C

```
CP
   ...
   m  ModP\(_1\)
       AspP
           ModP\(_2\)
               beh
```

The old paradigm for *m* as a question marker requires the positive
counterpart *beh* in the declarative clause. This indicates that *m* carries
interpretable modal features that have to be checked off. I assume that C [u-Mod;
u-Int] probes down the tree and finds the Goal of *m*.

(101)  *m*: [iF-modality; iF-interrogative]
However, a shift has taken place in the *m* interrogative paradigm. In many cases, *bo* can substitute for *m* in yes/no questions, so (102) is observable in contemporary TSM. This means that the interrogative *bo* is base-generated in C, serving as a non-modal question marker.\(^\text{132}\) I revisit this topic in chapter eight.

(102) i beh khi bo?

3sg want go Q

‘Does he want to go?’

The use of *bo* in questions with volitional modality is not a coincidence. Crucially, the negation of *beh* can take the shape of *bo* plus the affirmative modal *beh*. It is intriguing that the participation of the aspectual *bo* in both the negation and questions of the volitional *beh/m* system, given that *m* \(_2\) is believed by many to be the universal negator for modal verbs. In contemporary TSM, the negative form *bo-beh* exists in the volitional system rather than *m-beh*. But now, *bo* can be a pure negative for volitional *beh*, and an interrogative marker in the C, with no uninterpretable modality features needed to be checked.

In this section, I ignore the other *m* (labeled as *m* \(_2\)) as it is a negative with no modality. I do not intend to discuss whether or not *m* \(_2\) participates in the grammaticalization of *m* \(_1\). I assume that it is a functional category projecting a NegP or IntP.

\(^{132}\) Bo is an aspectual negative ‘not.have’, and is often paired with *u* ‘have’ when *bo* is used as an interrogative.
5.5 Comparative Studies

This section begins with a volitional typology and proceeds to each subcategory to which Southern Min beh applies. Like other types of modality, volition in general can be expressed across various categories, including words/phrases such as want, intend, desire, love, like, feel like, would like, will, be willing, will power, and dare in English. In this study, I limit volition to modal verbs. This section revolves around the use of Southern Min modal verbs beh and ai ‘want’, with a comparison with their counterparts in two other Chinese languages. Also included are English want and will as both of which can convey volition, according to the literature.

5.5.1 Volition.

Verplaetse (2003: 152) views volition as “interconnected with two other categories [possibility and necessity].” With his propositional versus event modality, Palmer (2001) groups volition and ability as dynamic, together with the traditional deontic system, under the event category. This makes sense as volition and ability involve agency. Bybee and Fleischman (1995) also classify desire and ability as agent-oriented modality. Lyons (1977), however, regards volition as part of deontic necessity, assuming that desideratives (e.g. ‘I want to have the book’) comes from directives (e.g. ‘Give me a book’). van der Auwera and Plungian (1998) mainly address modal distinctions between possibility and necessity, but exclude volition.

In this study, I classify volition as a third category, because volition has many overlapping areas shared with the possibility or the necessity system, based
on van der Auwera and Plungian (1998), introduced in chapter three. I do not, however, intend to say that this three-way distinction is better. The main purpose here is to provide empirical data to show that Chinese has a different volitional paradigm than English.

Bybee et al. (1994: 240) suggest typological grammaticalization paths for the concept of desire. I adopt two lines that are relevant to my study.

(103) desire > intention > future > come to want, order
(104) desire > intention > future > probability > come to think; concessive

I address the use of English will and want for two reasons. For one, Li (2003) translates Mandarin yao as ‘will’, ‘need’, and ‘must’, but never ‘want’; however, yao in many of his examples are in fact equivalent to English want. The other reason is that English want and will (and/or be going to) are frequently discussed by scholars, as these words share overlapping functions. For example, based on his corpus findings, Verplaetse (2003: 155) proposes that volition in English is shaped in three forms: the modal will, the quasi-modal be going to, and modal verb want to. Below I provide the grammaticalization path for the morphemes to be discussed in the following sections, including English will and want, and Chinese yao 要.

**English will.** The English will originated as *willan* in Old English. The online OED defines will as “desire, wish for, have a mind to, ‘want’ (something) [, and]; sometimes implying also ‘intend, purpose’.” Many other words based on

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133 I do not see this as a dialectal difference in that ‘want’ is the core use of yao. I assume that Li does not include the meaning of ‘want’ in his discussion of modal yao because want in English is still verb like.
this meaning come about in modern English, such as the adjective *willing* and the noun *will-power*.

The lexical verbal use of *will* only takes a fairly small portion in modern English, and is typically in a mental sense. The instance of (100) also shows a use of *want*.

(105) *I will him to do what I want him to do.* (James Berry, p.c.)

In present-day English, *will* is used as a modal in two major ways: prediction and volition; see (106) and (107). For other uses, see Coats (1983) and Gotti (2003: 285-289).

(106) *Will you marry me?* (Do you want to marry me?)

   *Of course, I will.* (I really want to.) Gotti (2003: 286)

(107) *John will mend the hole in the pipe.* Gotti (2003: 288-289) (the reading ‘I predict that John will mend the hole’, rather ‘John is willing to mend the hole’)

Note that the deontic reading is also crucial to *will*, as in (108) and (109).

(108) *Will you stop talking!* (Stop talking, please) (Gotti 2003: 287)

(109) *The successful candidate will have a university degree and be fluent in French.* (will = is required to) (Gotti 2003: 288)

Diachronically, the deontic use of *will* used to take up a large proportion, roughly about a half of the Middle English, but decreased to smaller than one third in early Modern English (Gotti 2003: 290-291). The prediction use in *will* however becomes the most prominent, accounting for 60% of Gotti’s data, compared to the 24% of volitional use. This distinction generally matches with
Coats’ (1983) modern English data, where a half of *will* is for prediction and one third is for volition.

**English want.** The categorial status of English *want* is controversial. Some agree that *want* is a modal auxiliary, while others don’t. *Want* is often classified as a deontic verb, as opposed to *think*, which is often considered an epistemic verb. The modern definition for *want* in the OED is: ‘to desire, wish for, often with an infinitive as object’ or ‘to desire (a person) to (do something)’. According to the online OED, the etymology of English *want* probably comes from Old Norse *vanta* ‘to be lacking or missing’. The sense of lacking is still in use in present-day English; see (110) and (111) (George Oliver, p.c.).

(110) *There's something wanting in her verbal communication.*
(111) *As a father of ten, he works hard so that his children are free from want.*

Boudin (2009: 333) suggests that *want* bears dual semantics between volition and necessity, and that the distinction is contextually sensitive; see his examples below.

(112) *You want to see her again, right?* (want = wish; volition)
(113) *You want to be careful.* (want = ought, need; deontic)

The following sentences show the use of *want* in the deontic necessity realm in a fairly strong sense.

(114) *I want the homework to be typed and stapled.* (order)
(115) *I want that the homework be typed and stapled.* (subjunctive mood)

However, under certain situations such as (116) and (117), *want* is used as a hedge. By using ‘want’, the utterance is less strong in terms of directiveness.
(116) You will **want** to study hard, or you’ll regret it. (James Berry, p.c.)

(117) You’re going to **want** to make a first left at the intersection. (George Oliver, p.c.)

My consultants feel that using **want** in (116) is to provide advice, which is less strong than the use of ‘ought to’ or ‘should’, or even ‘must’ in terms of deonticity. In the case of (117), **want** is to used to soften the directiveness of the imperative sense in ‘Make a first left’.

**Want** is commonly used. In his study on English volition where sentences with the first person as the subject are examined, Verplaetse (1999: 111) found two thirds of data from **will** and the rest shared equally by **be going to** and **want to**. Verplaetse (2003: 179) concludes that “the expression of volition with the form **want to** is becoming more internalized in the grammar and taking an increasingly important place in contemporary English”.

**Chinese yao 要.** One of the meanings in Southern Min **beh 欲** and **ai 愛** is ‘want’. I discuss **yao** here because the two TSM morphemes are somewhat equivalent to Mandarin **yao 要** and Hakka **oi 愛**. Among the three Chinese languages, Mandarin **yao** and Hakka **oi** behave more alike in their usage, whereas Southern Min makes use of both **beh** and **ai**, and of disyllabic morphemes, such as **beh-ai** ‘want’ and **tioh-ai** ‘should, must’. I have addressed **beh-ai** in this chapter; **tioh-ai** will be discussed in chapter six. The grammaticalization of **yao** is discussed below.
Cheng (2003: 124) suggests that *yao* originates as a noun, meaning ‘essence and key point’, as in (118).\(^{134}\)

\begin{align*}
(118) \quad 聞不可為要 \quad 11^{\text{th}}\text{-}6^{\text{th}} \text{cy. BCE} \\
\text{bu} \quad \text{ke} \quad \text{wei} \quad \text{dian} \quad \text{yao} \\
\text{NEG} \quad \text{can} \quad \text{serve.as} \quad \text{book} \quad \text{essence} \\
\text{‘(They) cannot be essential rules.’}
\end{align*}

Chang and Chen (2003: 8-9) provide a more detailed categorial status for *yao*, shown below in (119) and (120).

\begin{align*}
(119) \quad \text{pre-Middle Chinese (2\text{nd BC}-3\text{rd CE})} \\
\text{noun:} \quad \text{‘waist’, ‘essence; key point; ‘contract’} \\
\text{Adj:} \quad \text{‘destitute’} \\
\text{Verb:} \quad \text{‘to pursue a goal; to get’; ‘to ask somebody to do something’; ‘to threaten’; ‘to invite/to sign a contract with’; ‘to have to’} \\
(120) \quad \text{early Middle Chinese (3\text{rd}-6\text{th CE})} \\
\text{noun:} \quad \text{‘essence; key point} \\
\text{Adj:} \quad \text{‘destitute’} \\
\text{Verb:} \quad \text{‘to invite’; ‘to ask; pursue’; ‘to have to’; ‘want’} \\
\text{Aux:} \quad \text{‘be going to’}
\end{align*}

As seen, the verbal *yao* carries deontic necessity as it is used to indicate ‘to have to’. The *be going to* sense in *yao* is interesting in that in modern TSM the volitional *beh* can also be used as immediate future ‘be going to; about to’.

\(^{134}\) I changed her glosses into Pinyin.
Tao was going to stand up and sit with (him).’

As pointed out by Chang and Chen (2003), the meaning of ‘want’ and ‘be going to’ in yao 要 appeared in the early Middle Chinese era. The hypothetical ‘if’ for yao emerged in the late Middle Chinese era (7th-13th cy. CE) and was predominantly used in the Ming-Qing Dynasties (14th-17th cy. AD).

‘If he doesn’t want to do something, then he won’t do it.’

**Chinese ai** 愛. Although Hakka oi is likely a cognate to Chinese 愛, ai in modern Standard Chinese (Mandarin) is mainly a lexical verb ‘love, like’ and not used the same way as does Mandarin yao. Based on Chang (2009: 65), Southern Min ai has undergone a development path, from lexical ‘love/like/hope’ to deontic necessity, despite the fact that these two usages co-exist in modern TSM.

The following subsections investigate each category covered by Southern Min beh and its counterparts in Mandarin and Hakka.

### 5.5.2 The lexical beh.

TSM beh, Mandarin yao and Hakka oi can all be used as verbs.

(123)  

<table>
<thead>
<tr>
<th>TSM</th>
<th>MSC</th>
<th>Hakka</th>
</tr>
</thead>
<tbody>
<tr>
<td>gua</td>
<td>beh(-tih)</td>
<td>kam-a.</td>
</tr>
<tr>
<td>wo</td>
<td>yao</td>
<td>ju-zi.</td>
</tr>
<tr>
<td>ngai</td>
<td>oi</td>
<td>kam-e.</td>
</tr>
</tbody>
</table>
1sg  want  tangerine  
‘I **want** tangerines.’

As mentioned, *-tih* ‘to obtain’ can be added to *beh* ‘want’ to show one’s desire, but no equivalent is found in the other two Chinese languages. In the English cases, *want* expresses verbal volition in present-day English and *will* is not a lexical verb; see the ungrammatical sentence in (124).

(124) *I **will** tangerines.

The negation of (123) is (125) where a negator scopes over the verb.

(125)  
<table>
<thead>
<tr>
<th>TSM</th>
<th>TSM</th>
<th>MSC</th>
<th>Hakka</th>
</tr>
</thead>
<tbody>
<tr>
<td>gua</td>
<td>bo-beh(-tih)</td>
<td>kam-a.</td>
<td></td>
</tr>
<tr>
<td>wo</td>
<td>bu-yao</td>
<td>ju-zi.</td>
<td></td>
</tr>
<tr>
<td>ngai</td>
<td>m-oi</td>
<td>kam-e.</td>
<td></td>
</tr>
<tr>
<td>1sg</td>
<td>NEG-want</td>
<td>tangerine</td>
<td></td>
</tr>
</tbody>
</table>

‘I **don’t** want (to eat) tangerines.’

5.5.3 The epistemic *beh*.

The epistemic system shows a parallel consistency among *beh*, *yao* and *oi*, yet the other volitional source *ai* 愛 in Southern Min cannot be used, as the second line of (126) shows. Mandarin *yao* may be replaced by an adverb such as *(ji-)jian* (即-)將 ‘about to’, the latter of which is much less common in everyday speech.

(126)   
<table>
<thead>
<tr>
<th>TSM</th>
<th>TSM</th>
<th>MSC</th>
<th>Hakka</th>
</tr>
</thead>
<tbody>
<tr>
<td>beh</td>
<td>loh.hoo</td>
<td>a.</td>
<td>PAR</td>
</tr>
<tr>
<td>ai</td>
<td>loh.hoo</td>
<td>a.</td>
<td>PAR</td>
</tr>
<tr>
<td>yao</td>
<td>xia.yu</td>
<td>le.</td>
<td>PAR</td>
</tr>
<tr>
<td>oi</td>
<td>lok.sui</td>
<td>leh.</td>
<td>PAR</td>
</tr>
</tbody>
</table>

‘It’s going to rain (pretty soon).’
Southern Min *ai* does not have epistemic meanings. It is, rather, a deontic necessity modal expressing obligation.

(127)  
*ai loh.hoo. TSM*  
must rain  
intended: ‘(You) must rain.’

We shall also examine how English *want* or *will* behaves as epistemics. *Want* contains both lexical and modal categories, but only in the deontic sense. As seen in (128), *want* cannot be used as immediate future.

(128)  
*It wants to rain.*  
Intended: It’s going to rain (soon).

The agency in *want* is strong, and the theta role of Agent in *want* cannot be assigned to the inanimate subject ‘it’ in (126). On the contrary, the epistemic *beh* is compatible with a human subject gua ‘I’ or inanimate non-human subject hue ‘flower’; see (129) and (130) in which *beh* cannot be glossed as ‘want’. In a way, English *want* is less grammaticalized than *beh*.

(129)  
gua masiong *beh* likui a. TSM  
3sg immediately going.to leave PAR  
‘I’m leaving immediately.’

(130)  
hue masiong *beh* kui a. TSM  
flower immediately going.to bloom PAR  
‘Flowers are going to bloom.’

On the other hand, English *will* is not equivalent to epistemic *beh*, either. The modal *will* in (131) shows prediction, and the most likely translation in Southern Min is *e*, as in (132).
(131) *It will rain tomorrow.* (prediction)
(132) bin-a-t sai eloh.hoo. TSM
tomorrow will rain
‘It will rain tomorrow.’

Moving from the use of *beh* to *e*, we are now facing a puzzle. Considering Southern Min *e* is in the possibility paradigm (chapter four), how can *e* come into the volitional system, assuming *will* as a source of volition in English?

Example (133) shows that just like Southern Min *e*, Mandarin ability *hui* 會 and Hakka *voi* also occur in a similar fashion. We need to account for the use of *e*, *hui* and *voi* in the three Chinese languages to express prediction ‘will’.

(133) bin-a-t sai e loh-hoo. TSM
mingtian hui xiayu. MSC
tian.kong.ngit voi lok-siu. Hakka
tomorrow will rain
‘It will rain tomorrow.’

I see the diachronic development of *hui* 會 as a reference for a possible source of volition in the Chinese language, as Southern Min *e* and Mandarin *hui* share a similar grammaticalization path, and *hui* and Hakka *voi* are considered cognates.

As Liu (2003) suggests, Chinese *hui* 會 originates as ‘to meet, to merge’ in *Shiji*, complied by Sima Qian (ca. 145 or 135 BCE – 86 BCE). The sense of ‘comprehension’ and of ‘futurity’ emerged in *Shishuo xinyu* 世說新語 (roughly CE 420-589). In *Zutang Ji* (the Nantang period, 937-975 CE), the lexical use of *hui* ‘knowing/understanding’ takes the largest proportion (97%), compared to the
lower frequency in the ‘merge’ meaning, futurity and modal use of *hui*. Not until *Zhuzi Yulei* (13th cy. CE) did the use of ‘understanding’ (as in *li-hui* 理會) and ‘ability’ in *hui* begin to receive more attention.

(134) *hui*: ‘merge’ > ‘comprehend’ > future

Liu (2003) does not address the use of *hui* as volition. Intriguingly, *willan* once gained the meaning of ‘potentiality, capacity, or sufficiency: can, may, able to, is capable of –ing; is (large) enough or sufficient to’ in the 14th century (Li 2003: 82). I regard this point as relevant in explaining the intertwined relationship between the volition and possibility systems.

Note that English immediate future *be going to* and prediction *will* are closely related. It is then not surprising to see that Mandarin *yao* and *hui* are somewhat interchangeable.

(135) *huiqu yao* bei wo ma ma de. MSC return going.to PASS 1sg mom scold PAR  
‘I’m going to be scolded by my mom once I get back home.’

(136) *huiqu hui* bei wo ma ma de. MSC return going.to PASS 1sg mom sold PAR  
‘I’m going to be scolded by my mom once I get back home.’

With these data, I disagree with Li’s (2003) treating Mandarin epistemic *yao* as equivalent to English *will*. Mandarin epistemic *yao* is immediate future, while English prediction *will* is more like Mandarin *hui*. However, Li treats *hui* as ‘may’ in the possibility modal system, which I think is also problematic (see chapter 4).

In brief, the epistemic use in Chinese is parallel among SM *beh*, Mandarin *yao* and Hakka *oi*. English *want* has no epistemic usage and therefore is not
equivalent to SM immediate future beh. English will is more often used as an epistemic than volitional, but it differs from beh, as the former is for prediction and latter for immediate future. English will is not equivalent to beh; rather, e from the possibility paradigm should be used as the gloss for ‘will’.

I have presented the interaction between volition and the possibility paradigms. We shall soon see how volition is intertwined with the necessity paradigm in the next subsection.

5.5.4 The volitional beh.

The volitional ‘want’ in TSM is expressed by means of beh, ai, beh-ai, ai-beh or siunn-beh. The words listed are not terribly interchangeable and neither are they an exhaustive list, however.

The two basic volition forms for Southern Min ‘want’ are beh and ai, to which Mandarin yao and Hakka voi are equivalents; see (137).

(137) gua beh/*ai khi seh-ke. TSM
   wo yao/*ai qu guangjie. MSC
   ngai oi hi rhiu-kai. Hakka
   1sg want go shopping
   ‘I want to go shopping.’

Note that Mandarin ai, although written as 愛, is not in the system shown above. Mandarin ai basically means ‘love’ or ‘liking’.

We shall also examine the use of e/be as volition and its counterparts in Mandarin and Hakka. The volitional use of will often comes about in first person in declarative, such as (138), or second person in questions.
For third person, *e* as ‘will’ may not be as clear as it can. For instance, the
‘will’ in the translation line may indicate volition or prediction.

The ‘will’ paradigm is not that simple. For instance, *e* in (138) cannot be
volitional, possibly due to the effect of passivization. English is the same.

The interpretation of *will* also involves verb types. To express a statement
such as ‘I am a teacher’, the copula *shi* is used in Mandarin, as in (141).

However, with a modal *will* an English sentence may be read in two ways.

MSC makes use of two words, however. (143) and (144) are possible translations
for the English sentence (142).

(142) *I will be a teacher in the future.*
Yao in (143) expresses volition, whereas hui in (144) denotes futurity. The copula dang in (143) has the dynamics of ‘to be/to become’, while shi in (144) is simple a linking verb without semantics. Notice that dang and shi are used with different modal verbs.

Again, Mandarin hui is not necessarily prediction, will in promise involves volition; see (145). The promise ‘I will’ can be translated as (146).

(146) wo hui de. MSC
   1sg will DE.
   ‘I will’

Lastly, under certain situations, will may tend to be read as volition, as in (147).

(147) A: Will you marry me? B: I will.

The above issues regarding volitional e have not been fully addressed in the literature. To the best of my knowledge, Zhang (1999: 43-44) may be the only study listing the volitional use of TSM e/be. Nevertheless, he does not go into any in-depth discussion. The topic of English will as volition is debatable; I leave this issue to future research.

5.5.5 The deontic necessity in ai.

We have so far seen beh as epistemic and volitional as well as its counterparts in the other two Sinitic languages. However, beh is not the same as Mandarin yao, particularly in the respect of necessity. For instance, beh does not
express deontic necessity as in (148), but ai does. Hakka oi functions similarly to Mandarin yao.

(148) li ai/*beh tshing kah kao e. TSM
gi oi tsok ha heu e. Hakka
2sg need wear more heavy PAR
ni yao chuan hou yi.dian.er. MSC
2sg need wear heavy a.bit
‘You need to wear warmer (clothes).’

Within Southern Min, the morpheme beh is used across two categories in the system: epistemic and internal participant volitional. Ai differs from beh in at least two ways. First, ai does not have epistemic usage. Second, whereas ai can express deontic necessity, beh cannot. Ai can be accompanied by another deontic necessity modal tioh ‘need’ (chapter Six). In other words, ai can express both participant internal volition and external deontic necessity.

Table 5.14
Beh vs. ai in TSM

<table>
<thead>
<tr>
<th>SM</th>
<th>beh</th>
<th>ai</th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td>(tih-)beh ‘going to’</td>
<td>--</td>
</tr>
<tr>
<td>Participant internal</td>
<td>beh(-ai)/(ai-)beh ‘want’</td>
<td>(beh)-ailai(-beh) ‘want’ ai ‘need’</td>
</tr>
<tr>
<td>Participant external</td>
<td>--</td>
<td>(tioh-ai) ‘should, must’</td>
</tr>
</tbody>
</table>

Li (2003) glosses Mandarin yao as ‘will’ (for epistemic use), and ‘need’ or ‘should’ for deontic use. He does not include the use of ‘want’ in yao. As demonstrated in Table 5.14, TSM beh does not cover all usages that Mandarin
yao or Hakka oi contains. Yet, TSM ai complements some categories lacking in beh in its system but available in Mandarin yao or Hakka oi 愛.

As for English, the morpheme desire, love or like does not extend to the deontic necessity sense as the Chinese languages do. There is however some tendency, as shown in (149), although the phrase would love or would like is polite and sounds more like an invitation.

(149) I would love/would like you to do that.

Another interesting topic in English is its deontic sense in want. Compare the following sentences (James Berry, p.c.).

(150) You (will) want to study hard, or you’ll regret it.
(151) You should study hard.
(152) You must study hard.

The deonticity differs in degree. With want in (148), the speaker, often someone who has the authority, is in principle offering advice: ‘I want you to study hard, but I can’t force you’. The use of want here is in a way for hedging. Next, should in (149) is stronger than want, and must in (150) has an even stronger demand, close to an order. I do not find a close connection between (tioh-)ai and the three deontic modals listed above in Table 5.14. The degree distinction in TSM is typically made by tones or reinforced by an additional deontic adverb.

This English deontic use of want is often seen in second person as illustrated above, more examples below, where want is used as a hedge; George Oliver, p.c.

(153) You’re going to want to make a left at the intersection.
(154) You may want to do this.
This strategy can be seen in the Chinese languages, yet one may or may not find Mandarin yao in every such sentence, however. My Mandarin consultants feel that yao has a strong volitional meaning.

Below are Mandarin translations for (153) and (154), where yao only occurs in (155), but bu.feng is a hedge in Mandarin as in (156). Using yao in (155) makes one feel a strong necessity. In other words, yao may not be a hedge word like English want. Yet, changing it to interrogative yao.bu.yao softens the tone, as in (156)’.

(155) ni yao zai shizilukou zuo zhuan.
2sg want LOC intersection left turn
‘You’re going to want to make a left at the intersection.’

(156) ni bu.feng zheme zuo.
2sg not.hurt this do
‘You may want to do this.’

(156)’ ni yao.bu.yao zheme zuo?
2sg want.not.want this do
‘Would you like to do this?’

5.5.7 Concluding remarks.

The Southern Min necessity paradigm cannot do without ai, if one wants to see a system with (a) epistemic, (b) participant internal volition, and (c) participant external deontic necessity. Mandarin or Hakka simply makes use of one morpheme for all the three categories.
Table 5.15
Comparison of volition

<table>
<thead>
<tr>
<th></th>
<th>SM</th>
<th>MSC</th>
<th>Hakka</th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td>(ti-)beh ‘going to’</td>
<td>(kuai-)yao 快要 ‘going to’</td>
<td>oi 愛 ‘going to’</td>
</tr>
<tr>
<td>Participant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>internal</td>
<td>beh(-ai)/ai(-beh)/siunn-beh 想欲 ‘want’</td>
<td>yao/xiangyao 想要 ‘want’</td>
<td>(siong-)oi 想愛 ‘want’</td>
</tr>
<tr>
<td></td>
<td>su-iaul/ai ‘need’</td>
<td>yao/xuyao 需要 ‘need’</td>
<td>oi ‘need’</td>
</tr>
<tr>
<td>Participant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>external</td>
<td>(tioh-)ai 著愛 ‘ought to, must’</td>
<td>yao ‘ought to, must’</td>
<td>oi ‘have to, ought to, must’</td>
</tr>
</tbody>
</table>

One issue that I skipped in the previous paragraphs is the modal use of ‘need’ in yao. Li (2003) does not address the use yao as volitional ‘want’ although he touches upon yao as ‘need’ in expressing participant internal necessity.

The expression for ‘need’ in TSM is in fact the same as that of Mandarin, but pronounced in the literature reading as su.iau ‘need’ in TSM. As in (157), ai is also a possibility, but not beh.

(157) gua su-iau/ai/*beh khi be-tshai (a).
1sg need go grocery.shopping PAR

‘I need to do the shopping.’

Just like English want and will, Southern Min beh and e both involve volition. This also means that e is across the possibility and another paradigm. I single out the use of e as ‘will’ in the middle for convenience of comparison.
Table 5.16 shows the Southern Min modal systems go vertically as modality does (across both epistemic and deontic). However, $e$ is also found in the horizontal direction, which is cross-listed in both the possibility and another system. For instance, the English modal auxiliary ‘can’ can be epistemic, participant-internal (ability) and participant external (permission). TSM $e$ behaves similarly, but it also goes to the English ‘will’ system, as shown in Table 5.16. Also, unlike TSM $e$, English will is not in the possibility system, under which another modal can plays an essential role. TSM $e$ does not mean epistemic ‘may’ or ‘can’; instead, the adverb ko-ling from the literate linguistc layer is used.

Another difference is that want cannot be epistemic, thus not appearing in Table 5.17. I am agnostic about the categorial status of will as volition, and I distinguish will from want because they behave differently.

Table 5.16 Two systems: possibility and volition

<table>
<thead>
<tr>
<th></th>
<th>possibility</th>
<th>$e$</th>
<th>volition</th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td>$ko$-$ling$</td>
<td>prediction: $e$ ‘will’</td>
<td>$beh$ ‘going.to/about.to’</td>
</tr>
<tr>
<td>Participant internal</td>
<td>$e$-$hiau$ ‘can’</td>
<td>$volition: e$ ‘will’</td>
<td>$beh$; ai ‘want’</td>
</tr>
<tr>
<td>Participant external</td>
<td>$e$-$sai$ ‘can’</td>
<td></td>
<td>ai ‘want’</td>
</tr>
</tbody>
</table>

Table 5.17 English will and want

<table>
<thead>
<tr>
<th></th>
<th>will</th>
<th>want</th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td>I will eat soon. (prediction)</td>
<td>--</td>
</tr>
<tr>
<td>Participant internal</td>
<td>I will do this for you. (volition)</td>
<td>I want to eat. (volition)</td>
</tr>
<tr>
<td>Participant external</td>
<td>--</td>
<td>You will want to make a left. (to advise)</td>
</tr>
</tbody>
</table>
Cross-linguistic studies have been conducted on volitional modal systems. This study focuses on the differences between English and the three Sinitic languages under investigation. In principle, like English *will* and *want*, Chinese has two source lines for volition from words equivalent to ‘will’ and ‘want’. However, there are two important differences. Chinese words for ‘want’ are more grammaticalized than English *want*, and the Chinese ‘will’ related words also appear in another modal system (possibility, chapter 4).

5.6 Conclusion

This chapter focuses on the use of *beh/m* in Taiwanese Southern Min. Volition is only one of the categories in *beh/m*. Doublings such as *beh-ai* ‘want’ and *siunn-beh* ‘want’ derive from the affirmative *beh*, just like *e* in the previous chapter. These doublings arise in language change: when the semantic features in a morpheme become interpretable [i-F], and a near synonym comes about, a disyllabic word is made. *Beh* can be used as marking immediate future, and can serve as a conditional complementizer too. The grammaticalization path shows the reanalysis moving upwards in the tree, as evident cross-linguistically. The reanalysis shows that the epistemic modal is higher, and the volition one is lower but higher than the VP.

There is a distinction between $m_1$ ‘not.want’ and $m_2$ ‘not’. The former is to negate *beh* ‘want’, whereas $m_2$ is for copular or stative verbs, including other
volitional modals. The negation of volition does not rely on \( m \) ‘not.want’ solely. The other way to look at volitional negation is the alternative forms, \( bo\text{-}beh \) and \( bo\text{-}ai \), although they are not completely interchangeable with \( m_1 \). \( bo \) in these cases is a pure negative, perhaps this \( bo \) should be labeled in the same fashion as \( bo_2 \), as opposed to \( bo_1 \), the latter of which is aspectual negation ‘not.have’ (chapter seven).

My etymological research for the origin of \( m \) \( \rightleftharpoons \) is not successful. From the use of \( bo\text{-}beh \) just noted, we can only postulate that \( m \) ‘not.want’ has an abstract Neg head projecting right up the VP or ModP, where a verbal head ‘want’ is situated.

Not only is negation, but the interrogative system is also undergoing changes. The interrogative \( m_1 \) usually checks \( beh \) in the declarative utterance, but this question marker has been replaced by \( bo \). Nevertheless, the newly developed negative \( bo\text{-}beh \) or \( bo\text{-}ai \) has not yet reanalyzed as an interrogative.

Mandarin \( yao \) 要 (initially ‘essence, waist’) is more similar to Hakka \( oi \) 愛 (initially ‘love, desire’) than TSM \( beh \); however, three words originate from different sources. Ranging from the immediate future ‘going to’, participant internal volition ‘need’, to deontic necessity ‘ought to’, the above two morphemes cover more categories than does Southern Min \( beh \). In principle, \( beh \) has no deontic necessity usage, and \( ai \) (initially ‘love, desire’) fills this gap, and can be cross-listed in both the necessity and volition systems.

The English data are interesting too. I compare \( will \) and \( want \), as they both express volition. Originating from \( willan \) in Old English, \( will \) is the source for
‘desire’ and functions as a volition modal, just like Southern Min ai. While the volition meaning in will exists, the prediction use is much more prominent in will in Present-day English. The two-way use of will is not captured by the Southern Min volitional modal beh ‘want’ or ai ‘want’, but e ‘can’. E is the main morpheme in the possibility paradigm, as introduced in chapter 4. In other words, e can mean ‘can’ and ‘will’.

Want originates as the Old Norse ‘lacking, missing’ and becomes a volition verb in English. This ‘desire’ source is interesting as it comes from ‘not.having’ to ‘wanting (something)’. The English want is not equivalent to TSM beh ‘want’. With regards to categories, beh is more modal than lexical, while want is the other way around. English want cannot be used to express immediate future as does TSM beh ‘be going to’. Beh has no deontic necessity, but English want does, despite that want is now often used as a hedge. Briefly, TSM beh differs from want, although semantically they are both volitional.

To conclude, the modal system in Southern Min is complex. I have visited the volition and possibility systems in this and previous chapters. Some topics addressed in this chapter will also be revisited in the following chapter.
Chapter 6

THE NECESSITIVE MODALS TIOH AND BIAN

This chapter is on the last modal pair in Southern Min: tioh ‘need’ and bian ‘need.not’. I have introduced two types of modal negation, namely abilitive and volitional in previous chapters, and this current chapter deals with a third type: necessity modality.

This chapter is structured as follows: the synchrony and diachrony of tioh/bian are presented in sections 6.2 and 6.3. I discuss the grammaticalization of tioh/bian in section 6.4, where theoretical accounts are laid out. Section 6.5 is on cross-linguistic necessity modality, followed by a concluding section.

6.1 Introduction

The third modal pair includes tioh 著 ‘need’ and bian 免 ‘need.not’. The affirmative tioh has been well studied in the Chinese literature, yet its negative counterpart bian has often been neglected.

Tioh has an original meaning as ‘to attach’. The necessity modality occurred in middle Chinese time when tioh was used as a verb or modal ‘need’. In contemporary TSM, tioh is not used as a verb, and its modal use is often accompanied by a renewal ai, originally meaning ‘love’. Both tioh and ai are discussed in this chapter.

The negative m, when attached to the affirmative tioh, *m-tioh, does not bear the meaning of ‘not-need’. The negative counterpart of tioh is, rather, a different lexical entry: bian. Bian 免 has an origin in meaning ‘to exempt; to escape’. Like
the other two negatives (*be ‘cannot’ and *m ‘not.want’) introduced in chapters four and five, modality and negation are fused in this signal morpheme *bian ‘need.not’.

In addition to *tioh and *bian, I also discuss other Southern Min modals in the necessity paradigm that are equivalent to English ‘should’, ‘have to’, or ‘must’.

6.2 Synchrony of *tioh/*bian

This section discuses the use of affirmative *tioh ‘need’ and *bian 免 ‘need.not’.¹³⁵ I only introduce the necessity modality use of *tioh, and ignore other categories in which *tioh occupies a post-verbal syntactic position. Unless noted otherwise, all sentences are contemporary Taiwanese Southern Min in this section.

6.2.1 The lexical *tioh.

*Tioh as a lexical verb does not exist in TSM. There are 4,400 tokens of 著 from the TSM corpus.¹³⁶ I checked the first two hundred token among which I found no lexical use. I expected sentences such as (1), where *tioh as a verb ‘need’ is predicated by a nominal phrase.

(1) *tse *tioh tsinn.
this needs money
‘To buy this, one needs money.’

My consultants supplied other verbs for the same sentence; see (2), where *ai 愛 or *su-iau 需要 ‘need’ is used.

¹³⁵ I gloss all cases of *tioh as ‘need’ for convenience although they may mean ‘should’, ‘have to’, or ‘must’ under different contexts. I treat the glosses of *bian in the same fashion.

¹³⁶ 著 has a wider range of usage with different pronunciations; section 6.3.
(2) tse  ai/ su-iau tsinn.
this  needs  money
‘To buy this, one needs money.’

Siu-iau is from the literate linguistic layer of the Chinese language. There are only 11 tokens of su-iau found in the corpus, including nouns, verbs and modals.

Ai is a renewal for necessity modality; I discuss this function of ai in section 6.2.3.

Yang (1992) provides an example in which tioh functions as a verb, meaning ‘need’, as in (3). However, this use of tioh is in a question, co-occurring with its negative counterpart bian ‘not.need’.

(3) tioh  sann  ia  bian? 著衫也免？
need  clothes or  need.not
‘Do (you) need clothes?’ (Yang 1992)

One of my consultants thought that he might use (3) and heard it spoken by others, yet, he provided two other versions, as (4) and (5). In (4), he uses the disyllabic tioh-ai as the verb, whereas bo replaces the interrogative bian in (5).

(4) tioh-ai  sann  ia  bian?
Need-need  clothes or  not.need
‘Do (you) need clothes?’

(5) tioh/ai  sann  bo?
need/need  clothes  Q
‘Do (you) need clothes?’

Sentence (6) with another verb su-iau 需要 ‘to need’ is another option too.

(6) su-iau  sann  bo?
need  clothes  Q
‘Do (you) need clothes?’
Briefly, the fact that \textit{tioh} appears in a restrictive environment indicates that \textit{tioh} `need' is losing its verbhood. We observe grammaticalization taking place in necessity \textit{tioh}; alternative necessity \textit{ai} is often used.

\textbf{6.2.2 The modal \textit{tioh}.}

Another category of \textit{tioh} is necessity modal, yet this use of \textit{tioh} is not productive, either. There is nearly no modal use found among the first hundred tokens of \textit{tioh} in the corpus. Checking 100 more tokens, I only discovered three instances of modal \textit{tioh}, with two cases appearing as \textit{tioh-ai}; see (8) and (9).\footnote{I will discuss the function of \textit{m} in (8) in section 6.2.8.}

\begin{verbatim}
(7) 我那著救你的命。
gua na tioh kiu li e mia.
1sg why need save 2sg GEN life
`Why do I have to save you?'

(8) 家己仔著愛小心
ka-ki-a tioh-ai sio-sim
self need careful
`You need to be careful.'

(9) 妳毋著愛趕緊說
li m tioh-ai kuann-kin kong.
2sg M need hurry say
`You should speak now.'
\end{verbatim}

My consultants provided me with three options. As seen in (9), \textit{tioh} is often accompanied by –\textit{ai}, although \textit{ai} can stand alone without \textit{tioh}. The pragmatics
may change from one usage to the next, but situations vary because tone also
plays a role.

(9)  li tioh/tioh-ai/ai tshing khah tse sann.
2sg need/need-love/need wear than more clothes

‘You need to wear heavy.’
‘You are advised to wear heavy.’

6.2.3 Ai as necessity modality.

I discuss ai as lexical with the meanings of ‘love’ and as a volitional
modal ‘want’ in chapter five. This current chapter adds a third use to ai, that is
necessity modality, from which a disyllabic tioh-ai ‘need’ derives. TSM uses tioh
著, ai 愛 and tioh-ai 著愛 for necessity modality, yet each is characterized
differently. I examined the first 100 tokens of each morpheme from the TSM
corpus. The use of tioh as modality ‘need’ is much less in common; see (11).

(11) A: 你著愛救我的命，
   li tioh-ai kiu gua e mia
   2sg need save 1sg GEN life
   ‘You must save me.’

B: 我那著救你的命。
   gua na tioh kiu li e mia.
   1sg why need save 2sg GEN life
   ‘Why do I have to save you?’

I next investigate ai. As illustrated in Table 6.1, ai consists of three major
meanings in the first hundred tokens examined.\footnote{138}{There is one case that is unclear to me, so it is excluded.}
Table 6.1
The meaning distribution of *ai*

<table>
<thead>
<tr>
<th>meaning</th>
<th>Number of tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘need’</td>
<td>lexical verb: 3; modal verb: 66</td>
</tr>
<tr>
<td>‘want’</td>
<td>11</td>
</tr>
<tr>
<td>‘love; like’</td>
<td>V: 13; N: 3; ADJ: 3</td>
</tr>
</tbody>
</table>

The necessity modal use accounts for two thirds of the data; the remaining cases are *ai* as volitional ‘want’ and its lexical use of ‘love’. Below is an example of *ai* as necessity verb.

(12) 是愛偌濟錢啦?

`si ai gua-tse tsinn la?`

COP need how.much money PAR

‘How much does (this) need?’/How much is it?’

Secondly, I discuss the corpus result of *tioh-ai*. All the first hundred tokens of *tioh-ai* are used as necessity modals. *Tioh-ai* and *ai* may be used by the same speaker alternatively; (13) is one example.

(13) 著愛提伊做模範，

`tioh-ai theh i tso boo-huan,
need make.use 3sg do role.model`

愛照伊安呢做。

`ai tsiau i an-ne tso.
need follow 3sg this.way do`

‘(Someone) needs to use him as a role model and follow him.’

Modality doubling for emphasis is also possible; *ai* appears with an additional adverb or another modal: *it-ting* ‘definitely’ in (14) and *ing-kai* ‘should’ in (15).
(14) 一定愛好好栽培這二个囝仔
    it-ting ai    hoo-hoo   tsai-pue   tsit lng e   kiann-a
    definitely need well cultivate these two CL son
    ‘(Someone) must raise these two boys well.’

(15) 應該愛來尋這個目標
    ing-kai   ai    lai   tshue    tsit e   bok-piau.
    should need come look for this CL target
    ‘(Someone) should begin to look for a target.’

The interchangeable ai, tioh and tioh-ai have been recorded in previous
research such as Cheng (1980: 51) and Hsin (1999: 24); however, they do not
connect the use of ai to another modality, namely volitional beh.

Recall that ai is used to express volition and is often attached to beh ‘want’
in the form of beh-ai ‘want’ (chapter five). Tioh is undergoing a similar reanalysis,
resulting in the competing forms of tioh, ai, and tioh-ai.

The negation of ai ‘need’ is bian ‘not.need’, but not *m-ai or *bo-ai.

Table 6.2
The use of ai in TSM

<table>
<thead>
<tr>
<th></th>
<th>volition</th>
<th>necessity</th>
</tr>
</thead>
<tbody>
<tr>
<td>affirmative</td>
<td>ai ‘want’</td>
<td>ai ‘need’</td>
</tr>
<tr>
<td>negative</td>
<td>*m-ai</td>
<td>m-ai: prohibitive ‘do not’</td>
</tr>
<tr>
<td></td>
<td>bo-ai ‘not-want’</td>
<td>*bo-ai</td>
</tr>
<tr>
<td></td>
<td>m ‘not.want’</td>
<td>bian ‘need.not’</td>
</tr>
</tbody>
</table>

Last, there are two other possible candidates for necessity modals: su-iau 需
要 and bi-su 必須. They occur, however, in small numbers, with only 11 tokens
of su-iau and two tokens of bi-su. Both words are from the literate linguistic layer,
and are not often used in everyday speech.
6.2.4 *Tioh* as a conjunction.

Chen (2003: 53) regards *tioh* in the following case as a connective adverb.\(^{139}\)

\[
(16) \text{id} \text{khuann} \text{gua} \text{ak} \text{kah} \text{kui} \text{sin-khu}, \\
3\text{sg} \text{see} \text{1sg drench PREP all body} \\
\text{‘She saw me drenched,’} \\
\text{\textit{tioh} iong \text{ui-ku-kin-a} ka \text{gua} \text{tshit thau bin}.} \\
\text{\textit{TIOH use towel PREP 1sg wipe head face} } \\
\text{‘and (then) wiped my head and face dry with a towel.’ }
\]

As seen in my translation, *tioh* provides a temporal sense of an event happening shortly after a previous one. Chen (2003: 51-52) provides five examples with *tioh-ai* and suggests *tioh* in those as functioning as a connector.\(^{140}\)

One example is (17).

\[
(17) \text{ki-jien beh tshua lan Gin-ti-a,} \\
\text{since want marry our (name)} \\
\text{\textit{i \textit{tioh-ai} tam tsik-jim la}.} \\
3\text{sg TIOH-need carry responsibility PAR} \\
\text{‘Since he wants to marry Gin-ti-a, he has to take responsibility.’ }
\]

However, I do not consider *tioh* in (17) to be a temporal connector; rather, *ki-jien* ‘since’ is the conjunction. *Tioh* and *ai* together denotes necessity modality.

Chen analyzes *tioh* in (18) as a clausal connector.

\[
(18) \text{m si hioh-khon-jit,} \\
\text{NEG COP holiday} \\
\]

---

\(^{139}\) I change her original translation as she does not translate the disposal marker \textit{ka}. She seems to have translated \textit{ka as hoo} ‘give’. I also changed some part of her transcription and glosses, such as \textit{men 要 > bian}, and \textit{ai} 愛 ‘must’ > ‘need’.

\(^{140}\) I change all her transcriptions to fit with the system I use in this dissertation.
Tioh in (18) can be a modal too, as tioh ‘need’ and bian ‘need.not’ are parallel in this utterance. A conjunction is not obligatory in order to connect two thoughts in the Chinese language. The first part can also be read as ‘on a non-holiday’, under which there is no need for a clausal connector.

Chen (2003: 51-52) argues that in (19), ‘when the condition … ‘half an hour later’ is fulfilled, then the event … ‘to pick them up at the gate’ will be undertaking.’ But her translation does not show such a sequence ‘I then need to pick them up at the gate’.

I agree with the temporal sense of tioh that can be translated as ‘then’. However, I see tioh as connecting the time adverbial ‘in a half hour’ to the necessity of ‘picking them up at the gate’, rather than connecting ‘(their) coming in thirty minutes’ to ‘picking them up’. There is a possibility in which tioh and ai are one unit, indicating necessity modal ‘need’.
It is however difficult to distinguish the modal *tioh* in *tioh-ai* from the temporal use of *tioh* ‘then/soon after’; typically both share the same pronunciation and occupy a pre-verbal position.

### 6.2.5 The negative *bian*.

As noted in Table 6.2, the negation of *tioh, ai, or tioh-ai* ‘need’ is not *m-tioh, *m-ai* or *m-tioh-ai*. *Bian* is the negation, but *bian* is not a phonetic fusion from negation plus its affirmative *tioh*.

(20) \( \text{NEG} + \text{tioh} \text{ ‘need’} \neq \text{bian} \text{ ‘need.not’} \)

I look at both lexical and modal uses of *bian*. Just like its affirmative counterpart *tioh*, *bian* is rarely used as a lexical verb. Previous studies such as Li (2007) and Lien (2008) do not include the verbal usage of *bian*, but I found the lexical use of *bian* as in (22) and (23) from the TSM corpus. The use of *bian* can be interpreted as ‘exempt from’.

(22) tsit \textbf{bian} tsinn. \textit{這免錢}

\begin{verbatim}
this exempt.from money
\end{verbatim}

‘This is free.’

(23) li \textbf{bian} huan-lo. \textit{你免煩惱}

\begin{verbatim}
2sg exempt.from worry
\end{verbatim}

‘No worries.’

*Bian* in (22) and (23) is probably a set phrase with the noun. Many instances with *bian-tsinn* occur in the corpus; see (24).

(24) 圓仔湯食免錢的呼

\begin{verbatim}
inn-a thng tsiah bian-tsinn e hoo
rice.ball soup eat not.need-money ASST PAR
\end{verbatim}

‘Rice ball soup is free, right?’
Next, the modal *bian* denotes necessity ‘need.not’. *Bian* in the same sentence in (23) can be read as a modal ‘need.not’. Below are two examples from the corpus.

(25)  li          bian          huan-lo. 你免煩惱
      2sg          not.need      worry
      ‘You don’t have to worry.’

(26)  予你借去了後我就免生活…啊！
      hoo          li          tsioh      ki          liau-au
      PASS         2sg          borrow         go         after
      gua          tioh        bian         sing-uah     ah
      1sg          then         not.need     make.a.living     PAR
      ‘After (the tool) was borrowed by you, (I) didn’t have to make a living.’

Li (2007) suggests that the modal *bian* expresses obligation, such as in

(27).\(^{141}\)

(27)  下哺的會汝免去參加。SM; Li (2007: 147)
      e.po          e          hue
      afternoon     GEN      meeting
      li            bian       khi      tsham-ka.
      2sg          need.not    go     participate
      ‘You don’t have to attend the meeting in the afternoon.’

6.2.6 The interrogative *bian*.

As noted, the negative morphemes are often used as interrogative markers.

We have seen *be* ‘can.not’ and *m* ‘not.want’ in the previous chapters. However, I did not find any *bian* as interrogative in my corpus.

\(^{141}\) Transcription and translation are mine.
We have seen *bian* used in questions previously in section 6.2.1, when *tioh* is discussed. I repeat the sentence below for convenience. however, (28) is not from the TSM corpus.

(28) 

<table>
<thead>
<tr>
<th>tioh</th>
<th>sann</th>
<th>a</th>
<th>bian</th>
</tr>
</thead>
<tbody>
<tr>
<td>need</td>
<td>clothes</td>
<td>or</td>
<td>need.not</td>
</tr>
</tbody>
</table>

‘Do (you) need clothes?’

Li (2007) in his grammar book on Southern Min provides similar examples, where *bian* appears at sentential final position; see (29) and (30).

(29) 

<table>
<thead>
<tr>
<th>beh</th>
<th>tshiann-lang-kheh</th>
<th>tioh</th>
<th>be</th>
<th>hi</th>
<th>a</th>
<th>bian</th>
</tr>
</thead>
<tbody>
<tr>
<td>want</td>
<td>host-guest</td>
<td>need</td>
<td>buy</td>
<td>fish</td>
<td>or</td>
<td>need.not</td>
</tr>
</tbody>
</table>

‘Do (we) buy fish to host our guests?’

(30) 

<table>
<thead>
<tr>
<th>tioh</th>
<th>phak</th>
<th>kha</th>
<th>ta</th>
<th>a</th>
<th>bian</th>
</tr>
</thead>
<tbody>
<tr>
<td>need</td>
<td>make.dry</td>
<td>more</td>
<td>dry</td>
<td>or</td>
<td>need.not</td>
</tr>
</tbody>
</table>

‘Do (I) have to dry it completely?’

One can see the pair *tioh* ‘need’ versus *bian* ‘need.not’, in these questions. My consultants agree with the use of (28)-(30). They, however, use *bo* as a Q for these questions. The productivity test from the corpora provides a hint, and the disjunctive use ‘need or not.need’ in these cases reveals that *bian* is still a negative. Unlike the other negatives, *bian* is not an interrogative marker.

6.2.7 The prohibitive.

Modality is connected to imperatives or prohibitives, which often take place in the 2\textsuperscript{nd} person. *Mai* from the fusion of *m* ‘not’ and *ai* ‘need’ is also often used; (32) and (33).
(31)  **bian**  koh  kha  a.
    PROH again  call  PAR
    ‘There is no need (for you) to call again.’

(32)  **mai**  koh  kha  a.
    PROH again  call  PAR
    ‘Don’t call (someone) again.’

(33)  li  **mai**  luan  kong.
    2sg  MAI messily  say
    ‘Do not make up things.’

*Mai* is only used in the 2\textsuperscript{nd} person subject, as (34) is ungrammatical.

(34)  *i  **mai**  khi.
    3sg  PROH go
    Int.: ‘He had better not go.’

*Mai* can appear with another modality, such as *siong-hoo* ‘had better’,
with which the tone is softened.

(35)  li  *siong-hoo  **mai**  khi.
    2sg  the.best  PROH go
    ‘You had better not go.’

Another common prohibitive in TSM is *m-thang*.

(36)  **m-thang**  ko  kong  a.
    PROH  again  say  PAR
    ‘Don’t say any more.’

(37)  li  **m-thang**  bo  khi  hakhau.
    2sg  not-allow  NEG  go  school
    ‘You cannot not go to school.’
6.2.8 m-bian as negative concord?

Li (2007) and Lien (2008) both suggest that m and bian involve negative concord. Li’s reasoning comes from (38), where two negatives m and bian are used, but the interpretation of the sentence takes one negative only.

(38) 我著去唔？唔免，我家己去。 SM; Li (2007: 155)
gua tioh khi m?
1sg need go Q
‘Do I need to go?’

**m-bian,**
gua ka-ki khi.
M-BIAN 1sg self go.
‘No, I myself go.’

Li (2007) provides two examples with m-bian, and both are in the answer portion. Yet, Lien has examples where m-bian is a modal verb; see (39).

(39) 我唔免提你的工錢啦 TSM; Lien (2008: 10)
gua m-bian te li e kang-tsinn la.
1sg M-BIAN take 2sg POSS labor-money PAR
‘I need not take money (wages) from you.’

Lien’s (2008: 10) found 188 tokens of such usage in his modern TSM corpus, which indicates high productivity of m-bian.

The first question to ask is the status of m in these instances. The volitional $m_1$ ‘not.want’ differs from m in (39). Is m in (39) the same as the pure negator $m_2$, which is typically used with stative verbs and modals (chapter five)? The answer is no, because $m_2$ is ‘not’, but the m in (39) does not yield negation.
I provide two analyses. The use of *m* together with *bian* may be contributed to the denasalization of *b* in *bian* from *m*, which is the initial consonant of ㄇ.

(40)  
\[ \textit{mian} > \textit{m-bian} \]

If the above is not the case, then *bian* may be losing its negativity. This can be rephrased as whether or not *m* is a renewal for *bian*.

Interestingly, *m* is also used with the affirmative *tioh* without negativity, as in (41). That is, when *m* and *tioh* is used, the sentence has the same meaning as when *tioh* stands alone.

(41)  
\[ \text{li (m) tioh khah tsa khun le.} \]  
\[ 2sg \text{ M need more early sleep PAR} \]

‘You have to go to bed earlier.’

This phenomena is also found in Lien (2008: 10), where he suggests that *m-tioh* is used to look for agreement from the listener. I found cases where *m-tioh(-ai)* shows impatience; see (42).

(42)  
\[ \text{問你的話，妳毋著愛趕緊講} \]  
\[ \text{mng li e ue, li m tioh-ai kuann-kin kong.} \]  
\[ \text{ask 2sg GEN word 2sg M need hurry say} \]

‘(Someone) is asking you. You should speak now.’

Lien notes that when *m-tioh* precedes a modal, it is to provide suggestions.

(43)  
\[ \text{你毋著毋通叫我去共你保你} \]  
\[ \text{TSM; Lien (2008: 10)} \]
\[ \text{li m-tioh m-tang kiou gua} \]  
\[ 2sg M-tioh not-allow ask 1sg \]
\[ \text{go PREP 2sg bail 2sg} \]

‘You had better not ask me to bail you out.’
As \( m \) in (42) and (43) can be dropped, I analyze \( m \) as an emphatic marker. Table 6.3 summarizes the various categories of \textit{tioh} and \textit{bian} in contemporary TSM.

Table 6.3
Categories of \textit{tioh} and \textit{bian}

<table>
<thead>
<tr>
<th></th>
<th>V</th>
<th>MOD</th>
<th>Discourse marker</th>
<th>INT</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{tioh}</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>\textit{bian}</td>
<td>√</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
</tbody>
</table>

6.3 Diachrony of \textit{tioh}/\textit{bian}

In this section, I synthesize previous studies on \textit{tioh}, in addition to my corpus analysis, and trace the origin of \textit{bian} in the history of the Chinese language.

6.3.1 The multi-functional \textit{tioh}.

Modal \textit{tioh} is recorded as 著 in the Southern Min literature. The character 著 has various pronunciations, and carries a larger number of categories than the other verbs discussed in the previous chapters. The \textit{Hanyu da cidian} has the following lexical entries for this morpheme. The pronunciation is in MSC.

Table 6.4
Definitions of 著 in Chinese

<table>
<thead>
<tr>
<th>著</th>
<th>V: to make clear, to show, to establish</th>
</tr>
</thead>
<tbody>
<tr>
<td>著</td>
<td>V: to stay; same as 佇</td>
</tr>
<tr>
<td>著</td>
<td>V: to store; same as 貯</td>
</tr>
<tr>
<td>著</td>
<td>V: to attach; to wear; to put; to grow; to feel emotional attached; to spend</td>
</tr>
<tr>
<td>著</td>
<td>V: to ignite; post-verbal: to reach the goal</td>
</tr>
<tr>
<td>著</td>
<td>Auxiliary: progressive</td>
</tr>
</tbody>
</table>
Table 6.5 summarizes the various uses of 著 in contemporary TSM

Table 6.5
The multiple meanings of tioh 著 in TSM

<table>
<thead>
<tr>
<th>pronunciation</th>
<th>meaning</th>
<th>pronunciation</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>tioh</td>
<td>V: ‘to wear’</td>
<td>tu</td>
<td>V: ‘to write’</td>
</tr>
<tr>
<td>tioh</td>
<td>V: ‘to target at’;</td>
<td>tiau</td>
<td>V: ‘to attach’</td>
</tr>
<tr>
<td></td>
<td>‘to undergo’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tioh</td>
<td>V &amp; Mod: ‘need’</td>
<td>ti</td>
<td>V: ‘to exist’</td>
</tr>
<tr>
<td>tioh</td>
<td>Adverb: ‘then’</td>
<td>ti</td>
<td>LOC: ‘be at’</td>
</tr>
<tr>
<td>tioh</td>
<td>verbal complement</td>
<td>toh</td>
<td>V: ‘to ignite’</td>
</tr>
</tbody>
</table>

The preverbal use includes tioh ‘to wear’, tiau ‘to attach’, toh ‘to ignite’, the necessity modal ‘need’, and the adverbial tioh ‘then’. The post-verbal tioh is a telicity marker, and ti shows location.

I only focus on two major uses of tioh in this dissertation. The first type characterizes tioh as post-verbal aspect. In (44) and (45), tioh provides the activity verb tshue ‘look for’ with telicity.142 In other words, tioh turns an activity verb such as ‘look for’ into a telic one ‘find’.

(44) i tshue be tioh thau-loo. TSM
    3sg look.for not.able obtain job
    ‘He cannot find a job.’

(45) i tshue tioh thau-loo a bu? TSM
    3sg look.for obtain job PAR Q
    ‘Has he found a job?’

142 Mandarin makes use of another morpheme dao 到 for such a function.
The other use of *tioh* is preverbal, expressing necessity modality; see (46). This usage is the focus of this section.

(46)  
li  tioh(-ai)  khi  tshue  thao-loo.  TSM  
2sg  need(-need)  go  look.for  job  
‘You need to look for a job.’

As the modal use of *著* is the focus, more attention is given to the word order [著 *tioh* + V] rather than [V + *tioh* 著], 著 in the latter of which is aspectual. What follows is a history of *tioh* as discussed in previous research. I also review related uses of 著, including Zhuzi Yulei and related Min studies.

### 6.3.2 Diachrony of *tioh*.

There have been a considerable number of studies on 著 about different Chinese language varieties. However, the modal use of 著 has not received much attention. I single out this usage and re-organize it chronologically.

The origin of 著 can be traced back to the pre-Qing Dynasties (before 221 BCE) in which 著 has three lexical meanings: ‘to attach’, ‘to be conspicuous’ and ‘to write’ (Chen 2004).

(47)  
矢著于莊門  春秋公羊傳 (*Gongyang zhuang*; 476-221 BCE)  
shi  zhuo  yu  zhuang.men  
arrows  attach  LOC  gate  
‘An arrow hit the gate.’

---

143 For example, Sun (1998).

144 Sentences are from Chen (2004: 43-47) and glosses are mine. All sentences are in MSC pronunciation; I transcribe the morpheme 著, based on its meaning in each case.
(48) 兵箸晉陽三年矣 鎮國策 (Zhan guo ce; the 3rd to 1st centuries BCE)
兵(zhuo) 晉(Jinyang) 三(san) 年(nian) 兵(zhuo) 
Troop (place) three year ASP
‘Troops have besieged Jinyang for three years.’

(49) 桓公之信著乎天下 春秋公羊傳 (Gongyang zhuan; 476-221 BCE)
桓公(zhi) 之(xin) 信(zhu) 著(zhu) 著(hu) 乎(hu) 天(tian)下(xia).
(name) GEN faith conspicuous LOC the world
‘The good faith of Huan Gong is conspicuous to all the world.’

(50) 著於丹書 春秋左傳襄公 (Zuo Zhuan; compiled by 389 BCE)
著(zhu) 於(yu) 丹(dan) 書(shu)
Write LOC red book
‘Write down (the name of the criminal) in red’

In the West Han Dynasty, several new usages emerged, including ‘to wear’, which derives from ‘to attach’ (Chen 2004; Yang 1992).

Moving to Middle Chinese, during the Wei-Jin-Nan-Bei Dynasties, 著 further developed from a lexical to grammatical item. 著 as ‘to target’, ‘to be at’ and ‘to reach’ can be attested in Shi shuo xinyu 世說新語 (403-444 BCE), based on Chen (2004). Below is an example of ‘to reach’.

(51) 可擲箸門外 Shi shuo xinyu 世說新語 (403-444 BCE)
可(ku) 擲(zhi) 箸(ZHE) 門(wen) 外(wai)
can throw reach door out
‘(It) could be thrown out of the door.’ (Chen 2004: 59)
More new functions such as ‘to persist in’, ‘to use’, and causative ‘to make’ are found in *Dunhuang bianwen ji* 敦煌變文集. 著 in (52) can also mean ‘feeling attached to and longing for’ (Chen 2004: 63).

(52) 何需戀著海中財  敦煌變文 (*Dunhuang bianwen*)

he xu lian zhuo hai zhong cai

why must love persist in sea middle wealth

‘Why must one pine for wealth in the ocean?’

Modality ‘need’ in 著 first appears in the literature around the Tang Dynasty (618-907 CE) in the North (Yang 1992: 14).

(53) 鴻雁纔飛便著行  敦煌變文 (*Dunhuang bianwen*; Tang 618-907 CE)

hongyan cai fei bian zhuo xing

swan goose just fly then need go

‘A swan goose, though having just taken flight, indeed had to go.’

(54) 亦須著精神好  祖堂集 (*Zutang ji*; 952 CE)

yi xu zhuo jing shen hao

also need need essence spirit good

‘Also demand that the essences and spirits be good.’

Note that *tioh* 著 in (53) is a modal ‘need to’, whereas it is lexical in (54).

Strangely, there is no lexical use of *tioh* in the earlier text *Dunhuang bianwen* than *Zutang ji*, where the lexical *tioh* is attested (Chen 2004).

---

145 Sentences are from Chen (2004: 63); glosses are mine. I modify some translation in (52)-(54).

146 The two sentences are from Chen (2004: 69); glosses are mine.
Briefly, by early Mandarin time, 著 has developed into its modal usage.

Chen (2004: 90) concludes that modal 著 follows a grammaticalization as (55).

(55) 著 [TSM: tioh]: ‘to attach’ > ‘persist in’ > ‘need’

6.3.3 Tioh in Zhuzi Yulei

In the following paragraphs, I pay special attention to two early Min texts: one is Zhuzi yulei and the other is Lijing ji.

Table 6.4 summarizes necessity modals in Zhuzi (adapted Wu 2004a: 77).

<table>
<thead>
<tr>
<th>Table 6.4</th>
<th>Necessity (modal) verbs in Zhuzi Yulei</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 須 su</td>
<td>401</td>
</tr>
<tr>
<td>2. 須是 su-si</td>
<td>141</td>
</tr>
<tr>
<td>3. 須得 su-tik</td>
<td>3</td>
</tr>
<tr>
<td>4. 須著 su-tioh</td>
<td>14</td>
</tr>
<tr>
<td>5. 須直 tik-su</td>
<td>3</td>
</tr>
<tr>
<td>6. 必須 pit-su</td>
<td>10</td>
</tr>
<tr>
<td>7. 要 iau</td>
<td>165</td>
</tr>
<tr>
<td>8. 要須 iau-su</td>
<td>20</td>
</tr>
<tr>
<td>9. 須要 su-iau</td>
<td>4</td>
</tr>
<tr>
<td>10. 用 iong</td>
<td>15</td>
</tr>
<tr>
<td>11. 當 tong</td>
<td>135</td>
</tr>
</tbody>
</table>

The other meanings of ‘to use’ and causative ‘to make’ of tioh may be associated with ‘need’ too. Further research is, however, needed for a firm conclusion.
Apparently *su* 須 is the major modal verb, expressing ‘need’, from which items two to six are derived. The negative for *su* is *put* 不 or *bi* 未. Among the disyllabic modals, the second item *su-si* ‘need to be’, consisting of ‘need’ and a copula *si*, is also productively used in this text. Wu (2004a: 71) explains that *su-si* differs from *su* in the fact that *su-si* takes a CP complement.

The fourth item *su-tioh* ‘need-need’ is worth attention as well. As noted, *tioh* first occurred in the Tang Dynasty as modality in earlier historical texts than *Zhuzi yulei*. In *Zhuzi*, the combination of *su* and *tioh* is attested. 148 Item 6 *pit-su* 必須 has survived to MSC, pronounced as *bi-xu*.

According to Wu (2004a), other than item 2, which takes a CP, items 3 to 6 are restrictive in use. For example, item 3 only occurs in negation and questions, and items 4 through 6 only take a VP predicate, with no negative and interrogative form, as *不必須 bo put-su* ‘not need’ is not a correct form.

Item 7 *iau* 要 is also important. Recall that in TSM, *iau* ‘to want’ denotes volitional modality (chapter five). Volition and necessity modality are related. Interestingly, *iong* 用, initially meaning ‘to use’, can be used as a necessity modal. This is relevant, as in MSC *bu-yong* 不用 ‘not-use’ is one of the negative necessity modals. The affirmative form *yong* ‘need’ does not survive.

148 *Tioh* is the most productive modal in contemporary TSM. It needs further research to answer the question whether *su* took over *tioh* as necessity modality in later texts such as *Zhuzi*. The use of *su* in *Zhuzi* may simply have to do with stylish or regional differences.
The difference between the two important modals *su* and *iau* in *Zhuzi yulei* is summarized in Table 6.7 (Wu 2004a: 77); brackets show the number of tokens.

Table 6.7
The overlapping modality in *Zhuzi Yulei*

<table>
<thead>
<tr>
<th><em>su</em> 須 ‘must’</th>
<th><em>iau</em> 要 [212] ‘want’</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>pit-su</em> 必須 ‘must’</td>
<td><em>su</em> [401] 須 ‘need’</td>
</tr>
<tr>
<td></td>
<td><em>su</em> [401] 須 ‘need’</td>
</tr>
<tr>
<td></td>
<td><em>iau</em> 要 [165] ‘need’</td>
</tr>
</tbody>
</table>

The use of modality in *Zhuzi yulei* differs largely from that in contemporary TSM. However, *su* 須 and *iau* 要 (MSC transcription: *xu* and *yao*) have been adopted by MSC to this era.

**6.3.4 Tioh in Lijing Ji.**

In the 16th century Min text *Lijing ji* 荔鏡記, necessity modality is mostly expressed by *tioh*.\(^{149}\)

**Tioh as a lexical verb.**

(56) 自古嫁娶著媒人 *Lijing ji*; Chung (2001: 40)

    tsu-koo ke-tshua **tioh** mui-lang

    since old.times marriage need match-maker

    ‘Marriage has relied on match-makers since ancient times.’

(57) 打虎須著親兄弟 *Lijing ji*; Chung (2001: 40)

    phah hoo su-**tioh** tshin hiann-ti.

    hit tiger need real brothers

    ‘Catching a tiger requires help from brothers.’

\(^{149}\) Examples (55)-(60) are from Chung (2001); glosses and translation are mine.
**tioh as a modal verb.** There are also cases where *tioh* is used as a modal verb. Disyllabic modals also appear in this text; (58)-(60). As just noted, *su 須, pit 必,* and *tioh 著* individually express modality ‘need’.

(58) **你去路上著細膩**  *Lijing ji; Chung (2001: 52)*

    li  khi  loo.siong  tioh  se-ji.

2sg  go  on.the.road  need  caution

‘You need to be careful on the way (there).’

(59) **須著趕路程**  *Lijing ji; Chung (2001: 52)*

    su-tioh  kuann  loo-ting
    need  hurry  mileage

‘(someone) needs to hurry on the way.’

(60) **三爹必須著只內去**  *Lijing ji; Chung (2001: 52)*

    sann-tia  pit-su-tioh  cit-lai  khi.
    (title)  need  enter  go

‘(name) needs to come in (for something).’

I have discussed how *tioh* characterizes modality in *Lijing ji* by lexical and grammatical means in the above examples. Briefly, TSM necessity modals differ in shape, but historical traces are attestable; see Table 6.8. For instance, *tioh* can be seen in epistemic *tiann-tioh* ‘must’. The participant internal necessity modal *su-iau* has appeared in *Zhuzi yulei*. Interestingly, *tioh* as necessity modality is used in modern TSM, as opposed to *su* in *Zhuzi yulei*. I will discuss *ai* 愛 later, as its necessity sense is a later development.
Table 6.8
Modern Southern Min necessity modals

<table>
<thead>
<tr>
<th>necessity</th>
</tr>
</thead>
<tbody>
<tr>
<td>tiann-tioh 定著 ‘must’ (epistemic)</td>
</tr>
<tr>
<td>su-iau 需要 ‘need’ (participant internal necessity)</td>
</tr>
<tr>
<td>tioh 著 ‘need’ (deontic necessity)</td>
</tr>
<tr>
<td>ai 愛; tioh-ai 著愛 ‘need’ (deontic necessity)</td>
</tr>
</tbody>
</table>

**tioh as a complementizer.** We now move to another topic: *tioh* as a complementizer. Based on Chung (2001: 53-61), *tioh* can be in C too. She however only categorizes the use of *tioh* in embedded sentences without further separating the modal *tioh* from the conjunction *tioh*.

I use her examples to demonstrate that *tioh* has begun to be used as a C in *Lijing Ji*. One type of complementizer appears in causal relationships as in (61) and (62).  

(61) 好花因著風雨滾 *Lijing ji*; Chung (2001: 55)
ho hue in-*tioh* hong hoo kun.
good flower because wind rain turnover
‘Good flowers turn over because of wind and rain.’

(62) 爲著人情到只處 *Lijing ji*; Chung (2001: 55)
ui-*tioh* jin-tsing kau jit chu.
because of human affection arrive this place
‘I came here for (someone).’

---

150 Hsin (1999) treats *tiann-tioh* as an adverb.

151 Sentences are from Chung (2001: 55); glosses and translation are mine.
Tioh in the compounding conjunctions in-tioh 因著 and ui-tioh 爲著 does not carry the semantics of necessity; rather, in 因 and ui 爲 are typically clause connectors, meaning ‘because/because of/for’. While Chung does not associate the above usage with C, she suggests tioh in the following sentence as a conditional conjunction.

(63) 今著叫一聲三哥即放 Lijing ji; Chung (2001: 55)
now need call one CL (title) then release
‘You need to call me Third Elder Brother in order for me to let you go.’

I do not agree. Chung translates tioh as dei 得 in MSC, which means ‘need to’, but she argues that tioh is a conditional marker. I analyze tioh here as a modal.

She further explains that (63) is a case of the [beh X # tioh Y] conditional construction, where X and Y are clauses, with beh ‘if’ optionally dropped. This construction is similar to English ‘if…then’. Tioh ‘then’ has an immediate temporal function. Another example from Chung is (64), where tioh means ‘to attach’ or ‘to undergo’. As noted in chapter five, na-beh is the conditional connector rather than tioh.

(64) na-beh put kian, li tioh-tinn. Lijing ji; Chung (2001: 60)
if NEG see 3sg TIOH-intertwine
‘If (she) is out of scene, you’re in trouble.’

I argue that tioh in (64) does not function as a conditional marker. Also, many examples under her conditional category show tioh as necessity modality; see (65)-(66).

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(65) 你不實說，定著討死  \textit{Lijing ji; Chung (2001: 60)}

\begin{verbatim}
li m sit sueh, tiann-tioh tho si.
\end{verbatim}

\begin{verbatim}
2sg NEG honestly say must receive death
\end{verbatim}

‘If you don’t tell the truth, you must die.’

(66) 卜脫林大姻親，必須著投告恁。\textit{Lijing ji; Chung (2001: 60)}

\begin{verbatim}
beh thuat Lim-taiin-tsins, pit-su-tioh tau-ko lin.
\end{verbatim}

\begin{verbatim}
if rid (name) marriage need beg 2sg
\end{verbatim}

‘To get rid of the marriage with Limtai, I need to beg you.’

Also, we see modality doublings, such as \textit{tiann-tioh} ‘definitely-need’, and \textit{pit-su-tioh} ‘need-need-need’. Therefore, \textit{tioh} in these cases should not be a C, as mistakenly suggested by Chung. The conditional marker \textit{na ‘if’} can be inserted in (65) for (67). This means that \textit{tioh} in these cases is a modal.

(67)  li na m sit sueh…

\begin{verbatim}
2sg if NEG honestly say
\end{verbatim}

‘If you don’t tell the truth…’

The same conclusion applies to her concession examples, one case of which is (68), in which \textit{tioh} is also a modal, meaning ‘need’. The complementizer can be \textit{jim} 任 ‘however’, or \textit{ia} 也, translated here as ‘regardless; nevertheless’.

(68) 任你口說出蓮花，也著嫁乞伊 \textit{Lijing ji; Chung (2001: 61)}^{152}

\begin{verbatim}
jim li kao-sueh-tsuts-lian-hue,
\end{verbatim}

\begin{verbatim}
regardless 2sg whatever.reason
\end{verbatim}

\begin{verbatim}
ia tioh ke khit i.
\end{verbatim}

\begin{verbatim}
also need marry PREP 3sg
\end{verbatim}

---

^{152} 說出蓮花, literally ‘lotus out of the mouth’, is a metaphor meaning ‘whatever reason’
‘Regardless of any reason you come up with, you need to/must marry him.’

I agree that the categorial status of *tioh* ranges from V to Mod, and to C. It is just that *tioh* as a necessity modal often connects two dependent/subordinating events/clauses. Only in the clausal relationship type does *tioh* behave like a C, as in (61) and (62).

### 6.3.5 *Tioh* in TSM.

I discuss TSM necessity modality in section 6.2. Table 6.9 outlines TSM necessity modal paradigm, including the affirmative and negative systems. As seen, historical traces are apparent in morphology.

<table>
<thead>
<tr>
<th>Table 6.9</th>
<th>TSM necessity paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td><em>tiann-tioh</em> 定著 ‘must’</td>
</tr>
<tr>
<td></td>
<td><em>ing-tong</em> 應當 ‘should’</td>
</tr>
<tr>
<td>Participant-internal/Participant-external</td>
<td><em>ai 愛</em>; <em>su-iau</em> 需要 ‘need’</td>
</tr>
<tr>
<td>Participant-external deontic</td>
<td><em>Tioh 着</em>; <em>ai 愛</em>; <em>tioh-ai 着</em> 愛 ‘need’</td>
</tr>
<tr>
<td></td>
<td><em>bian 免</em> ‘not need’</td>
</tr>
<tr>
<td></td>
<td><em>put-kai</em> 不該 ‘should’</td>
</tr>
</tbody>
</table>

I found it difficult to match TSM modals with those in English. There are no individual words in TSM to match English ‘should’, ‘need’, ‘have to’, or ‘must’.  

---

153 I am agnostic about *tioh* moving to T for the case of temporal *tioh* ‘then’.  

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The semantics of *ai* is taken over by another modal *ing-kai* ‘should’; (69) is mainly for suggestions.

(69) li   ing-kai   ai   khi.   TSM
     2sg  should   need   go

‘You should go (somewhere).’

_Tioh(-ai)_ ‘need’ is the major necessity modal in TSM. To express stronger directiveness, another modality adverb such as _i-tng_ 一定 ‘definitely, absolutely’ is often utilized; see (70). The additional _kah gua_, literally ‘give me’, often indicates impatience and impoliteness.

(70) li   i-tng   tioh/ai/tioh-ai (kah gua) khi.   TSM
     2sg  definitely need   PREP 1sg  go

‘You must go (somewhere).’

### 6.3.6 The evolution of _tioh_.

As noted, _tioh_ as necessity modality first appeared in the _Tang_ dynasty. In _Zutang ji_ and _Dunhuang bianwen_, _tioh_ was used as lexical or modal ‘need’. A puzzle is that _su_ 需 is the major necessity modal in _Dunhuang bianwen_, but _tioh_ is not noted in the modal system by Wu (2004a: 37). _Su_ in a later text _Zhuzi yulei_ serves as the major necessity modal although _su-tioh_ 須著 and other combinations also occur in the same text (Wu 2004b).

In the Min text _Lijing ji_, _tioh_ 著 is the most productive modal for necessity, and _su_ only appears in _su-tioh_ 須著 or _pit-su-tioh_ 必須著. The paradigm of necessity modality in contemporary TSM differs. _Tioh_ remains as one of the three necessity modals and the other two are _ai_ and _tioh-ai_. _Ai_ as necessity modality
first appeared in the 19\textsuperscript{th} to 20\textsuperscript{th} centuries (Chang 2009). Ai as a renewal for necessity \textit{tioh} is just as \textit{ai} is a renewal for volition \textit{beh} ‘want’ (chapter five).

I summarize the evolution of Southern Min \textit{tioh} as necessity ‘need’ in (71). I show the time periods when \textit{tioh} and \textit{ai} first occurred as modality and also the dominating necessity modal during each period of time in the history. Apparently, \textit{tioh} undergoes grammaticalization, as a renewal \textit{ai} is often attached to \textit{tioh}, resulting in \textit{tioh-ai} ‘need’.

(71) \textit{tioh} 著; modality use appeared in the Tang dynasty (618-907 CE)
    > \textit{su} 須; \textit{Dunhuang bianwen}; Tang (618-907 CE)
    > \textit{su} 須; \textit{Zhuzi yulei} (1270 CE)
    > \textit{tioh} 著; \textit{Lijing ji} (16\textsuperscript{TH} cy.)
    > \textit{ai} 愛; modality use appeared 19\textsuperscript{th}-20\textsuperscript{th} cy.
    > \textit{tioh-ai} 著愛; contemporary TSM

6.3.7 Diachrony of bian 免.

I begin with dictionary definitions for \textit{bian} 免. There are two entries in \textit{Hanyu da cidian}, with MSC pronunciations as \textit{mian} and \textit{wen}. I discuss the meanings of the first pronunciation, as it is more relevant.\textsuperscript{154} The lexical use of \textit{mian} includes five entries: ‘to take off’, ‘to leave’, ‘to release’, ‘to escape’, and ‘to exempt’. I provide two examples below.

(72) 臨難毋苟免 禮記曲禮上 (\textit{Liji}; 202-220 BCE)
    lin nan wu guo \textbf{mian}
    face difficulty NEG indifferent escape
    ‘in the face of difficulties, do not indifferently escape’

\textsuperscript{154} Transcription is in MSC; glosses and translation are mine.

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As seen in these definitions, the use of mian 免 shows opposite semantics from 著 zhuo, which has an origin ‘to attach’. It is not surprising that bian 免 is used as the negation of 著 tioh in TSM.

What’s interesting is the negative use of mian. The dictionary suggests that mian as negation is like bu ‘not’ or prohibitive bu-yao in MSC. Below is the example from the Hanyu dai cidian. Mian as negation occurred in Middle Chinese; (74).

(74) 旦夕公歸伸拜謝，

dan xi gong gui shen bai xie
dawn dusk lord return extend veneration respect

免勞騎去逐雙旌。 唐韓愈 (poetry by Han Yu; 768-824 CE)

mian lao qi qu zhu shuang jing
avoid travail ride go chase double banner

‘Dawn and dusk does his Lordship return to extend veneration and respects, in doing so avoiding the travail of riding in the wake of the redoubled banners.’

Interestingly, I found xu-zhuo 需著 ‘need’ being used in the same poetry; (75).

(75) 長令奴仆知饑渴，

zhang ling nu pu zhi ji ke
master command slave thrall know hunger thirst

須著賢良待性情。 唐韓愈 (poetry by Han Yu; 768-824 CE)

xu-zhuo xian liang dai xing qing
need-able virtuous retain character deportment

‘Just as the master commands slave and thrall to know hunger and thirst, so must the virtuous and able man retains (fine) character and deportment.

As noted, bian is used as a negative and interrogative marker in modern TSM. Investigating the grammar books (see Wu 2004a and 2004b) on Dunhuang bianwen (618-907 CE) and Zhuzi yulei (1271 CE), I found no record of bian as negation during these two periods. 155

One may wonder how negation in bian derives. I investigate the previous Min text Lijing ji for bian 免. Surprisingly, the use of put bian 不免 is fairly productive in this text, with 212 tokens out of the total 238 tokens of bian. I analyze bian in these cases in Lijing ji as a verb, followed by another lexical verb in a sequence. For the 1 st and 2 nd person, bu bian is used as ‘why not’ or ‘might as well’. 156 There is no negation or real compelling obligation involved.

(76) put bian kiou ming. 不免叫門。
not exempt ask door
‘Why not knocking at the door? (since I’m here)’

(77) put bian khi hiou i tshu. 不免去歇伊處。
not exempt go rest 3sg place
‘(You) might as well go and stay at his place.’

(78) put bian kiann kau hue-hng. 不免行到花園
NEG avoid walk arrive garden
‘Why don’t you go to the garden,

155 Nor is bian used in the V-NEG construction as a question marker in these texts. This provides evidence that my postulation in section 6.2.6 is on the right track. That is, bian is not an interrogative.

156 I transcribe these sentences in TSM.
The above are instances with some degree of suggestions from the addresser or of volition from a self. However, there are cases where the addresser speaks to the 2nd person, (79), with necessity modality.

(79) u ue put bian phian gua. 有話不免騙我
have word NEG avoid deceive 1sg
‘You need to tell me the truth.’/Don’t deceive me with words.’

Modality can also appear in the third person subject; (70). The context indicates that the situation is difficult (for someone) ‘not to avoid getting someone out and punishing him’.

(80) 不兔叫出來懲戒伊。
put bian kiou tshut-lai ting-kai i
NEG avoid ask come.out punish 3sg
‘They had to get out of (someone) and punish him.’

In a routine practice such as (81), put bian may move from ‘hard to avoid’ to ‘what necessarily follows next’. This is still different from contemporary TSM bian ‘need.not’

(81) 不兔請亞娘梳粧。
put bian tshiann A-Niu se-tsong
NEG avoid ask(politely) name make.up
‘(The maid) politely asks A-Niu to dress up.’

To summarize, bian in the above examples from Lijing ji is associated with modality and negation. I assume that the meaning of ‘to exempt/to avoid’ in bian is later reanalyzed as ‘not necessary; not need’ in modern TSM. Future research is required.

What follows is a discussion of m-bian. At first thought, the juxtaposition of put ‘not’ and bian ‘to exempt; to avoid’ in Lijing ji may explain the m-bian ‘not.need’ version of modern TSM; however, m in m-bian does not give rise to negation. I do not see the contexts of put and bian together in the above cases as an origin of m-bian ‘need.not’ in contemporary TSM. All examples of put bian in Lijing ji take a VP or CP complement, and bian is not predicated by a nominal phrase, as it can be in TSM.

The m part in m-bian may be simply phonetic. There are two possible analyses. First, the initial in mian is denasalized, thus making two pronunciations, m-bian and bian, in TSM.

(82)  mian > m-bian > bian

The other analysis suggests bian as original, and m is added as emphatic.

(83)  bian > m-bian

As previously noted, I against the notion that m-bian is a case of negative concord by Li (2007) and Lien (2008). Briefly, m is not an N-element that licenses negative indefinites; meanwhile, bian is not an N-word, either. Both components are required in negative concord (cf. Herburger 2001).
Another piece of evidence for this \( m \) as emphatic comes from the non-negative \( m \), used together with \( tioh \), where \( m \) behaves like an emphatic.

(85) \[ li \ (m) \ tioh-ai \ ka \ tsa \ kuann \ le. \]
\[ 2sg \ m \ need \ more \ early \ sleep \ PAR \]
'You need to go to bed early.'

To conclude, I trace the diachronic development of \( tioh \) and \( bian \) in this section. The necessity modality of \( tioh \) comes from the semantics of ‘to attach’ or ‘to persist in’. As the negative counterpart of \( tioh \), the negation of \( bian \) derives from the semantics of \( mian \) ‘to exempt, to avoid’. Interesting, the lexical use of \( mian \) can be associated with ‘to detach’, the opposite of ‘to attach’.

6.4 Grammaticalization of \( tioh/bian \)

I have shown how \( tioh \) and \( bian \) have evolved in the history of Chinese. This section reviews how reanalysis takes place in these necessity modals under the generative framework of grammaticalization.

6.4.1 \( Tioh: V > Mod > C. \)

The lexical use of \( tioh \) in (86) expresses necessity, just as \( ai \) in (87).

(86) \[ tioh \ sann \ a \ bian? \]
\[ need \ clothes \ or \ Q \]
‘Do (you) need clothes?’

(87) \[ jit \ ai \ tsinn \ bo? \]
\[ this \ need \ money \ Q \]
‘Do I need to pay to get this?’
As discussed in section 6.3, *tioh* evolves from the meaning of ‘to attach’ or ‘persist in’. The use of *ai* as necessity modality in TSM is a later development.

(88)  *tioh*: V ‘attach; persist in’ > V ‘need’

(89)  *ai*: N ‘essence’ > V ‘need’

*Tioh or ai* occupies the V head when it carries full semantic features.

(90)  *Tioh* as a lexical verb

```
    VP
      
  tioh/ai
```

Reanalysis takes place at different levels. During the first stage, when *tioh* gradually loses its semantic features, it becomes reanalyzed in a higher head, carrying [iF: necessity]; see (91).

(91)  Reanalysis of *tioh*

```
    vP
      
  [iF]  VP
     
  tioh
```

*tioh*: ‘attach; persist in’ > ‘need’ > [iF: necessity]

When the verb position is empty, another stronger semantic verb (e.g. *ai*) fills in, thus resulting in a disyllabic modal *tioh-ai* ‘need’; see (92).
(92)  *Ai* as a renewal

```
  vP
     \           \                  
        \         \                  
          tioh-ai  VP                ai
```

$tioh$: ‘need’ > [iF: necessity]

$ai$: ‘need’

A competing form $ai$ ‘need’, originally meaning ‘love’, comes into use before this stage, as shown in (93). *Ai* presumably is base-generated in $V$, and moves to $v$, as $ai$ ‘need’ requires an Agent argument.

(93)  Reanalysis of $ai$ as ‘need’

```
  vP
     \           \               
        \         \               
          ai     VP               ai
```

$ai$: ‘love’ > ‘need’

Due to a loss of semantic features, *tioh* or $ai$ further becomes a modal; *tioh*- $ai$ is the same.

(94)  *tioh*: ‘need’ > [iF: necessity]
When moving from V to Mod, the necessity modal *tioh-ai* follows the same grammaticalization path.

From chapters four through six, we have seen a pattern in the affirmative modals/verbs in their reanalysis process: they all make use of renewals in morphology, while they semantically become weakened. As a consequence, monosyllabic modals often become multi-syllabic. Syntactically, as full-fledged verbs lose semantic features, accompanying by a loss of agency, they move from VP to ModP. In language acquisition, it is a reanalysis triggered by the Economy Principles.

(95) \( \text{li } \text{tioh/ai/tioh-ai} \khi. \text{TSM} \)

\( \text{2sg need go} \)

‘You need to go.’

A step further up is when *tioh* becomes reanalyzed from ModP to C. The use of *tioh* as a conjunction in (97) is a case of *tioh* as C. *Ai* however is not a C yet.

(96) Reanalysis of *tioh* as Mod

\[
\text{ModP} \quad \text{tioh} \quad \text{VP}
\]

(97) a-*tioh* tu-tioh a.

\[
\text{CONJ encounter-attach} \quad \text{PAR}
\]

‘I then encountered (something).’
6.4.2 Bian: V > neg > Q.

The negation of tioh(-ai) ‘need’ is not projected by a NegP above the ModP, as mistakenly presented in (99).

(98) *gua put tioh-ai khi.
    1sg NEG need go
    Int.: ‘I don’t need to go.’

(99) A misplaced NegP for modal tioh-ai

NegP
   _______
   |        |
   |        |
NEG: m/put ModP
   _______
   |        |
   |        |
tioh-ai

Recall that one of the dictionary entries of bian is equivalent to ‘not’; this definition, however, does not seem to include modality. An examination of bian in the 16th century play Lijing ji reveals that bian ‘to exempt’ often appears with a negative put 不 ‘not’. However, bian is a lexical verb under such circumstances.

The context of negation and bian may have given rise to necessity modality in bian.

(100) bian: V ‘to exempt’ > ‘need.not’ > [iF: necessity; negation]

(101) jit (m-) bian tsinn .
    this M need.not money
    ‘This is free.’
(102) The negative *bian*

```
  NegP
    bian
    ModP
      bian
      VP
        bian
```

This path follows one of van der Auwera’s (2010) typological classifications for diachrony of negation: negation often comes from ‘lack’. The same is true in *mei* 没, which originates as ‘to lack’, from *mo* 没 ‘to die; to sink’.

Despite the fact that the necessity use of *bian* is not attested in historical texts prior to contemporary TSM, it is reasonable to postulate V to Mod in *bian*, as the modal use of *bian* far outnumbers its lexical one.

(103) *bian*: V > Mod ‘not.need’

Finally, just as all the other negative morphemes in TSM, *bian* may be used as Q, in the CP layer.

(104) *tioh(-ai) siann* a bian?

  need(-need) clothes or not.need

  ‘Do you need clothes?’

However, *bian* does not have other functions of C other than interrogatives. Possibly *bian* is still used under a disjunctive relationship ‘need or not.need’;
(104). I did not find such construction as (104) in the corpus. Nevertheless, *bian* demonstrates a grammaticalization path as (105), based on its synchrony.

(105) *bian*: V ‘exempt; avoid’ > Mod: necessity negation > Q: interrogatives (?)

### 6.5 Comparative Studies

Patterning with the previous two chapters, this section covers typology of necessity modality and a comparison among the three Sinitic language branches. I organize one category of *tiohlbian* after another, and discuss several special topics.

#### 6.5.1 Typology of necessity.

I discuss two issues below: English necessity modals and the sources of necessity modality. Note that the literature has used the terms *obligation*, *necessity*, or *obligation necessity*, which I use here interchangeably.

English has the following necessity modals, based on van der Auwera and Plungian’s (1998) classification. As discussed, TSM does not have corresponding modals to match each English modal; *tioh* ‘need’ serves as the basic necessity modal.

<table>
<thead>
<tr>
<th></th>
<th>necessity</th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td><em>must</em>; <em>should</em>; <em>will</em></td>
</tr>
<tr>
<td>Participant-internal</td>
<td><em>need</em> (to)</td>
</tr>
<tr>
<td>Participant-external (non-deontic)</td>
<td><em>have to</em>; <em>must</em></td>
</tr>
<tr>
<td>Deontic</td>
<td><em>must</em>; <em>should</em>; <em>shall</em>; <em>ought to</em></td>
</tr>
</tbody>
</table>

adapted from Li (2003: 64)

bold: prominent markers; non-bold: often used, but not prominent markers
There are also different ways to look at these modals. When referred to central versus semi-modals, they can be grouped as follows:

(106)  central: *must, need, should, ought*
Semi-modal: *have to, had better, have got to, need to, be supposed to, ought to*

In terms of degree of modality, the distinction between “strong” and “weak” modals is used. For example, Smith (2003: 242) classifies modals as markers of “strong” versus “weaker” necessity as (107).

(107)  modals of strong necessity: *must, have to, have got to, need, need to*
       modals of weaker necessity: *should, ought to, supposed to*

Smith however admits that this distinction is not perfect either, in that “the strongest use of the weaker forms …[can] …carry more force than the weakest uses of strong forms” (Smith 2003: 242). Examples are (108) and (109).

(108)  *You should get a move on.* (used deontically)
(109)  *You must come and visit some time.*

Coates (1983) investigates most of these modal verbs from corpora, which she claims presents contemporary English at the time; Collins (2009) updates her conclusions. What is relevant is the definitions of modals by Coates.

Coates suggests the semantics of *must* and *have got to* as ‘it is essential that’, compared to *have to*, which means ‘it is necessary for’ (Coates 1983: 53).

(110)  *You must play this ten times over.* (Coates 1983: 34)
(111)  *…the only thing you’ve got to remember is…*(Coates 1983: 53)
(112)  *I have to get up at 7 a.m. tomorrow.* (Coates 1983: 54)
The major difference between *must* and *have to* is that with *must*, the speaker has authority, and the authority of *have to* comes from no particular source (Coates 1983: 55). *Must* represents the strongest directive in English.

Coates refers *should* to be “the most commonly used [modal] to express the Root modality of (weak) obligation” (Coates 1983: 58).

(113) *You should* walk round the ramparts of the old city too. (Coates 1983: 58)

*Ought* has a similar function and sense to that of *should*.

(114) *There is a new book you ought to see.* (Coates 1983: 71)

However, like many others, Coates also agrees that modality in each modal is in a continuum, where a use can range from the strongest to the weakest. The tone in *ought* turns from ‘I advise you/it is advisable’ to ‘it would be a good idea’, as in (115).

(115) *You ought to come over to Cambridge some time.* (Coates 1983: 71)

Negation of modals is interesting. When *have to* is negated, the semantics is “it is not necessary for” (Coates 1983: 55). Southern Min *bian* serves this function; see (117).

(116) *They don’t have to be drama experts.* (Coates 1983: 54)

(117) **bian** koh kong a. TSM
need.not again say PAR
‘There is no need to say more.’

By contrast, the negated *must* denotes “it is necessary for you not’ or simply ‘you are obliged …not’ (Coates 1983: 55).

(118) *You mustn’t put words into my mouth.* (Coates 1983: 39)
The equivalent to Southern Min is *mai*, which comes from the modal negation *m* ‘not’ and *ai* ‘need’.

(119) mai koh kong a. TSM
       PROH again say PAR
       ‘Don’t say (it) again.’

Bybee et al. (1994) do not address sources of necessity modality; they focus on the subjunctive use of English *should* but not *need*. Nonetheless, they conclude that obligation modality follows the path such as (120).

(120) obligation $\rightarrow$ intention or imperative (Bybee et al. 1994: 240)

I agree that obligation and intention are related and that imperatives are often derived from obligation modality, as I have demonstrated in chapter five and this chapter. I’m agnostic about the direction.

In the Chinese language, the source for necessity modality can be ‘to attach’ as Southern Min *tioh*, ‘essence’ as MSC *yao*, or ‘desire’ as Hakka *oi*, the latter two of which can also be volition.

The negation of MSC *yao* and Hakka *oi* projects above the VP, presented as *bu-yao/bu-yong* ‘not-need’ and *m-sii* (literally ‘not-use’). The negation of TSM *tioh* is lexical, as a negative modal *bian* ‘need.not’ is utilized.

What follows is a comparison among the three Sinitic languages.

**6.5.2 The lexical *tioh/bian*.

As stated, the lexical use of *tioh* in modern TSM has become rare. In the Min affirmative paradigm, an alternative necessity verb *ai* 愛 is used, whereas Hakka makes use of *oi* 愛 and Mandarin uses *yao* 要.
From the historical texts, the use of *tioh* may come from an older linguistic stratum first attested in the Tang dynasty, while *ai* is from a newer layer, which emerged two to three centuries ago. The newer usage is cognate to Hakka *oi*.

The necessity system is intertwined with volitional modality in TSM, evident in the use of *ai* as the affirmative necessity ‘need’ and ‘want’. The dual function also applies to Hakka *oi* and Mandarin *yao*.

In the TSM corpus, *bian* as a lexical verb ‘need.not’ is uncommon, and it often accompanied by a nominal phrase, as a fixed expression.

(122) tse *bian* tsinn. TSM
this need.not money
‘This is free of charge’

(123) *bian* huan-lo. TSM
need.not worry
‘No worries.’

Hakka does not use *mien* (equivalent to Min *bian*) to negate *oi* 愛 ‘need’. A negative modal *m-sii* 帶使 ‘not.need’ is used instead. Interestingly, *sii* 使 ‘to make; to demand’ also appears in the possibility deontic *ssi-m-tet* ‘can.not’ (not.allowed). While *m-sii* expresses obligatory necessity, *sii-m-tet* is permissive.
Like Hakka, Mandarin utilizes a negative verb *bu-yao* 不要 or *bu-yong* 不用.

(126) zhe  **bu-yao/bu-yong**  qian  MSC
this  NEG-need  money

‘This is free of charge’

As noted, *yao* can express both volition (‘want’) and necessity (‘need’). *Bu-yao* as one unit negates volition or necessity, whereas *bu-yong* is only for necessity. *Yong* 用 is attested as modality ‘need’ in earlier texts such as *Lijing ji*, despite the fact that its meaning of ‘to use’ is more common in MSC.

Note that *yao* can be used in the affirmative setting, while *yong* cannot. In other words, just like TSM *bian* or Hakka *m-sii*, MSC *bu-yong* heads its own VP.

(127) zhe  **yao/yong**  qian  MSC
this  need  money

‘This is not free.’

I further investigate the external non-deontic use of ‘need’. *Ai* or *tioh-aai* participates; however, *tioh* is not a candidate; (128). Hakka and MSC make use of *oi* and *yao*, just like their lexical counterparts.158

---

157 One consultant (in her sixties) used *seu* 忧 and another (in her forties) provided me with *fan-nau* 煩惱.
(128) hue ai/tioh-ai/su-iau (u) tsui tsiah e uah. TSM
  hue *tioh (u) tsui tsiah e uah. TSM
  fa oi/si-rhau (yu) sui zhang voi sang. Hakka
  hua yao/xu-yao (you) shui cai neng huo. MSC
flower need have water then able live
‘Flowers needs water to survive.’

As seen in (128), another option for ‘need’ is su-iau 需要, yet this usage is in
literate pronunciation and is much less common than ai or tioh-ai. The
equivalents in MSC and Hakka are xu-yao and si-rhau.

(129) hue bian/bo-su-iau tsui tioh e uah. TSM
  fa m-sii/mo-si-rhau sui tsiu voi sang Hakka
  hua bu-yong/bu-xu-yao shui jiu neng huo MSC
flower need.not water then able live
‘Flowers don not need water to survive.’

There are two negation systems as in(129). Table 6.11 summarizes the
necessity modality systems of the three languages.

Table 6.11
The necessity modality of the three languages

<table>
<thead>
<tr>
<th></th>
<th>TSM</th>
<th>Hakka</th>
<th>MSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘need’</td>
<td>ai, tioh-ai</td>
<td>oi</td>
<td>yao</td>
</tr>
<tr>
<td>‘do not need’</td>
<td>bian</td>
<td>m-si</td>
<td>bu-yao; bu-yong</td>
</tr>
<tr>
<td>‘need’</td>
<td>su-iau</td>
<td>si-rhau</td>
<td>xu-yao</td>
</tr>
<tr>
<td>‘do not need’</td>
<td>bo-su-iau</td>
<td>mo-si-rhau</td>
<td>bu-xu-yao</td>
</tr>
</tbody>
</table>

158 Sang ‘to live’ 生 is used in Hakka rather than 活 ‘to live’, pronounced as uah
in TSM and huo in MSC.
6.5.3 The epistemic *tioh/bian*.

Neither *tioh* nor *bian* has an epistemic use. Nonetheless, *tioh-beh*, which consists of the temporal *tioh* ‘about to’ together with *beh* ‘going.to’, can express epistemic. As discussed in chapter five, TSM *beh* can express immediate future; *tioh* here also denotes temporal immediacy. The MSC and Hakka counterparts are *yao* and *oi*, respectively.

(130) thinn *tioh/beh/tioh-beh* kng a. TSM
  tian *yao* liang le. MSC
  tien *oi* kong leh. Hakka
  sky about.to brighten PAR
  ‘It’s about dawn.’

Next, *tioh* can be observed in epistemic *tiann-tioh* 定著 ‘must’; however, *tiann-tioh* is often considered to be adverbial.\(^\text{159}\) As the Chinese language does not show much morphology in adverbs, *tiann-tioh* can be translated as a modal ‘must’ or an adverb, just like *it-ting* 一定 ‘definitely’.

(131) *tiann-tioh*/it-ting si i. TSM
  must COP 3sg
  ‘It must be him.’/It is definitely him.’

More interestingly, *tiann-tioh* can be used with another modal, resulting in double modality. As standard English does not allow double modals, all my translation of *tiann-tioh* is adverbial.

\(^{159}\) Li (2003) and Hsin (1999) suggest that the Sinitic language (the former on MSC and the latter on TSM) mainly makes use of adverbs to express epistemic necessity.
(132) tse tiann-tioh ai tsinn. TSM
3sg definitely need money
‘This, of course, needs money.’

(133) i tiann-tioh siunn-beh khi a. TSM
3sg certainly want go PAR
‘He certainly wants to go.’

(134) gua tiann-tioh e kah li tau-sann-kang. TSM
1sg surely will PREP 2sg help
‘I will surely help you.’

As for the epistemic should, the three languages are largely parallel to one another. The literal reading ing-kai 該 is in TSM and rhin-koi 應該 in Hakka should come from the same stratification layer as MSC ying-gai 應該.\(^{160}\), \(^{161}\)

(135) i ing-kai e kah li tau-sann-kang. TSM
ki rhin-koi voi lau ngi ten-shui. Hakka
3sg should will will PREP 2sg help
ta ying-gai hui bang.zhu ni. MSC
1sg should will PREP 2sg help 2g
‘He should (be willing to) help you.’

\(^{160}\) For ‘help’, I use the most common words, such as tau-sann-kang 鬥相共/tau-kha-tshiut 鬥跤手 for TSM and ten-shui for Hakka. According to my consultants, other words such as pang-tsoolpang bang (TSM), and pong tsu or pong mang (Hakka) 幫助/幫忙 are possible.

\(^{161}\) Note that MSC has a different word order in (135). My consultants do not use a preposition gei as the following order:
ta ying-ga hui gei ni bang.mang.
3sg should will give 2sg help
‘He should help you.’
Some other forms than *ing-kai* can be used in TSM too. Below is an example with *ing-tong* 應當. Each of the morphemes has a historical trace in *Zhuzi yulei* (cf. Wu 2004b). Hakka and MSC have similar counterparts; Table 6.12.

(136) i *ing-tong* (si) li-kui a. TSM
3sg should COP leave PAR
‘He should have left.’

Table 6.12
Epistemic necessity modals of the three languages

<table>
<thead>
<tr>
<th></th>
<th>TSM</th>
<th>Hakka</th>
<th>MSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘about to’</td>
<td>tioh-beh, beh</td>
<td>oi</td>
<td>(kuai) yao</td>
</tr>
<tr>
<td>‘must’</td>
<td>tiann-tioh 定著</td>
<td>tin-tshoh 定著</td>
<td>Ying-ding 一定</td>
</tr>
<tr>
<td>should</td>
<td><em>ing-kai</em> 應當</td>
<td><em>rhin-koi</em> 應當</td>
<td><em>ying-gai</em> 應當</td>
</tr>
<tr>
<td></td>
<td><em>ing-tong</em> 應當</td>
<td><em>rhin-tong</em> 應當</td>
<td><em>ying-dang</em> 應當</td>
</tr>
</tbody>
</table>

6.5.4 The deontic necessity *tioh/bian*.

The online TSM dictionary does not include *tioh* as a lexical necessity verb. Below are two examples provided by the dictionary and both use *tioh* as a modal. MSC is also from the dictionary; Hakka data are added for comparison.

(137) li *tioh* tsai to-li. TSM
ni *yao* dong dao-li. MSC
ngi *oi* ti to-li. Hakka
2sg need know principle
‘You need to understand.’

---

162 I use the official TSM site made available by Taiwan Ministry of Education: [http://twblg.dict.edu.tw/holodict_new/index.html](http://twblg.dict.edu.tw/holodict_new/index.html). I ignore tones; the translation is mine.
(138) **tioh** lai neh! TSM
**yao** lai oh! MSC
**oi** loi oh! Hakka

need come PAR

‘Do come.’

*Tioh-ai* can also act as a modal for (137) and (138) above. I do not see significant semantic differences among *tioh, ai* or *tioh-ai* when they are used as necessity modals. The strong or weak necessity sense should come from the context. Take (137) as an example, the use of the 2nd person does not provide a necessary outcome for a compelling obligation, as *li* ‘you’ can be added to (138), which is more like an invitation. *Tioh* in (137) can also be translated as ‘have to’ or ‘should’.

Double necessity modality can be observed, which often provides stronger necessity; see (139), in which *tioh-ai* is better translated as ‘must’. The same applies to Mandarin *yao* and Hakka *oi*.

(139) **你一定著愛保庇伊个人**

li i-tng **tioh-ai** po-pi i e lang. TSM
ni yi-ding **yao** bao-you ta de ren. MSC
ngi ik-tin **oi** po-fu ki kai ngin. Hakka

2sg definitely must bless.protect he GEN person

‘You must bless and protect that person (my man).’

---

163 A line from a TSM popular song 月娘啊聽我說 gueh-niu a thiann gua kong. Note that ‘to protect’ has three corresponding readings *po-bi* 保庇, *bao-you* 保佑, and *po-fu* 保護 for TSM, MSC, and Hakka, respectively.
It is worth noticing that MSC *dei* 得 and *bi-xu* 必须 are often referred to necessity modals in addition to *yao* 要, three of which are interchangeable. However, *dei* or *bi-xu* does not require *yi-ding* ‘definitely’, unless for emphasis otherwise.

(140) ni (*yi-ding) *dei/bi-xu* bao-you nei-ge ren.
2sg definitely must bless that-CL person
‘You must bless and protect that person (my man).’

Negation of TSM necessity modals is simple; *bian* ‘need.not’ is used as opposed to its affirmative counterpart *tioh*. However, MSC *yao* as a necessity modal cannot be negated by *bu* ‘not’; the negative modal *bu-yong* is used. Hakka is similar, as *m-sii* ‘need.not’ rather than *m-oi* ‘not-need’ is used.

(141) *bian* lai a! TSM
*bu-yong/*bu-yao lai le! MSC
*m-sii/*m-oi loi leh! Hakka
not-need/need.not come PAR
‘(You) don’t have to come.’

**Table 6.13**
The necessity modal paradigms of the three languages

<table>
<thead>
<tr>
<th>TSM</th>
<th>Hakka</th>
<th>MSC</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>tioh, ai, tioh-ai</em> ‘need’</td>
<td><em>oi</em> ‘need’</td>
<td><em>yao</em> ‘need’</td>
</tr>
<tr>
<td><em>bo-tioh; m-tioh</em></td>
<td><em>bo-oi</em></td>
<td><em>bu-yao</em></td>
</tr>
<tr>
<td><em>bian</em> ‘need.not’</td>
<td><em>m-sii</em> ‘need.not’</td>
<td><em>bu-yong</em> ‘need.not’</td>
</tr>
</tbody>
</table>

I compare the volition (chapter five) and necessity modality systems in MSC. Recall MSC volitional *yao* ‘want’ has a negative counterpart *bu yao* 不要 ‘not want’. However, the necessity paradigm differs, as it does not have a symmetric
counterpart: \( *yao \) ‘need’ versus \( bu-yao \) ‘not.need’. Table 6.14 provides a comparison between the modal systems.

Table 6.14

<table>
<thead>
<tr>
<th>Mandarin ( yao ) in the volitional and necessity paradigms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>affirmative</td>
</tr>
<tr>
<td>negative</td>
</tr>
</tbody>
</table>

The negation for the other MSC necessity modals, \( dei \) and \( bi-xu \), is also important, particularly in language acquisition. The negative forms are not \( *bu-dei \) and \( *bu-bi-xu \); rather, \( bu-yong \) and \( bu-bi \) are used.

(142) \( \text{wo jinnian } \text{dei/bi-xu jiaoshu.} \quad \text{MSC} \)

1sg this.year need/need teach

‘I need to teach this year.’

(143) \( \text{wo jinnian } *bu-dei/*bu-bi-xu/bu-yong/bu-bi jiaoshu.} \quad \text{MSC} \)

1sg this.year not-need teach

‘I don’t have to teach this year.’

Like \( bu-yong \), \( bu-bi \) is a negative modal. MSC does not have an affirmative modal as \( *yong \) ‘need’ or \( *bi \) ‘need’. In spite of the asymmetry in the affirmative and negative use in MSC, the morphemes \( yao \), \( bi \), \( xu \) and \( yong \) have individually been attested in necessity modality in the history of the Chinese language.

Table 6.15

<table>
<thead>
<tr>
<th>The necessity modal paradigm in Mandarin</th>
</tr>
</thead>
<tbody>
<tr>
<td>affirmative ‘need’</td>
</tr>
<tr>
<td>negative ‘not need’</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Next, I investigate the deontic use of ‘should’. TSM obligatory necessity \textit{ing-kai} is expressed in (143), particularly when there is no futurity or volition involved. Also, note that \textit{ai} ‘need’ strengthens the necessity modality in (143). I repeat the use of epistemic \textit{ing-kai} in (144) for comparison.

(143) \textit{i ing-kai (ai) kah li tau-sann-kang.} TSM
1sg should need PREP 2sg help
‘He should help you.’ (obligative)

(144) \textit{i ing-kai e kah li tau-sann-kang.} TSM
1sg should will PREP 2sg help
‘He should (be willing to) help you.’ (epistemic)

There are other forms in contemporary TSM for ‘should’ such as \textit{kai-tong} 該當 and \textit{kai} 該, where historical traces can be observed from the individual modals 該 or 當 ‘should’.\textsuperscript{164}

(145) \textit{iu kai-tong piau-tat siann-mih} TSM
again should express what
‘What else should I express (to her)?’

(146) \textit{si hit siann kai kong e tui-put-khi} TSM
COP that utterance should say GEN sorry
我袂記講出喙。    TSM
1sg not.able remember say out mouth
‘Sorry is what I should have said, but had not remembered to say.’

\textsuperscript{164} A line taken from a Min popular song 秋雨彼一瞑 \textit{tshiu hoo hit tsit mi.}
In addition to *ing 應, some other forms such as *kai 該 and *tong 當 can be observed in *Zhuzi Yulei for necessity modality ‘should’. Compared to the modal *tioh-ai ‘should’ from the native stratum, the above two uses are in the literate pronunciation, and are used less commonly in daily conversations. Hakka is similar to TSM, but MSC uses *ying-kai 應該 much more frequently.

In brief, *tioh-ai ‘need’ is the major necessity modal, and other form such as *kai-tong is also used in TSM. Other means such as adverbs may be used to strengthen or eliminate the degree of necessity. Nonetheless, TSM necessity modality is similar to the English dichotomous system, which often distinguishes the directive ‘need’/ ‘have (got) to’/ ‘must’ from ‘should’.

Table 6.16 provides a review of TSM modal systems (chapters four to six).

<table>
<thead>
<tr>
<th></th>
<th>possibility</th>
<th>volition₁</th>
<th>volition₂</th>
<th>necessity</th>
</tr>
</thead>
<tbody>
<tr>
<td>epistemic</td>
<td></td>
<td>*e 解 ‘will’</td>
<td>*beh 欲</td>
<td>[tiann-*tioh 定著 ‘must’]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(future; prediction)</td>
<td>‘about.to’ (immediate future)</td>
<td></td>
</tr>
<tr>
<td>participant-internal</td>
<td>*e-hiau 解曉</td>
<td>*e ‘will’</td>
<td>*ai 愛 ‘want’</td>
<td>*ai ‘need’愛</td>
</tr>
<tr>
<td></td>
<td>(ability)</td>
<td>(volition)</td>
<td>*beh-ai 欲愛 ‘want’</td>
<td></td>
</tr>
<tr>
<td>Participant-external; deontic</td>
<td>*e-sai 解使</td>
<td>*e-ing 解用</td>
<td>*e-tang 解通 (permission)</td>
<td>*tioh 著</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*tioh-ai 著愛</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[kai-tong 該當] (obligation)</td>
</tr>
</tbody>
</table>

---

165 I adopted van der Auwera and Plungian (1998) for the classification (epistemic, participant-internal, and participant-external) and for the possibility vs. necessity paradigm. I added volition for comparison.
6.6 Conclusion

This chapter revolves around the necessity modal pair *tioh* 著 ‘need’ and *bian* 見 ‘need.not’ in Taiwanese Southern Min. *Bian* is an under-researched topic. There has been a large body of literature on *tioh*, but mainly on its historical development and grammatical functions. I investigate the grammaticalization of these two morphemes with regard to their modal use.

Like the other modals in TSM, *tioh* is rarely used as a lexical necessity verb. Not only is *tioh* losing its verbhood, reanalysis also takes place in *tioh*. Another morpheme *ai* also expresses necessity semantics, and is also used as a renewal of *tioh*. TSM has necessity modals as *tioh, ai* and disyllabic *tioh-ai*.

The negation of *tioh* is not projected by a NegP; rather, another lexical entry *bian* ‘need.not’ is used. This is similar to the volitional pair: *beh* ‘want’ and *m* ‘not.want’ in chapter five. The grammaticalization process differs in these two modal systems, however. The negation of volitional *beh* is reanalyzed as two projections in *bo-beh* ‘not-want’: NegP and ModP. The negation of necessity *tioh* is *bian* ‘need.not’ and does not have competing forms as *bo-tioh* or *m-tioh*.

My current project differs from previous research in several aspects. I have connected the volitional and necessity paradigms. The reanalysis of *tioh* is investigated from a historical perspective, which I have also provided a theoretical account that is connected to the other modals discussed in chapters four and five. In addition, I have extended my discussion on Southern Min necessity modality to Hakka and Mandarin, and have brought up several under-addressed topics.
Chapter 7

THE ASPECTUAL NEGATIVES BO AND BUE

We have seen three negative morphemes in the previous chapters. This chapter introduces the last two negatives in Southern Min, both of which are aspectual: bo ‘not have’ and bue ‘not yet’.

The organization of this chapter is as follows: I discuss the varied categories of bo in modern Taiwanese Southern Min in section 2. Section 3 addresses the meanings and origins of the morphemes under investigation. Section 4 is the historical development of mei 沒 and wu 無, as bo shares some characteristics of both. I discuss cross-linguistic differences in Section 5. Section 6 concludes the chapter.

7.1 Introduction

Like some of the negative morphemes, Southern Min aspectual negation may have a verbal origin. The first aspectual negative to be addressed is the perfective bo ‘not have’ 無, which has a verbal usage as ‘not have’. The character 無 wu is often chosen to present TSM bo; however, wu does not serve as sentential negation in modern Mandarin. Mandarin mei and Hakka mo are equivalent to bo. These three morphemes all express possession, existence, and aspect.

Table 7.1
Aspectual negation in the three languages

<table>
<thead>
<tr>
<th></th>
<th>TSM</th>
<th>MSC</th>
<th>Hakka</th>
</tr>
</thead>
<tbody>
<tr>
<td>V: ‘not have’, ‘not exist’</td>
<td>bo</td>
<td>mei</td>
<td>mo</td>
</tr>
<tr>
<td>Perfective ‘not have’</td>
<td>bo</td>
<td>mei</td>
<td>mo</td>
</tr>
<tr>
<td>anterior ‘not yet’</td>
<td>bue</td>
<td>mei</td>
<td>mang</td>
</tr>
</tbody>
</table>
The other aspectual negative under investigation is *bue* ‘not yet’ 未 in TSM. Hakka uses another negative *mang* 亡, which originates as ‘to escape; to die’. Mandarin, however, uses one morpheme *mei* for both perfective ‘not have’ and anterior aspect ‘not yet’.

### 7.2 Synchrony of *bo* and *bue*

Li (2007) classifies *bo* into five different categories: verb, adjective, auxiliary, adverb and interrogative. Adopting some of his classifications, I summarize in the following paragraphs the categorial status of *bo* by incorporating examples from TSM corpora from which I drew the first 100 tokens of *bo* sentences for my analysis.

#### 7.2.1 *bo* as a verb.

*Bo* as a verb ‘not have’ precedes the nominal phrase and negates its possession or existence, as in (1) and (2). *Bo* in (2) is *V₁* in a verb sequence.

1. 田園無水的時
   
   tshan-hng  bo  tsui  e  si
   
   field  not.have  water  GEN  time
   
   ‘when there is no water in the field…’

2. 閒閒佇厝裡無代誌做。
   
   ing-ing  ti  tshu  li  bo  tai-tsi  tso.
   
   available  LOC  home  inside  not.have  thing  do

---

166 Note that Li’s accounts are based on his data through fieldwork in Fujian, China. Nevertheless, in the relevant discussions TSM is basically the same as the Southern Min sub-dialects on which Li conducted his research.

167 Sentences are from the corpora, unless otherwise stated.

168 TSM doesn’t have negatives as a D; see Gillon and Yang (2010).
‘(staying) at home not having things to do’

*Bo* can also be the second verb in a sequential event; see (3).

(3) 寻無合意的人

<table>
<thead>
<tr>
<th>tshue</th>
<th>bo</th>
<th>hap.i</th>
<th>e</th>
<th>lang</th>
</tr>
</thead>
<tbody>
<tr>
<td>look. for</td>
<td>not. have</td>
<td>interested</td>
<td>CL</td>
<td>person</td>
</tr>
</tbody>
</table>

‘(She) couldn’t find her Mr./Ms. Right.’

*Bo* as *V₂* can be used with quantifiers as *bo kui e* ‘no more than several hits’ in (4).

(4) 啊攏掘無幾下就鈍啊啦

<table>
<thead>
<tr>
<th>a</th>
<th>long</th>
<th>kut</th>
<th>bo</th>
<th>kui</th>
<th>e,</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAR</td>
<td>all</td>
<td>dig</td>
<td>not. have</td>
<td>several</td>
<td>hit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>tioh</th>
<th>tun</th>
<th>a</th>
<th>la.</th>
</tr>
</thead>
<tbody>
<tr>
<td>then</td>
<td>dull</td>
<td>PAR</td>
<td>PAR</td>
</tr>
</tbody>
</table>

‘Not digging long, sometime this (tool) became dull.’

The nominal object following *bo* may be fronted or dropped; see (5) and (6).

(5) 寻就連一支竹筍仔都無啦

<table>
<thead>
<tr>
<th>tshue</th>
<th>tioh</th>
<th>lian</th>
<th>tsit</th>
<th>ki</th>
<th>tik-sun-a</th>
</tr>
</thead>
<tbody>
<tr>
<td>look. for</td>
<td>then</td>
<td>FOC</td>
<td>one</td>
<td>CL</td>
<td>bamboo. shoot</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>long</th>
<th>bo</th>
<th>la.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOC</td>
<td>not. have</td>
<td>PAR</td>
</tr>
</tbody>
</table>

‘(He) couldn’t even find a bamboo shoot.’

(6) 寻無安呢啦

<table>
<thead>
<tr>
<th>tshue</th>
<th>bo</th>
<th>an-me-la</th>
</tr>
</thead>
<tbody>
<tr>
<td>look. for</td>
<td>not. have</td>
<td>PAR</td>
</tr>
</tbody>
</table>

‘(He) couldn’t find (something)’

This use of *bo* is often considered resultative in set expressions (7).

(7) kuann-bo  literally: ‘see-no’; ‘can’t understand’

| tak-bo | literally: ‘read-no’; ‘can’t study well’ |
7.2.2 *bo* as aspectual negation.

*Bo* is used as perfective in (8) and (9).

(8) 無落來共看呼

**bo** loo-lai kah kuann hoo

not.have come.down PREP look PAR

‘(someone) didn’t come down to take a look (at something/someone).’

做伊安呢就開走

tso i a-ne toh kui tsau

do 3sg this.way then drive away

‘suddenly driving away’

(9) 可能啊就是無用大腦

kho-ling a tioh si **bo** iong tua-nau.

may PAR then COP not use big-brain

‘(He) may not have used his brain.’

*Bo* in (10) appears in the secondary predicate, and *bo* negates the telic *tioh* in (11),

(10) 這孟宗傷心落目屎,

tse Bing-tsong siong-sim lau bak-sai

this (name) heart.broken drop tears

‘Bing-tsong burst into tears, heart-broken, …’

哭到無成聲

khau kah **bo** sing-siann

cry COMP not.have change sound

‘crying (until he could produce) no sound’

(11) 尋無著母親的屍體

tshue **bo** tioh bu-tshin e si-the.

look.for NEG attach mother GEN body

‘(Someone) couldn’t find (his) mother’s body’
The post-verbal * nhi ‘go’ is a resultative of the verb *bo ‘not have, not exist’.

(12) 這個田地啊麼安呢，

<table>
<thead>
<tr>
<th>tsit</th>
<th>tshan-te</th>
<th>a ma</th>
<th>an-ne</th>
</tr>
</thead>
<tbody>
<tr>
<td>this</td>
<td>field</td>
<td>also</td>
<td>PAR</td>
</tr>
</tbody>
</table>

一塊一塊無去啊安呢

<table>
<thead>
<tr>
<th>iit</th>
<th>te</th>
<th>jit</th>
<th>te</th>
<th>bo</th>
<th>khi</th>
<th>a</th>
<th>an-ne</th>
</tr>
</thead>
<tbody>
<tr>
<td>one</td>
<td>piece</td>
<td>one</td>
<td>piece</td>
<td>not have</td>
<td>go</td>
<td>PAR</td>
<td>PAR</td>
</tr>
</tbody>
</table>

‘The field was then gone (disappearing) piece by piece.’

7.2.3 *bo as a pure negator.*

I address the issue of *bo as a pure negator in chapter five. For instance, *bo in (13b) negates the volition of *beh ‘want’ in the answer part (13b).

(13) a.  | li  | beh  | khi  | a   | m   | khi? |
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2sg</td>
<td>want</td>
<td>go or</td>
<td>NEG</td>
<td>go</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

‘Do you want to go?’

b.  | gua  | bo  | beh  | khi |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>not</td>
<td>want</td>
<td>go</td>
<td></td>
</tr>
</tbody>
</table>

‘I don’t want to go.’

*Bo can also appear with a stative or adjectival predicate; see (14) and (15).*

(14)  | 身體無甲爽快，破病啊啦 |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>sin-the</td>
<td>bo</td>
</tr>
<tr>
<td>body</td>
<td>NEG</td>
</tr>
</tbody>
</table>

‘(Someone) wasn’t well, getting ill.’

(15)  | 本身的立場就企無在啊 |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>pun-sin</td>
<td>e</td>
</tr>
<tr>
<td>self</td>
<td>GEN</td>
</tr>
</tbody>
</table>

‘not having a leg to stand on’
Bo also can be used with the progressive, as in (16a). This usage can indicate habitual or short-termed situations (16b).

(16a) 慱無得驚就著啦
long  bo  tih  tiann  toh  tioh  la
all  NEG  PROG  fear  then  correct  PAR
‘(He) is not being feared and that is all.

(16b) i  bo  tih  tsiah  hun.
NEG  PROG  eat  cigarette
‘I am not smoking. (progressive)’/ ‘I do not smoke’ (habit).

7.2.4 bo as an interrogative.

When used as Q, bo is usually paired with its affirmative counterpart u.

(17) 母親妳有愛食啥物貨無?
bu-tshin  li  u  ai  tsiah  siann-mih-hue  bo?
Mother  2sg  have  love  eat  whatThingThing  Q
‘Mom, what would you like to eat?’

Bo may also appear with modals; however, there is a mismatch in (18), as be is expected rather than bo.

(18) 您猶會記 e0我無?
li  iau  e  ki-e  gua  bo?
2sg  still  can  remember  1sg  Q
‘Do you still remember me?’

Bo can be used in a tag question such as (19). Hsin (1999) calls this assertive questions, as the speaker often expects a positive answer from the hearer.

(19) 來嫁我好無?
lai  ke  gua  hoo-bo?
come  marry  1sg  good-Q
‘Marry me, will you?’
7.2.5 *bo* as a discourse adverb.

*Bo* as a discourse marker (DM) can appear in different forms under different situations. Below are some examples. For instance, *bo* in (20)-(22) is used to provide suggestions.

(20) 無你食覓，e0呼。

```
bo     li  tsiah  kuann-mai  e  hoo.
```

otherwise 2sg eat look-try PAR PAR

‘Why don’t you try (it) then?’

(21) 抑無來共我鬥腳手

```
iah-bo  lai  kah  gua  tau-kha-tshiu
```

or-BO come PREP 1sg help

‘How about (you) come and help me?’

(22) 無安呢第二個就共號做 lieng5 kun2

```
bo     an-ne  te-jii  e  tioh  ka
BO     this.way  the.second  CL  then  PREP
ho-tso  Liengkun
name-as  (name)
```

‘How about naming the second daughter Liengkun?’

Li (2007) also provides a discourse use of *bo*, where *u-bo* is used to catch attention from the hearer, carrying no lexical meaning. It carries a pragmatic clue, as “got it?” or “you know?”

(23) 熱天時，有無，病人定會怡濟。 SM; Li (2007: 203)

```
zuah-tinn  si,  u-bo,
hot.day  when  U-BO
pang-lang  tian-tioh  e  kah  tse.
patient  must  will  more  more
```

‘When it is hot, you know, the number of patients usually increases.’

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Bo can also be used in conditionals. Bo in (24) expresses negation under circumstances where certain conditions do not meet. It is possibly a reduced from na-bo-tsiah ‘if-not-nominalizer’; tsiah is a C here. Chang (1997) further classifies the discourse function of bo into conditional and response.

(24) 一定愛共娶起來，
    it-ting ai kah tshua-khi-lai
definitely need PREP marry
    ‘(You) definitely need to marry her.’

無者，是真艱苦，
    bo-tsiah, si tsin kan-kho
not-if COP very difficult
    ‘If not, it’d be difficult.’

會亂到歸家伙安呢。
    e luan kau kui-tshu-hue an-ne
will messy to whole.home PAR
    ‘You’d have no easy life.’

7.2.6 Other categories of bo.

I provide one example showing bo as habitual; tih is compatible with bo.

(25) i u/bo (tih) tsiah hun.
    3sg HAB/not.HAB PROG eat cigarette
    ‘He smokes./He doesn’t smoke.’

Among the five negatives, only bo can co-occur with the aspect marker tih.

(25’) *i be/m bian/bue tih tsiah hun.
    3sg not.able/not.want/need.not/not.yet TIH eat cigarette
    int. ‘He isn’t able to/doesn’t want to/ don’t need to smoke. /He has not yet smoked.

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7.2.7 bue as aspectual negation.

Unlike bo, bue is not used as a verb in contemporary Taiwanese Southern Min. Bue expresses anterior aspect and often appears with iau ‘yet’ 猶:

(26) 透早天未光
thau-tsa   thinn  bue   kng
early.morning   sky   not.yet   brighten.up
‘It’s early in the morning when the sky hasn’t brightened up.’

(27) 啊 ieng9 暗猶未食咧,
a   ieng-am   iau   bue   tsiah   le
PAR    dinner   still   not.yet   eat   PAR
‘(I) have not eaten dinner yet.’

Bue ‘not yet’ can be the aspect of the first verb or the second verb (often, resultative) in a verb sequence; see (28) and (29) respectively.

(28) 猶未食早仔著卜轉啊
iau   bue   tsiah   tsa-a   tioh   beh   tng   a.
yet   not.yet   eat   breakfast   then   about.to   return   PAR
‘(He) has not yet had breakfast but is about to leave for home.’

(29) 厝起猶未好
tshu   khi   iau   bue   hoo
house   build   yet   not.yet   finish
‘The building of the house has not finished.’

Example (30) shows that modifiers appear between the aspect bue and the resultative verb hoo ‘good’, and (31) tells us the relative word order of aspect and modality.

(30) 路做猶未講真好
loo   tso   iau   bue   kong   tsin   hoo
The road has not yet been too well built.’

(31) 彼大曰：伊猶未卜嫁！

hit tsua e kong
that older NML say

i iau bue beh ke.

3sg yet not.yet want marry

‘That older one says that she has not wanted to get married.’

As in (32) and (33), the affirmative aspect is expressed through an adverb i-

king 已經 ‘already’, which is optional, and 矣 a, which indicates a change of state.

(32) thinn i-king kng a.

sky already brighten PAR

‘The sky has already brightened up.’

(33) tshu i-king khi hoo a

house already build finish PAR

‘The building of the house has already finished.’

7.2.8 bue as an interrogative.

Bue can be used as an interrogative as in (34) and (35).

(34) 「你有號名未？」伊講：「猶未咧。」

li u ho-mia bue? i kong iau bue leh.
2sg have name Q 3sg say yet not.yet PAR

‘Have you named (someone)?’ ‘He says, not yet.’

(35) 你彼本書是看透猶未？

li hit pun tshe si khuann-tau iau bue?
2sg that CL book COP read-through yet Q

‘Have you figured out that book?’
7.2.9 Concluding remarks.

To conclude, this subsection summarizes some observations about Southern Min bo. Bo is multi-functional. It can behave like a verb, an aspect marker, a modal, a pure negative, an interrogative marker or even a discourse marker. Syntactically, bo can appear in the VP, AspP, as well as CP. Given that Chinese negation goes through a reanalysis of head to head movement, bo can be the head of each of these phrase structures. When bo is at the CP level, it can be used for polarity marking (such as interrogatives) and for discourse marking (such as adjuncts and adverbs). These will be two different levels of CP.

The other aspectual negation bue does not carry a lexical use and it is not a discourse marker either.

Table 7.2 illustrates the categorial status of bo. The categories of bue is demonstrated in Table 7.3.

Table 7.2
The categorial status of bo

<table>
<thead>
<tr>
<th>verb</th>
<th>TMA</th>
<th>NEG</th>
<th>QM; INT</th>
<th>DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Table 7.3
The categorial status of bue

<table>
<thead>
<tr>
<th>verb</th>
<th>TMA</th>
<th>NEG</th>
<th>QM; INT</th>
<th>DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>--</td>
</tr>
</tbody>
</table>
7.3 Diachrony of aspectual negation

This section investigates four aspectual negatives from a diachronic perspective. Different morphemes or characters are adopted in the languages under investigation. For perfective ‘not.have’, I discuss the development of mei 没 and wu 無 as they are possible cognates of Southern Min bo. The discussion of 未 is for Southern Min bue ‘not.yet’ in. Also included is the morpheme 死, for Hakka mang ‘not.yet’.

7.3.1 On wu 無.

The word 無 is an archaic negative, with MSC pronunciation wu. It is often postulated to be a cognate of the morpheme mei that developed later.

The Chinese dictionary Shuowen 說文 suggests the etymology of wu 無 as an associative compound for ‘a person dancing’.

Another character 舞 wu was further developed for the meaning of ‘dance’.

Based on the Cotemporary Chinese Dictionary Hanyu da cidian 漢語大詞典, the parts of speech of wu include negated verbs, interrogatives, and discourse markers, which are similar to those of mei. I address each below.

---

169 Associative Compounding is one of the six methods of Chinese character formation.


171 Examples (37)-(46) are from Hanyu da cidian, unless noted otherwise. Transcription and translations are mine. Transcription is in MSC.
1. *wu*: verb ‘not have’

(36) 人而無儀，不死何為 《詩經》(*Shi Jing*; the Spring-Autumn period 770-476 BCE)\(^{172}\)

ren er *wu* yi,
be.person and not.have demeanor
bu si he wei
NEG die what do

‘If a man has no dignity of demeanor, what should he do but die?’

(37) 欲取鳴琴彈，恨無知音賞。 唐孟浩然詩 (*Tang*; 618-907 CE)

yu qu mingqin tan,
want take instrument play
hen *wu* zhiyin shang
hate not.have confidant appreciate

‘wanting to play the Chinese guitar, but hating having no confidant to appreciate it’

2. *wu*: verb ‘to die’

(38) 吾無後，當共勉勵，篤睦為先。南史 *Histories of the Southern Dynasties*; 643-659 CE

wu *wu* hou, dang gong mianli,
1sg die after should together encourage
du mu wei xian
firmly harmonious COP first

‘After I am no more, you should first encourage each other and get along peacefully.’

Below are examples where *wu* is used as a functional category, ranging from a negative, an interrogative to discourse marking.

---

\(^{172}\) Translation is by James Legge. This example is from Wang (2000: 659).
3. *wu*: ‘not’ = MSC *fei* 非 or *bu-shi* 不是 ‘be-not’ 173

(39) 苟無忠信之人，
   
   gou wu zhong xin zhi ren
   if not be faithful trustworthy GEN person
   
   則禮不虛道。禮記 *Li ji*; (Warring States; 475-221 BCE)
   
   ze li bu xu dao
   then rites not empty doctrine
   
   ‘The rites should not be perfunctorily performed by the man who is not right in heart and sincere.’

4. *wu*: adverb ‘not’ = MSC *bu* 不 ‘not’

(40) 無偏無黨，王道蕩蕩 尚書洪範 *Shang shu* (772-476 BCE)

   wu pian wu dang, wang dao dangdang
   not deflect not uneven kingdom road significant
   
   ‘Without deflection, without unevenness, pursue the royal righteousness.’

5. *wu*: negative = MSC *wei-ceng* 未曾 ‘not-ever; ‘never’ or *mei* 沒 ‘not.yet’

   The dictionary only notes negation of *wu* for this entry, but this use shows that *wu* is aspectual. This contradicts with the finding by Shi and Li (2004), who believes that *wu* disappeared before it began to undergo the grammaticalization from its lexical ‘not have’ to other grammatical functions.

   Wang (2000) provides the following example, where *wu* is aspectual, meaning ‘not ever’.

173 Translation of (39) and (40) is from James Legge. All the MSC equivalents for each entry are from *Hanyu da cidian.*
(41) 行離理而不外危者，無之有也《荀子》Xunzi; (Warring States; 475-221 BCE)

xing li li er bu wai wei zhe,
behave deviate reason and NEG out danger NML
wu zhi you ye
not.ever this have PAR

‘There is never been a case where danger does not occur because of deviation from righteousness.’

6. wu: prohibitive = MSC bu-ke 不可 or bu-yao 不要 ‘do not V’

(42) 無若丹朱傲，惟慢遊是好。《尚書》Shang shu (772-476 BCE)¹⁷⁴
wu ruo DanZhu ao,
RPOH like (name) arrogant
wei man you shi hao
only indolence dissipation COP like

‘Be not haughty like Zhu of Dan, who found his pleasure only in indolence and dissipation.’

7. wu: interrogative = MSC fou 否

(43) 晚來天欲雪，
wan lai tien yu xue,
evening come sky about.to snow

能飲一杯無？白居易詩 poetry by Bai Yuyi (772-846 CE)
neng yin yi bei wu

can drink one cup Q

‘It’s about to snow. Would you care for some wine?’

¹⁷⁴ Translation by James Legge
8. *wu*: conjunction

*Hanyu da cidian* also provides two types of conjunction. Examples are (44) and (45), equivalent to MSC *bu-lun* 不論 ‘not matter how’ and *ji-shi* 即使 ‘even if’.

(44) 無小無大，從公于邁。《詩經》; the *Book of Poetry*; (1046-771 BCE)

```
wu xiao wu da cong kong yu mai
CONJ small CONJ big follow master to progress
```

‘Small and great, all follow the prince in his progress to it.’

(45) 國無小，不可易之。《左傳》Zuozhuan (476-221 BCE)

```
guo wu xiao bu ke yi zhi
country even.if small NEG can easy PRON
```

‘Even if the nation is small, you cannot take it lightly.’

9. *wu*: no specific meaning

This use of *wu* also appears in sentence initial position. It is a discourse marker.

(46) 無寧以善人為則 《左傳》Zuozhuan (476-221 BCE)

```
wu ning yi shan ren wei ze
WU peace use righteous person COP model
```

‘For peace, making use of righteous persons is the [correct] principle.’

From these definitions, we learn that *wu* ranges from a negated verb to functional categories, including negation, interrogation, and conjunction. *Wu* can also be used to express aspect and prohibitive. A possible grammaticalization path of *wu* is presented as (47).

---

175 Translation by James Legge

176 杜預注，無寧寧也。Du Yu annotates, *wu ning ning ye* ‘wu comfort means comfort’. 

290
(47) \textit{wu}: V > ASP > NEG > C

My investigation of \textit{wu} doesn’t fit with Shi and Li’s (2004) claim that \textit{mei} replaced \textit{wu} before the latter negative further developed from its lexical use. We move to \textit{mei} in the following subsection.

7.3.2 On \textit{mei} 沒.

There are three pronunciation entries for 沒 in the contemporary dictionary: \textit{mo}, \textit{mei} and \textit{me}.

1. \textit{mo} 沒. Under this pronunciation, the lexical use includes ‘to sink’, to swim in’, ‘to flood’, ‘to cover’, to suppress’, ‘to end’, ‘to disappear’, ‘to lose’, ‘to cave in’, and ‘to die’. Below are selective examples from the dictionary.\textsuperscript{177} These verbal uses of \textit{mo}, however, appear in set expressions only in MSC.

\textit{Mo} as ‘to sink/drown’


(48) 若赴水火，入焉焦沒耳 《荀子》Xuzi; (Warring States; 475-221 BCE)
ruo fu shui huo,
if go water fire
ru yian jiao mo er
enter PRON burn drown PAR
‘If going to the water and fire, one will be either burned or drowned.’

\textit{Mo} as ‘to die’ = \textit{mo} 歿 ‘die’\textsuperscript{178}

\textsuperscript{177} Unless noted otherwise, examples are from \textit{Hanyu da cidian}.

\textsuperscript{178} Translation by James Legge
(49) 父在覲其志，父沒，覲其行。《論語》The Analects; (772-221 BCE)
father alive observe POSS will
father die observe POSS conduct

‘While a man's father is alive, look at the bent of his will; when his father is
dead, look at his conduct.’

_Mo_: ‘to flood’

(50) 水來漂沒，溺其人民《史記》Shiji; (109-91 BCE)
water come float flood drown POSS people

‘When the waters come flooding in, they drown one’s people.’

There is a modality use under the entry of _mo_.

_Mo as prohibitive_ = _mo_ 莫 or _bu-yao_ 不要 ‘do not’

(51) 我勸世人沒要學撐船，
1sg advise regular.person NEG.PROH learn pole punt

‘I advise you not pole a punt. If you do, you cannot be free.’

development. The dictionary lists two definitions under the pronunciation of _mei_.

_Mei as ‘not have’, also read as _mo_ = MSC _wu_ 無 or _mei.you_ 沒有

(52) 娥眉愁自結，鬢髮沒情梳。
Tang Yuanhui Poem
eye.brow worry self tie
‘My eye-brows are tied due to worries’

\[
\begin{align*}
\text{binfai } & \text{ mei } \quad \text{ qing } \quad \text{ shu.} \\
\text{Hair } & \text{ not.} \text{ have } \quad \text{ mind } \quad \text{ comb} \\
\text{‘I have no mind to comb my hair.’}
\end{align*}
\]

\textit{Mei as ‘not.yet’} = \textit{wei} ‘not.yet’ or \textit{bu-ceng} ‘not-ever’

This aspectual use of \textit{mei} is important as \textit{mei} is also a perfective. This means that \textit{mei} has a dual aspectual function.

(53) \textit{今日索性連早飯也沒吃} 《\textit{紅樓夢}》\textit{The Dream of the Red Chamber}, Cao Xueqin, mid-18\textsuperscript{th} cy., Qing dynasty)

\[
\begin{align*}
\text{jinri } & \text{ suoxing } \quad \text{ lian } \quad \text{ zaofan } \quad \text{ ye } \quad \text{ mei } \quad \text{ chi} \\
\text{today } & \text{ directly } \quad \text{ FOC } \quad \text{ breakfast } \quad \text{ FOC } \quad \text{ not.ASP } \quad \text{ eat} \\
\text{‘He didn’t even eat breakfast.’}
\end{align*}
\]

Unlike \textit{mo}, the above two uses of \textit{mei} are still productive in MSC.

3. \textit{me} \textit{沒} = \textit{me} \textit{麼}

This is a later developed meaning. This use is often seen in \textit{甚沒} \textit{shenme}, \textit{什沒} \textit{shenme}, \textit{拾沒} \textit{shime}, all meaning ‘what’ (Wang 2000). The interrogative pronoun has changed to \textit{me} \textit{麼}, as in MSC \textit{什麼} \textit{shenme} ‘what’.

(54) \textit{緣沒不攢身入草,避難南皈?} 《敦煌變文集》

\[
\begin{align*}
\text{yuan } & \text{ me } \quad \text{ bu } \quad \text{ zan } \quad \text{ shen } \quad \text{ ru } \quad \text{ cao} \\
\text{affinity } & \text{ what } \quad \text{ NEG } \quad \text{ accumulate } \quad \text{ enter } \quad \text{ grass} \\
\text{bi } & \text{ nan } \quad \text{ nangui} \\
\text{escape } & \text{ refuge } \quad \text{ South} \\
\text{‘As affinity does not accumulate within one’s body as it enters the grasses, in order to avoid difficulties must one take refuge in the south.’}
\end{align*}
\]
The categories in modern Mandarin *mei* covers lexical ‘not have’, perfective ‘not have’, anterior aspect ‘not yet’, and interrogative. We have learned that *wu* 無 was used in questions and could serve as a discourse marker with no semantics. Southern Min *bo* and *wu* are alike in their category types. Still, one problem of considering Southern Min *bo* to be a cognate of *wu* is that *bo* can be used as perfective negation in contemporary TSM, but the historical *wu* doesn’t carry such a use. On the other hand, if we see *bo* as originating from *mei* 沒, we then have to explain why *mei* is not used for discourse marking. Language changes, and possibly *mei* and *wu* are of the same origin. So, *bo* carries characteristics from both of them.

Table 7.4 summarizes the categorial status of *wu* and *mei*, based on dictionary definitions.

Table 7.4
A comparison of *wu* and *mei*

<table>
<thead>
<tr>
<th></th>
<th><em>wu</em></th>
<th><em>mei</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>ASP</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>NEG</td>
<td>√</td>
<td>√</td>
</tr>
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<td>INT</td>
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<tr>
<td>DM</td>
<td>√</td>
<td>--</td>
</tr>
</tbody>
</table>
7.3.3 On Southern Min *bue* (未)

The etymological dictionary *Shuwen jie zi* 說文解字 defines 未, MSC pronunciation *wei*, as ‘flavor’. Another source about *wei* in *Shuowen* is *mu lao yu wei*, meaning wood dying in the *wei* time (*wei* being the appellation of one of the divisions of time according to traditional reckoning). I find the dying meaning in *wei* 未 from the annotation by 段玉裁 Duan Yucai (1735-1815). *Hai*, *mao* and *wei* are times used in Ancient Chinese.

(55) 木生於亥。壯於卯。死於未。*Shuwen jie zi*; (100-122 CE)

```
mu sheng yu hai, zhuang yu mao,  
wood born PREP hai.hour, grow PREP mao.hour
si yu wei  
die PREP wei.hour
```

‘The wood is born during the *hai* hour, grows during the *mao* hour, and dies during the *wei* hour.’

The contemporary Chinese dictionary *Hanyu da cidian* provides the following definitions for *未*, the first two of which have been explained above.

1. ‘flavor’

2. *wei-shi* 未時, literately the hour of *wei* = 1-3 in the afternoon

3. negation ‘not’ = MSC *bu* 不. I selected (56) from the Chinese dictionary and (57) from Wang (2000) as such examples.

(56) 未深猿鳥少。宋詩; Song poetry; (960-1279 CE)

```
shan.lin wei shen yuan niao shao  
mountain.wood not deep ape bird few
```

‘Not going too deep in the wood, one finds only few apes and birds.’
(57) 食肉者鄙，未能遠謀。《左傳》Zuo Zhuan; (770-476 BCE)

吃肉的人鄙陋，不能够谋长远。

4. prohibitive *wu* 勿 = MSC *bu-yao* 不要

(58) 東郊何時開？帶甲且未釋。 唐杜甫; poetry by Du fu (712-770 CE)

何时开东郊？带甲且未释。

When will the east gate open?

wear armor and PROH take off

‘keep your armor and do not take it off’

Interestingly, these archaic negative morphemes all carry a prohibitive use, but this modality use in *wei* is no longer found in contemporary usage. In MSC or TSM, prohibitive are often fused words from two morphemes, such as *bu-yao* 不要, literally ‘not-need’, in MSC. The negation *wei* is interchangeable with *bu* before the Tang dynasty, 618-907 CE (Wu 2006: 60). None of the above uses have been preserved to the modern era.

5. *wei* as ‘not.yet’. The anterior aspect usage is found in TSM *bue* ‘not.yet’, but not in MSC. MSC uses *wei* in set items such as *wei-lai* 未来 ‘in the future’ and *wei-bi* 未必 ‘not necessary’. The dictionary also notes two equivalents for *wei*, as *buceng* 不曾 ‘not.ever’ or *shanwei* 尚未 ‘not.yet’. Wang (2000: 456) also points out aspectual negation in *wei*. 
(59) 不好犯上，而好作亂者，未之有也。《論語》 *the Analects*; 772-221 BCE

\[
\begin{align*}
\text{bu} & \quad \text{hao} & \quad \text{fan} & \quad \text{shang}, \\
\text{not} & \quad \text{take.pleasure.in} & \quad \text{offend} & \quad \text{superior}
\end{align*}
\]
\[
\begin{align*}
\text{er} & \quad \text{hao} & \quad \text{zuo} & \quad \text{luan} & \quad \text{zhe}, \\
\text{and} & \quad \text{take.pleasure.in} & \quad \text{do} & \quad \text{confusion} & \quad \text{NML}
\end{align*}
\]
\[
\begin{align*}
\text{wei} & \quad \text{zhi} & \quad \text{you} & \quad \text{ye} & \quad \text{not-ever} & \quad \text{PRON} & \quad \text{have} & \quad \text{PAR}
\end{align*}
\]

‘There have been none, who, not liking to offend against their superiors, have been fond of stirring up confusion.’

6. *wei* as interrogative. The poetry below has *wei* as a question marker.

(60) 來日綺窗前，寒梅著花未？ 唐王維; poetry by Wangwei (701-761 CE)

\[
\begin{align*}
lai & \quad \text{ri} & \quad \text{qi} & \quad \text{chuang} & \quad \text{qian}, \\
\text{come} & \quad \text{day} & \quad \text{embroidered.curtain} & \quad \text{window} & \quad \text{front}
\end{align*}
\]
\[
\begin{align*}
\text{han} & \quad \text{mei} & \quad \text{zhuo} & \quad \text{hua} & \quad \text{wei}?
\end{align*}
\]

Winter plum attach flower Q

‘The day when you had stood before the curtained window [in parting], had you seen plum trees blossoming?’

The first two entries and the last two are still used in contemporary TSM.

未 in the first two nominal definitions is pronounced as *bi* in TSM, which is a literate pronunciation. The same morpheme is pronounced as *bue*, which is colloquial, for the last two definitions: *bue* as aspectual negative or an interrogative.

---

179 Translation by James Legge.
The origin of *wei* is regarded as a fusion of the negative initial *m-* in *wu* and the adverb 既 ‘already’ (Pulleyblank 1995: 114). The OC reconstruction of 未 is [miə] by Wang Li 王力 and [mjədh] by Li Fanggui 李方桂.\(^{180}\)

\[
m- + 既 [kiə] or [kjədh] \rightarrow 未 [miə] or [mjədh]
\]

Therefore, one should not take it for granted that all negatives originate as verbs, although many of them do.

### 7.3.4 On Hakka *mang* 亡.

I look at the definition of 亡 (MSC pronunciation wang) because Hakka uses *mang* for ‘not.yet’, as opposed to 未 in TSM. *Hanyu da cidian* has two entries for the character 亡: *wu* and *wang*.

1. **wu 亡 as ‘not.have’**

(61) 日知其所亡，月無忘其所能。\(^{181}\) 《Analects》論語; 772-221 BCE

\[
\text{ri zhi qi suo } \text{wu}, \quad \text{day know POSS PRON not.have} \\
\text{yue wu wang qi suo neng} \quad \text{month not forge his PRON can}
\]

‘He, who from day to day recognizes what he has not yet, and from month to month does not forget what he has attained to, …’

This dictionary *Hanyu da cidian* defines *wu* 亡 as the same as another morpheme *wu* 無; however, Wang (2000) argues that two Chinese rhyme dictionaries *Guangyun* 廣韻 and *Jiyun* 集韻 do not have a phonological entry *wu* for 亡.


\(^{181}\) Translation by James Legge.
2. *wang* 亡. Wang (2000: 12) suggests that the origin of *wang* is ‘to die out, to become extinct’.

**Wang as ‘escape’**

(62) 子牟有罪而亡 《國語》楚語上 (475-221 BCE)

Zimou you zui er *wang*

(name) have guilt and escape

‘Zimou is guilty and escapes.’

**Wang as ‘to die’**

(63) 時日曷喪，予及汝皆亡。《尚書》Shang shu; 772-476 BCE

shi ri he sang, yu ji ru jie *wang*

when day when die, 1sg and 2sg both die

‘When the day comes, I will die with you.’

**Wang as ‘to overthrow’**

(64) 暴其民甚 則身弒國亡。《孟子》Mengzi; 475-221 BCE

bao qi min shen,

torture POSS people extreme

ze shen shi guo *wang*

then body kill nation overthrow

‘If a king tortures his people, he will be killed and the nation will be destroyed.’

From the above, Hakka *mang* ‘not,yet’ possibly originates from a negative verb.

### 7.4 Grammaticalization of Aspectual Negation

I discuss the grammaticalization of *mei* and *wu*, followed by the notion of boundedness associated with MSC *mei*.

---

182 This example is from Wang (2000); other ones are from *Hanyu dai cidian.*
7.4.1 Historical development of mei(you).

The evolution of mei has been discussed extensively in the literature. Shi and Li (2004) have suggested that around the eighth century, mei evolved into negation, meaning ‘not have’. The negative form mei you emerged later approximately between the 14th and 15th centuries. By the 15th century, mei was mainly used to predicate nominal phrases and its predication was extended to verbal phrases afterwards. By the 16th century, the system of the modern Mandarin negative mei has been established.

The grammaticalization of mei.you as a negative can be divided into four stages:

1. **mo: verb = ‘to sink; to die’ > mei ‘to lack; not have’**

   The first stage is when the original verbal mo ‘to sink, to die’ evolved into the meaning of ‘lack, not have’. Sentence (65) shows that mo used to mean ‘to sink’ before the eighth century.

   (65) 夢為魚而沒於淵。 *Huainanzi, Zhenxun*, 125 BCE (Shi 2002: 199)
   meng wei yu er mo/mei yu yuan.
   dream COP fish and sink LOC abyss
   ‘(He) become a fish in his dream and sank into an abyss.’

   Sentences (66) and (67) are cases where mei means ‘not have’. In (66), mei predicates a nominal phrase.

   (66) 深山窮穡沒人來。 Poem by Liu Shangyin, 800 CE (Shi 2002: 200)
   shen shan qiong gu mei ren lai.
   deep mountain poor valley not.have people come
   ‘The deep mountains and poor valleys do not have people who come.’
(67) “車子有麼？” “車子沒。”  *Lao qi da*, 1325 CE  (Shi 2002: 200)

chezi  you  me?  chezi  mei.
carriage  have  Q  carriage  not.have

‘Do (you) have a carriage?’ ‘(We) don’t have any carriages.’

2. **mei:** verb ‘not have’ > negation, to negate you ‘to have’

During this stage, the negated verb changes to a pure negator. In (68), *mei* is to negate the verb *you* ‘to have’.

(68) 如何沒有鮮魚？ *Shuihu zhuan*, 1550 CE  (Shi 2002: 200)

ruhe  mei  you  xian  yu?
why  NEG  have  fresh  fish

‘Why don’t you have fresh fish?’

3. **mei:** negative of you ‘to have’ > negative of other verbs; aspectual

The third stage took place when *mei* began to be used with verbs other than *you* ‘to have’. This change probably occurred in the 16th century (Shi and Li 2004: 249). That is, *mei* began to appear with non-nominal predicates. For examples, *mei* in (69) is to negate the verb *shang* ‘to serve’.

(69) 這一日沒上過鐘酒。  *Jin ping mei*; 1550 CE (Shi 2002: 200)

zhe-yi-ri  mei  shang-guo  zhong  jiu.
for.a.while  NEG.ASP  serve-EXP  cup  wine

‘Wine has not been served for a while.’

During this stage, *mei* began to be used as a negative perfective marker (Shi and Li 2004: 197).\(^{183}\) The use of *mei* as a perfective negative marker occurred later than *mei* as negation to the verb *you*. The aspectual *mei* has then functioned

\(^{183}\) I mark *mei* as ASP for now. I will discuss its specific aspect use later in this chapter.

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as a bounded negative marker since the 16th century, although its original verbal usage ‘not have’ is still productive to this date. However, there is a problem in this diachrony: V > Neg > Asp.Neg. This does not seem to be a normal development, as Neg should go after Asp.Neg. Further research is required.

4. *mei + you > aspectual mei.you*

There is also a stage where *mei* became to fuse with *you* to form *mei.you*, which, as a whole, is reanalyzed as a negative perfective marker. Shi and Li (2004: 248) note that it took a couple of centuries for this reanalysis of aspectual *mei.you* to take place from the negative verb *mei you* ‘to not have’.

Shi and Li (2004) postulate a possible syntactic structure for the reanalysis into aspect to occur. In (70), *mei* is the first verb in an verb series. The brackets indicate two VPs.

(70)  

\[
[\text{mei} + \text{NP}] + [\text{V} + \text{NP}]
\]

When the first NP is empty, the structure becomes (71). The next step is for *mei* to become a functional projection, taking the VP as its complement, as in (72).

Note that this also shows a pattern from two events to one.

(71)  

\[
[\text{mei}] + [\text{V} + \text{NP}]
\]

Historically, *mei* as a negative marker came into existence when *mei* was used together with *you* ‘to have’, and then with a non-*have* verb as perfective.

I discuss how *mei mei.you* is reanalyzed into an interrogative. Shi and Li (2004: 269) suggest that *mei.you* as Q is productively used in the 18th century.

(73)  

\[
\text{吃了藥沒有?} \quad \text{Red 梁 the Dream of the Red Chamber}
\]

\[
\text{chi-le yao} \quad \text{mei.you?}
\]
Shi and Li argue that the preverbal interrogative you-mei.you did not exist in earlier texts written in the early 20th century such as in works by Lao She 老舍 (1899-1966) and Lu Hsun 鲁迅 (1881-1936). In other words, you-mei.you is a rather new development.

The historical development of the negative mei can be summarized as (75).

(75)  \[ mei = \text{verb} \ 'to \ die' \]
>  \[ mei = \text{verb} \ 'not \ have' \]
>  \[ mei = \text{negation} \ 'not' + you \ 'to \ have' \]
>  \[ mei = \text{perfective negative: mei/mei.you + (non-have) Verb} \]
>  \( (> mei = \text{question marker}) \)

Based on Shi and Li (2004), there is a head-to-head movement in mei: V > NEG > NEG.ASP > Q, with each head from a different reanalysis stage.\(^{184}\)

(76)  \[ mei = \text{V} \ 'not \ have' \]

---

\(^{184}\) I have previously noted the strange order, but the verbal origin of mei is widely accepted. With this, I analyze a head-to-head movement in mei.
(77) $mei = \text{negation ‘not’}$

\begin{center}
\begin{tikzpicture}
  \node {NegP}
  \pgftext{\textit{mei}}
  \pgftext{VP}
  \pgftext{you ‘have’}
\end{tikzpicture}
\end{center}

(78) $mei = \text{perfective negation \text{NEG.ASP}}$

\begin{center}
\begin{tikzpicture}
  \node {AspP}
  \pgftext{\textit{mei}}
  \pgftext{NegP}
  \pgftext{Neg}
  \pgftext{VP}
  \pgftext{V}
\end{tikzpicture}
\end{center}

(79) $mei = \text{interrogative}$

\begin{center}
\begin{tikzpicture}
  \node {CP}
  \pgftext{\textit{mei}}
  \pgftext{TP}
\end{tikzpicture}
\end{center}

The above patterns shows a reanalysis process, from a lexical (verb) to functional projections (negation, aspect, and questions).

Two lines of postulation can be outlined from the above paragraphs. For one, $mei$ as aspectual negation possibly comes from a reanalysis of $you$ from V to Asp. As the lexical possession $you$ ‘have’ becomes aspectual, $mei$ negates the aspectual $you$. Technically, $mei$ is simply negation under this analysis.

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Shi and Li (2004) adopt the reasoning that mei was further reanalyzed. I analyze the reanalysis as feature loss.

The other suggestion is that the aspect of mei derives from its negative verb ‘not have’ due to feature loss.

Shi and Li (2004) argue that the grammaticalization of mei led to the extinction of wu 無 as well as other negatives such as wei 未 ‘not yet’, because mei extended its usage from nominal to include other types of predicates. As the two authors suggest, the modern mei system was established no later than the 16th century and that the disappearance of wu took place approximately in the Yuan-Ming dynasties (1271-1644 CE).

Pan (2002: 306), however, believes that wu 無 changed to 沒 mei due to phonological weakening. Pan points out that mei does not exist in Southern dialects where wu is employed; similarly, wu cannot be found in Northern dialects where mei is used (Pan 2002: 309). In line with Pan, Xu (2003) proposes that with a similar pronunciation, mei replaces wu as a negated verb.

Either analysis provides us with a possible pathway of the grammaticalization of Southern Min bo. The following section discusses the diachrony of wu 無 whose character is often chosen to represent TSM bo.
7.4.2 Historical development of *wu*.

Norman (1995) suggests that the equivalent negative marker to *mei*. *You* in northern Min is a fused word of 無 ‘not have’ and 有 ‘have’, as in (83).

(83) [ma] 無 + [wu] 有 > [maw] = ‘not have’  
(Northern Min pronunciation)

If this line of reasoning is correct, Southern Min negative *bo* is possibly a fused word of negation plus its affirmative *u*.

(84) NEG: *m* + *u* ‘to have’ > *bo* ‘not have’

Shi and Li (2004) conclude that the negative *wu* ‘not have’ was used solely with nominal phrases from the pre-Qin times (221 BCE) to the Yuan-Ming Dynasties (1271-1644 CE). *Wu* 無 and *mei* 沒 served the same function until new usages in *mei* developed in the Tang-Song Dynasties (618-960 CE).

I have discussed various uses of *wu* and *mei* in section 7.3 with a conclusion that *wu* is not used as aspectual negation. Otherwise, *wu* and *mei* are fairly similar.

Below I provide examples of *wu* chronologically from different historical texts, including *wu* as the second verb in a sequential event. I focus on *wu* as a negated verb ‘not have’. The first two examples show that *wu* appears as a verb.

(85) 人誰無過 《左傳》(*Zuo Zhuan*; the Spring-Autumn period 770-476 BCE)  
ren shui *wu* guo  
person who not have mistake  
‘Who among men has made no mistakes?’

(86) 軍無糧食則亡。《孫子》(*Sun Tzu*; written 515-512 BCE)  
jun *wu* liangshi ze wang  
army not have food then die  
‘If soldiers do not have food, they will die.’
In a later text *Shishuo xinyu* 世說新語, one can see that *wu* negates the verb *you* ‘to have’.

(87) 且謂駿物無有殺理  (*Shishuo xinyu* 世說新語; 220-258 CE)

*QUIRE WEN JUNWU WU YOU SHA LI*

‘and saying that the steed should not be killed’

Also, in this historical text *wu* often appears in a verb sequence connected by the conjunction *er* ‘and’, such as (88) where *wu* is a negative ‘not’.

(88) 仁無隱而不著,

*REN WU YIN ER BU ZHUO*

*benevolence NEG hide and NEG apparent*

無幽而不彰者  (*Shishuo xinyu* 世說新語; 220-258 CE)

*WU YOU ER BU ZHANG ZHE*

*NEG remote and NEG apparent NML*

‘Benevolence will not be hidden without being known, will not be tucked away without being made apparent.’

In (89), *wu* is the second verb in a verbal sequence, yet it is fairly rare in *Shishuo Xinyu*. There is no conjunction between *ju* and *wu* in (89).

(89) 居無幾何而周舍死  (*Shishuo xinyu* 世說新語; 220-258 CE)

*JU WU JI HE, ER ZHOU SHE SI*

*live not have some year and name die*

‘…lived for some years and Zhoushe died’

---

185 One of the definitions for *wu* 無 is ‘not’; see section 7.3.2.
Next, in the *Baopuzi* 抱朴子 text (371-420 CE), *wu* is mainly used as a verb to negate nominal phrases (611 out of 646 tokens), according to Shi & Li (2004: 242). I provide an example below.

(90) 不見仙人，

bu jian xian ren,

NEG see transcendent person

不可謂世閒無仙人也。《抱朴子》內篇 (*Baopuzi*; 371-420 CE)

bu-ke wei shijian *wu* xian ren ye

NEG.can say world not.have transcendent person PAR

‘One can’t conclude that there is no transcendent in the world until he sees one.’

Third, in *Laoqida* 老乞大 (918-1392 CE), which served as a textbook at the time for Korean learners of Chinese, *wu* serves as the main verb in most tokens.

(91) 這房裏無人 (*Laoqida* 老乞大; 918-1392 CE)

zhe fang li *wu* ren

this room inside not.have person

‘There is no one in the room.’

It is hard to find instances of *wu* as the second verbal element. I found three out of the very few *wu* entries (seven). One example is (92). *Wu* appears as the second element, but there is an adverbial phrase *hou* ‘later’ between the first verb and *wu*. Also, *wu* can be considered to be in the embedded clause.

(92) 恐後無憑 (*Laoqida* 老乞大; 918-1392 CE)

kong hou *wu* ping

worry later not.have proof

‘worrying that there will be no proof later’
Note that the nominal phrase in (92) is indefinite. The indefinite and bare noun is easily lexicalized with the previous verb *wu* into one unit, such as *wu-ping* ‘having no proof’ 無憑.

*Mei* 没 is another lexical verb ‘not have’ in *Laoqida*. In other words, both *mei* and *wu* serve as negated verbs in this text. The number of *mei* sentences is larger than that of *wu*. We begin to see the rise of *mei* and the fall of *wu* in this text, which is not surprising. As noted by Shi and Li, *mei* emerged approximately in later Tang period (618-917 CE) and *Laoqida* is complied a little later than Tang.

Let us examine poetry around the Tang dynasty. In poetry, *wu* is often used to contrast with *you* ‘to have’, such as in (93).

(93) 荷盡已無擎雨蓋, 蘇軾《贈劉景文》(*Su Shi*; 1036-1101 CE)

<table>
<thead>
<tr>
<th>he</th>
<th>jin</th>
<th>yi</th>
<th>wu</th>
<th>qing</th>
<th>yu</th>
<th>gai</th>
</tr>
</thead>
<tbody>
<tr>
<td>lotus</td>
<td>die</td>
<td>already</td>
<td>not.</td>
<td>have</td>
<td>lift</td>
<td>rain</td>
</tr>
</tbody>
</table>

‘When the lotus dies, its sheltering leaves are already gone.’

菊殘猶有傲霜枝。

<table>
<thead>
<tr>
<th>ju</th>
<th>can</th>
<th>you</th>
<th>you</th>
<th>ao</th>
<th>shuang</th>
<th>zhi</th>
</tr>
</thead>
<tbody>
<tr>
<td>chrysanthemum</td>
<td>die</td>
<td>still</td>
<td>have</td>
<td>elegant frost</td>
<td>branch</td>
<td></td>
</tr>
</tbody>
</table>

‘When the chrysanthemum dies, its elegant frost branches still remain.’

In a Song poem below, *wu* is used as a negated verb too.

(94) 踏破鐵鞋無覓處。宋夏元鼎詩 (*Song Dynasty*, 1127-1279 CE)

<table>
<thead>
<tr>
<th>ta</th>
<th>po</th>
<th>tie</th>
<th>xie</th>
<th>wu</th>
<th>mi.chu</th>
</tr>
</thead>
<tbody>
<tr>
<td>step</td>
<td>worn</td>
<td>iron</td>
<td>shoe</td>
<td>not.</td>
<td>have</td>
</tr>
</tbody>
</table>

‘Though (I) have looked for everywhere, there is no place where I can find (it).’
Wu disappeared in the colloquial stratum of written Chinese, and in MSC wu can only be seen in frozen expressions, as in (94).

Moving to the 14\textsuperscript{th}-15\textsuperscript{th} centuries, we also see the same verbal use of wu in 水滸傳 Shuihu zhuan (Ming, 1368-1644 CE).

(95) 四邊並無別物 Shuihu zhuan (1368-1644 CE)
\begin{tabular}{ll}
si & bian bing \textbf{wu} bie wu \\
four side & and not.have other thing \\
\end{tabular}
‘There are no other things in all four sides.’

(96) 言無數句，話不一席 Shuihu zhuan (1368-1644 CE)
\begin{tabular}{llllll}
yan & \textbf{wu} & shu-ju, & hua & bu & yi x i \\
say & not.have & several-utterance & say & NEG & one feast \\
\end{tabular}
‘(Someone) didn’t say much and his words didn’t last longer than a feast’s worth of time.’

Finally, we shall also look at Lijing ji, the earliest available Min text. Most tokens of wu have the word order of NEG +DP. The V-NEG-DP construction is uncommon; (97) is one such example. The nominal mih ‘thing’ is indefinite.

(97) 我畏無物通度汝食。《曆鏡記》(Lijing ji; approximately 1566 CE)
\begin{tabular}{llllllll}
gua & kiann & \textbf{bo} & mih & tang & hoo & li tsiah. \\
1sg & dare & not.have & thing & can & give & 2sg eat \\
\end{tabular}
‘I’m afraid that I do not have food for you to eat.’

So far, we have not seen a case where the nominal phrase is definite. For it to happen needs some syntactic environment. For instance, we can say that kiann ‘dare’ and bo ‘not.have’ are two independent verbs in (97), but they can be in one

\footnote{I transcribe this line in modern Southern Min as \textit{Lijing ji} is a Min text.}
bi-clausal event in certain situations, such as ‘I don’t have the things that you requested.’ I address aspectual negation in the V-NEG-DP order in section 7.5.

Shi and Li (2004) claim that the lexical use of wu is limited to ‘to not have’ before it became extinct and was substituted by mei around 14th to 15th centuries. The authors’ evidence is that no pattern such as wu + VP is found in Baopuzi 抱仆子 (371-420 CE) and Shuihu zhuan 水滸傳 (Ming, 1368-1644 CE).

However, I have shown in section 7.3 that wu can be used as an pure negative, aspectual negative, interrogative or discourse marker before it went out of use. Based on this, we should expect a reanalysis of wu “up the tree” in syntax just like mei. This does not fit with Shi and Li’s (2004) claim. Possibly, wu has undergone a grammaticalization path as (98). A corpus analysis of more historical texts is required, however.

(98) wu: V > NEG > ASP > Q > DM

As discussed in section 7.2, modern TSM bo characterizes part of wu and of mei. Some puzzles arise. If bo derives from wu, why do we have bo as aspectual negation in modern TSM, while historically wu was never used this way?

On the other hand, if bo is mei, why does bo differ from MSC mei in terms of their predication and word order options? I return to the issues of predication in comparative studies of section 7.5. An apparent difference between MSC and the other two Sino language varieties is word order, which I address immediately after the following subsection.
7.4.3 Interim conclusion.

The above paragraphs address the development of Chinese negation, with a focus on aspectual negative morphemes. I show the grammaticalization path for each morpheme below:

\( 187 \)

(99)  \textit{moli/mei} 沒: \( V \) ‘to die’ > NEG; ASP > Q

(100)  \textit{wu} 無: \( V \) ‘not have’ > ASP; NEG > Q > DM

(101)  \textit{wei} 未: ? > ASP > Q

(102)  \textit{wang} 死: \( V \) ‘to escape’ > ASP > Q

Diachronically, all the Chinese negatives discussed thus far share some characteristics. There is head-to-head reanalysis, and many of these negatives originate as full-fledged verbs, mostly associated with ‘to die’. Nevertheless, a language may choose one form over another. For instance, TSM makes use of \textit{bo} 無 and \textit{bue} 未 as its two separate types of aspectual negation, whereas MSC uses \textit{mei} 無 for both. Hakka has \textit{mo} 無 and \textit{mang} 死 for perfective and anterior aspect.

I have discussed how previous research provides us with views on the synchronic negation among the Sinitic languages under investigation. I also supply the inquiry with my new insights, either associating one finding with another, or making further clarifications when necessarily.

A large portion of this section contributes to the diachrony of \textit{mei}, including its categorial status and word order. The reason is that these two areas differ significantly between MSC and the other language varieties in contemporary eras.

\( 187 \) All are in MSC pronunciation.
7.4.4 Word order change in mei.

This section addresses word order in negation. I first demonstrate two word orders in TSM with only one corresponding word order in MSC. Secondly, I refer this divergence to a change of word order in history during Middle Chinese time. In the remaining paragraphs, I provide examples from the literature on this change and associate them with the aspectual negatives under investigation.

There are two word orders for TSM negation. One is where bo serves as the first verb in a sequential event, as in (103). The other word order shown in (104) is also available in Sinitic varieties other than MSC.

\[(103)\text{ 無人知伊心稀微} \]
\[\text{bo lang tsai i sim li-bi.} \]
\[\text{not.have person know 3sg hear lonely} \]
\[\text{‘No one knows her loneliness.’}\]

\[(104)\text{ 等無心愛的人} \]
\[\text{tan bo sim ai e lang} \]
\[\text{wait not.have hear love GEN person} \]
\[\text{‘waiting for the one who (she) cares but in vain’}\]

I now focus on the latter word order. Let us examine (105), where mei negates the verb chi ‘to eat’.

\[(105)\text{ 蛋糕，我沒吃。} \]
\[\text{MSC dangao, wo mei chi.} \]
\[\text{cake 1sg not.PFV eat} \]
\[\text{‘The cake, I didn’t eat it.’}\]

\[188\text{ (103) is from a popular Taiwanese song 蕁愁牡丹 iu-tshiuboo-tan, and (104) is from 返來阮身邊 tng lai gunn sin-pinn.}\]

\[189\text{ The exception is the MSC V-bulde-R construction.}\]
However, in (106), where there is a resultative compound `chi-wan`, literally ‘eat-finish’, *mei* negates the resulative *wan* ‘finished’, but not the main verb `chi` ‘eat’.\(^{190}\)

\[(106)\text{蛋糕，我吃了，但没吃完。} \quad \text{MSC} \]
\[
\begin{array}{ccc}
dan.gao_i & wo & chi-le & [t_i] & dan & mei & chi-wan. \\
\text{cake} & 1sg & \text{eat-PFV} & \text{but} & \text{not.ASP} & \text{eat-finish}
\end{array}
\]

‘I ate some cake, but I did not finish (eating) it.’

In contrast, there are two word orders for (106) in TSM. In (107), *bo* precedes the verb ‘eat’, whereas *tsiah* ‘eat’ is followed by *bo* in (108). These two sentences share same semantics.

\[(107)\text{ke-nng-ko，gua bo (ka i) tsiah-uian.} \quad \text{MSC} \]
\[
\begin{array}{ccc}
\text{cake} & 1sg & \text{NEG.ASP} & \text{(PREP it)} & \text{eat-finish}
\end{array}
\]

‘The cake, I did not finish it.’

\[(108)\text{ke-nng-ko，gua tsiah bo uan.} \quad \text{MSC} \]
\[
\begin{array}{ccc}
\text{cake} & 1sg & \text{eat} & \text{NEG.ASP} & \text{finish}
\end{array}
\]

‘The cake, I did not finish it.’

The difference between these two languages is connected to word order change in the history of the Chinese language. According to Shi and Li (2004: 237), Chinese has gone through a dramatic structure change around the fifteen century, which I demonstrated as in (109).\(^{191}\)

\[(109) \quad [ V + O ] + [ M + X ] > M + ( V-X ) + O \]

---

\(^{190}\) *T\(_i\)* shows the original position of the topicalized *dangao* ‘cake’.

\(^{191}\) Translation of the terms is mine. Shi and Li (2004: 237) regard X as a secondary predicate.
M (modifier): interrogative pronouns, degree adverbs, negation, or adverbs

X: verbs, adjectives, time words, quantifier phrase, preposition phrase

I provide (110) as an example.

(110) pushed the door widely open  >  widely pushed open the door

[ pushed + the door ] + [ widely open ] > [ widely push-open the door ]

\[ V \quad O \quad M \quad X \quad M \quad V-X \quad O \]

First, the change involves clausal boundaries, from two to one, as shown in brackets. ‘Pushed the door’ is one event and ‘(the door was) widely open’ is the other. Second, the modifier (M) ‘widely’ is fronted, and the resultative state X ‘open’ is attached to the verb as (lexical) aspect.

Shi and Li argue that resultative compounding \( V-X \) in MSC comes from a structure change in (111).

(111) \( V + X > V-X \), when \( O \) and M in (105) are omitted

Now, take the resultative compound \( chi\text{-}wan \) in (106) as an example. There should be a change as in (112).

(112) \( chi \ ‘eat’ \ + \ (O) \ + \ (M) \ + \ wan \ ‘finish’ \ > \ chi\text{-}wan \ ‘finishing eating’ \)

For negation, the pattern should be like (113), adapted Shi and Li (2004: 238-239). \(^{192}\)

(113) \( [V + (O)] + [\text{Neg} + X ] \ > \ \text{Neg} + V-X + O \)

(114) \( [chi + dangao] + [mei + wan] \ > \ mei + chi\text{-}wan + dangao \)

\[ \text{eat} \quad \text{cake} \quad \text{NEG} \quad \text{finish} \quad \text{NEG} \quad \text{eat-finish} \quad \text{cake} \]

\(^{192}\) Not all Chinese negation completes this change. Here I only address negation as initially scoping over the secondary predicate in MSC.
Negation is fronted once the unit V-X is set. For this to take place, Shi (2002) argues that V-X is reanalyzed as one element, triggering the preposing of negation.

\[(115) \ [ V + O ] + [ \text{Neg} + X ] \rightarrow \text{Neg} + [ V-X + O]\]

I use brackets to separate clausal boundaries. This structure change involves clausal dependency from two independent clauses to a one-event clause.\(^{193}\) The NegP now scopes over a bi-verbal event. This change is completed in MSC, but not in TSM and Hakka, as the latter languages still make use of both word orders.

I have explained the word order change about negation in MSC, taking mei as an example. There are, however, other aspektual negatives such as wu and wei. In the following paragraphs, I synchronize the literature on Chinese aspektual negation, taking into account mei 沒, wu 無 and wei 未.

### 7.4.5 Word order change in aspektual negation.

The use of the various negatives from the Wei-Jin 魏晉 periods (beginning 265CE) to the Yuan-Ming 元明 Dynasties (ending 1644 CE) is allocated by the predicate (Shi and Li 2004: 241). The difference can be conceptualized below.\(^{194}\)

\[(116) \ V + [ \text{wei 未} '\text{not.yet}'; \text{bu 不} '\text{not}'] + \text{verbal/adjectival}\]

\[(117) \ V + [ \text{wu 無} '\text{not.have}'; \text{mei 沒} '\text{not.have}'; \text{bu-dao 不到} '\text{not-reach}'] + \text{nominal}\]

\(^{193}\) Many studies (such as Liu 2004; Wang 2010) have conducted on how the syntax of resultative compounds is represented.

\(^{194}\) *Wei 未* and *bu 不* were interchangeable in some texts at a time; *wu 無* in some historical texts are used as prohibitives, just as 毋.
In other words, when there is a verbal predicate, the candidate for negation is either *wei* or *bu*. A nominal predicate has a choice among *wu*, *mei* and *bu-dao*.

This distinction is only applicable to time periods before *mei* was established and extended to other usages. MSC loses these structures, yet contemporary TSM preserves them, with equivalents such as *bue* for ‘not.yet’, *bo* 無 for ‘not.have’, and *bo-kau* 不到 for ‘not-reach’. Below are historical examples for each type.\(^{195}\)

195 Examples are from Shi and Li (2004: 238-239); transcription and translation are mine. Transcriptions are all in MSC.
(122) 住了沒兩日就下起雪來 the *Dream of the Red Chamber* (the 18th cy.)

```
zhu le mei liang ri
live LE NEG two day
jiu xia qi xue lai
then fall up snow come
```

‘(Someone) stayed (somewhere) for less than two days when it began to
snow.’

From *Zutang ji* 祖堂集 (952 CE) to *Shuihu zhuan* (Ming, 1368-1644
CE), we see change in negation from *wu* to *bu-dao*. In a latter text *紅樓夢* the

*Dream of the Red Chamber* (mid-Qing, the 18th century), *bu-dao* is often replaced
by *mei* (Shi and Li 2004: 239). *Wu* disappeared eventually.

(123) development of aspectual negation for nominal predicates

\[ wu \rightarrow bu-dao \rightarrow mei \]

That is, *mei* takes over the other negatives for negation of the secondary
predicate. Before modern eras, *mei* can be observed in two word orders.

(124)  *mei* + *V* + (*-X*) + *O*
```
ta mei [chi fan] MSC
3sg NEG.ASP eat rice
```
‘He didn’t eat (the/a) meal.’

(125)  *V* + *mei* 沒 + *O*
```
*ta chi mei fan
3sg eat NEG.ASP rice
```
‘He didn’t eat (the/a) meal.’
In early modern Mandarin texts, such as the 18th century novel the *Dream of the Red Chamber*, these two word orders are still well attested. In MSC, *mei* however cannot be in the secondary predicate position, as in (125).

(126) tree for (124)          (127) tree for (125)

```
 VP                     NegP
 \__________\           \__________\  \\
   \__________\          \__________\ \\
      \__________\        \__________\ \\
         \__________\      \__________\ \\
              \__________\    \__________\ \\
                 \__________\  \__________\ \\
                        \__________\  \__________\ \\
"not.have"          "mei"      "mei"               "chi"
```

The prepositioned *mei* discussed above is bounded with the predicate of the verb: resultatives or quantifiers. I discuss boundedness next.

**7.4.6 Perfective or perfect.**

I first discuss the notion of “boundedness,” extending this topic to the disappearance of several aspectual negatives in Mandarin Chinese. Thus, today *mei* in MSC is used as both perfective and perfect, two terms I will explain accordingly.

Boundedness is used in the Chinese literature (such as Shi 2002) to distinguish *mei* from *bu*, both of which are the two basic negators in MSC. This term characterizes the phenomenon just discussed in section 7.4.3.
For instance, *mei* expresses the aspect of the verb, yet does not immediately precede *kai* ‘open’ in (128).

\[(128)\] ta *mei* tui (*mei*) -kai men. MSC  
3sg NEG.ASP push NEG -open door  
‘He pushed the door but failed to open the door.’

To negate the declarative, ‘He pushed the door open’, *mei* is projected above the VP, which is bounded with the telicity *kai* ‘open’. *Mei* also negates quantification in (129). An alternative utterance such as (130) is used.

\[(129)\] ta *mei* chi (*mei*) san kou fan. MSC  
3sg NEG.ASP eat NEG.ASP three mouth rice  
‘He ate less than three mouthfuls of meal.’

\[(130)\] ta chi bu dao san kou fan. MSC  
3sg eat NEG reach three mouth rice  
‘He ate less than three mouthfuls of meal.’

The boundedness notion used for the above examples is perfectivity. As discussed, perfective *mei* is connected to syntactic change in the history of the Chinese language.

\[(131)\] *mei*: not.PFV

*Bu*, on the other hand, is not bounded with the event; see the ungrammatical example in (132).\(^{196}\)

\[(132)\] *ta bu* tui kai men. MSC  
3sg NEG push open door  
Intended: ‘He didn’t push the door open.’

\(^{196}\) There is a possible reading for (132): ‘He doesn’t want to push open the door’. The negative *bu* can be volitional (chapter five).
In MSC, *bu* is used for adjectival or stative predicates.197

(133) hua  **bu**  hong.    MSC
   flower  NEG  red
   ‘The flower is red enough.’

(134) ta  **bu**  kaixin.    MSC
   3sg  NEG  happy
   ‘He is not happy.’

(135) ta  **bu**  neng  lai.    MSC
   3sg  NEG  can  come
   ‘He cannot come.’

Shi and Li (2004) argue that the occurrence of the “bounded” (in their term) *mei* is accompanied with the extension of *mei* to other types of negation. Before *mei* took over other bounded negatives such as *bu-ceng* 不曾 ‘never’ and *wei-ceng* 未曾 ‘never’ around the 15th to 17th centuries, both *bu* 不 and *wei* 未 were used to express unboundedness; see (136).198

(136) 閘議未了。  *Shuihu zhuan* 水滸傳; 1368-1644 CE
   shang-yi  **wei**  liao
   negotiate  NEG  finish
   ‘did not finish negotiating’

*Bu* may negate a bounded event, but it is restrictive to an additional adverb.

(137) 只和每日一般，並不說起。  *Shuihu zhuan* 水滸傳; 1368-1644 CE
   zhi  he  *mei-ri*  yiban,  **bing bu**  shuo-qi

---

197 *Bu* is to describe the degree of the adjective in (133). For the statement that ‘the flower is not red’, 不是 *bu-si* (… 的 de) is used.

198 Sentences are from Shi and Li (2004: 242-243); transcription and translation are mine.
only with every-day same but NEG mention
‘Just like every day, (he) did not even mention (what was happening).’

However, there are only two basic negative forms in MSC: *bu* and *mei*.

(138) *bu*: adjectival/stative verbs (unbounded)

(139) *bu-ceng/wei-ceng* ‘not-ever’ > *mei* ‘not yet’ (bounded)

The reanalysis illustrated in (139) indicates that *boundedness* by Shi and Li (2004) also refers to *anterior aspect*, aka. *perfect*, abbreviated as PF; see (140).

(140) *mei*: not.PF

<table>
<thead>
<tr>
<th>ta</th>
<th>3sg</th>
<th>MSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>hai-<strong>mei</strong>/hai-<strong>mei-you</strong></td>
<td>yet.not.PF/yet-not-PF</td>
<td>go</td>
</tr>
</tbody>
</table>

‘He has not left for the Great Walls.’

I add *mei* as perfective (abbreviated as PFV) below in (141) for comparison.

(141) ta **mei** qu Changcheng. MSC

<table>
<thead>
<tr>
<th>ta</th>
<th>3sg</th>
<th>MSC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>mei</strong></td>
<td>not.PFV</td>
<td>go</td>
</tr>
</tbody>
</table>

‘He did not go to the Great Walls.’

The PF aspect in (140) can be represented in the tree diagrams, accordingly.

(142) *hai-mei* as NEG.PF

```
NegP
  /
ha'i 'yet'
    /
  mei
      /
AspP
        /
  mei 'not.have'
```
Now, let us return to Southern Min bo and examine how it converges with and diverges from MSC. In a similar fashion, I look at individual-level predication, perfective, and anterior.

First, bo is for adjectival or stative predicates, which however patterns MSC bu rather than mei. I repeat the MSC (133) and (134), but add them TSM data.

(144) hua bu hong. MSC
    hue bo hang. TSM
    flower NEG red
    ‘The flower is not red enough.’

(145) ta bu kaixin. MSC
    i bo huann-hi. TSM
    3sg NEG happy
    ‘He is not happy.’

---

199 Le is the affirmative aspect of mei. There has been a prolonged debate on whether -le is perfective or perfect, I assume that –le  
    can be both, given the negation data provided above.
Interestingly, *bo* serves as a perfective marker, which is the same as MSC *mei* in
(132) and (141).

(146) ta men mei tui kai. MSC
    i mng bo sak kui. TSM
    3sg door NEG.PFV push open
    ‘He pushed the door but failed to make it open.’

(147) ta mei qu Changcheng. MSC
    i bo khi Tsng-tsiann. TSM
    3sg not.PFV go Great.walls
    ‘He did not go to the Great Walls.’

We have seen examples where Southern Min *bo* can be a counterpart to MSC *bu*
or *mei*. The aspectual *bo* patterns with MSC *mei*; both are perfective markers.

Next, I show one function of MSC *mei*, which is lacking in TSM *bo*.

Whereas MSC *mei* can express anterior aspect, TSM *bo* cannot and *bue* is used
instead.

(148) ta hai mei qu Changcheng. MSC
    i iau bue khi Tsng-tsiann. TSM
    3sg yet not.PFV go Great.walls
    ‘He has not left for the Great Walls.’

Table 7.5 shows the categorial status of TSM *bo*, compared with the
historical development of *wu* and *mei*. To conclude, *bo* is not the same as *wu*, and
*bo* is not *mei* either. A possibility is that *bo* is a cognate of *wu*, with a
development of aspectual use through the course of time.
Table 7.5
A comparison of bo, wu, and mei

<table>
<thead>
<tr>
<th></th>
<th>wu 無</th>
<th>mei 沒</th>
<th>bo</th>
</tr>
</thead>
<tbody>
<tr>
<td>V: not have</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>NEG.PFV</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>NEG.PF</td>
<td>(?)</td>
<td>√</td>
<td>(bue)</td>
</tr>
<tr>
<td>Q</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>DM</td>
<td>√</td>
<td>--</td>
<td>√</td>
</tr>
</tbody>
</table>

7.4.7 Concluding remarks.

The fourth section addresses grammaticalization of aspectual negation: mei, wu, wei and wang, as well as word order change in negation, resulting in parametric differences between MSC and the other two language varieties. I show the origin of these negatives markers, most of which are associated with death, a pattern similar to that of the modal negatives discussed in the previous three chapters.

7.5 Comparative Studies

This chapter focuses on two negatives in Southern Min: bo ‘not.have’ and buel ‘not.yet’. What follows is a comparison of bo and buel with their counterparts in Hakka and Mandarin. As in the previous chapters, I focus on parametric differences as well as topics that have less been addressed in the literature.
7.5.1 Different morphemes for ‘not.yet’

In section 7.3, I have traced the history of 沒 mo/mei, 死 wang, and 未 wei, all of which mean ‘not.yet’. The latter two morphemes are archaic and are not used as negative markers in modern standard Chinese. Mang is used in Hakka for anterior aspect ‘not yet’ (149).

(149) 佢到下晝兩點還亡食飯     Hakka
        ki    do    ha-zhiu    liong-diam    (han)    mang    sit    fan.
        3sg    till    afternoon    two o’clock    yet    not.yet    eat    rice
        ‘He had not eaten until two in the afternoon.’ (Fang 1994:38)

Hakka mang also derives from 死. Southern Min has a counterpart bue 未.

(150) 伊猶未食飯。     TSM
        i    iau    bue    tsiah    png.
        3sg    yet    not.yet    eat    rice
        ‘He has not eaten yet.’

MSC uses neither 死 nor 未 (wang and wei in MSC, respectively) as sources for aspectual negation. Instead, mei or meiyou is used; see (151).

(151) 他還*未/亡/沒(有)吃飯。    MSC
        ta    hai    *wei/*wang/mei(you)    chi    fan
        3sg    till    not.yet    eat    rice
        ‘He has not eaten yet.’

---

200 Examples and translation are from Fang (1994); transcription and glosses are mine.

201 TSM adverb 猶 iau ‘yet’ has a different character than that in Hakka han 還 in (150) and MSC hai 還 in (151).
The above examples show that aspectual negation among the three languages comes from a different origin. Nevertheless, these morphemes *bue*, *mang* and *mei* share similar semantics. Southern Min adopts *bue* 未 and Hakka *mang* 亡 for ‘not yet’; however, Mandarin uses *mei* 没 for two types of aspect.

The interrogative system also diverges between Mandarin and the other two languages. The perfective *bo* and anterior *bue* are used to elicit two different questions in TSM; Hakka has *mo* and *mang* as the counterparts.

(152) li u tsiah-png  bo? TSM
   ngi yu sit-fan  mo  Hakka
   2sg PF eat-meal  Q
   ‘Did you eat (a meal)?’

(153) li tsiah-png  buel? TSM
   ngi sit-fan  mang  Hakka
   2sg eat  Q
   ‘Have you eaten (a meal) yet?’

While TSM has a *bo* versus *bue* ‘not yet’ distinction, MSC *mei* severs a dual function, as shown in (154a) and (154b). As an interrogative, *mei* can be used to ask two types of questions.

(154) ni chifan le  mei? MSC
   2sg eat.meal LE  Q
   a. ‘Did you eat (a meal)?’
   b. ‘Have you eaten (a meal) yet?’

Some native speakers of MSC feel that *ma* (155) is equivalent to (154a), whereas *mei* is more prone to (154b).
Historically, *ma* is a phonological reduced form from *mei*. *Hanyu da cidian* provides us with the information that *ma*, is grammaticalized from *me* 沒, also written as *me* 麼. This use of *ma* in (155) shows that *ma* is more grammatical/neutral than *mei*. A larger scale of survey is required for a more confirm conclusion, however.

### 7.5.2 Asymmetric aspect marking.

One well-researched topic in the literature of Chinese is the asymmetry in Mandarin aspectual negation. As Shi (2002: 196) points out, the affirmative *V-le* for perfective in (156a) uses the inflectional system, whereas the negative counterpart *mei* utilizes a periphrastic system, as in (156b).

202 The negation of *–le* is *mei*; they are in complementary distribution.

(156) a. ta chang-le ge. MSC
    3sg sing-PFV song
    ‘He sang.’

b. ta *mei* chang ge. MSC
    3sg NEG.PFV sing song
    ‘He did not sing.’

---

202 Shi (2002: 197) uses perfect, as opposed to perfective proposed by Li and Thompson (1981: 185). I regard both as possible. I side with the latter authors here, however; accordingly, I change the translations in (156). I use PF for perfect and PFV for perfective.
Hakka and Southern Min, however, make use of a periphrastic system. That is, they have affirmative versus negative aspect counterparts; see (157).

(157)  
i  
\begin{tabular}{lll}
u/bo & tshiunn-kua. & TSM \\
ki & yu/mo & tshong-go. \\
3sg & PFV/NEG.PFV & sing-song \\
\end{tabular} 
‘He sang./He did not sing.’

For perfective, English uses both systems, as the auxiliary have indicates the periphrastic system and the –ed in the past participle is inflectional; see (158).

(158)  
I have wash-ed my hands.

English perfective, on the other hand, is expressed by means of simple past tense.

(159)  
I sang. /I did not sing.

The negative perfective aspect are bo, mo, and mei(-you) for Southern Min, Hakka, and Mandarin, respectively. Notice that Mandarin has two versions: mei or mei-you. The former is an aspectual negative, and the latter mei is simply negation. One may also consider mei-you to be one morpheme, denoting both aspect and negation.

(160)  
\begin{tabular}{lll}
ta & mei/mei-you & changge. \\
3sg & not.PFV/not-PFV & sing.song \\
\end{tabular} 
‘He did not sing.’

Often addressed in the literature (such as Tsao and Cheng 1995) is the aspectual you in affirmative sentences by Taiwanese Mandarin speakers due to language contact with Mandarin; compare (156) and (161).

(161)  
\begin{tabular}{lll}
ta & you & chang \text{ge.} \\
i & u & tshiunn-kua. \\
\end{tabular} 
Taiwan Mandarin TSM
ki  yu  tshong  go.  Hakka
3sg  PFV  sing  song
‘He sang./He did sing.’

The periphrastic affirmative you has become reanalyzed as an aspect marker in the Taiwanese version of Mandarin for some speakers. You can also be used as an emphatic marker, similar to the function of the English do-auxiliary, shown in (161) in ‘He did sing’.

7.5.3 Different mei’s in Mandarin.

As noted in previous paragraphs, Mandarin makes use of –le to express completion or perfectivity of an event.

(162)  wo  chi-le.  MSC
1sg  eat-LE
‘I ate.’/’I have eaten.’

The status of –le varies from one scholar to another. Li and Thompson (1981) regard this –le as perfective, whereas Shi (2002) argues that –le is perfect, aka anterior aspect. I think that both suggestions are possible, as anterior and perfective aspects are in the continuum in grammaticalization.

Below I discuss the aspectual status of mei(you) ‘not(have)’, the negation of -le. Let us examine the first set of examples in (163) and (164). Whereas MSC uses mei for both situations in (163), two different negatives are used in TSM as in (164a) and (164b).

(163)  a.  wo  hai  shi  mei  gen  ta  shuo.  MSC
1sg  still  COP  NEG.PFV  with  3sg  say
‘I still did not tell him (about something).’
b. wo hai **mei** gen ta shuo. MSC
1sg still NEG.PF with 3sg say
‘I have not yet told him (about something).’

(164) a. **gua** a si **bo** ka i kong. TSM
1sg still COP NEG.PFV with 3sg say
‘I still did not tell him (about something).’

b. **gua** iau **bue** ka i kong. TSM
1sg still NEG.PF with 3sg say
‘I have not yet told him (about something).’

The second group of data below has a resulting state **hoo** ‘good, alright, finished’. The perfective **u** and **bo** cannot be used because **hoo** is anterior.

(165) *gua **ji** **u** sia hoo. TSM
1sg word PFV write good
Intended: ‘I have finished practicing characters.’

(166) *gua **ji** **bo** sia hoo. TSM
1sg word NEG.PFV write good
Intended: ‘I have not finished practicing characters.’

To express anterior aspect (perfect), the final particle **a** 矣 is used for affirmative and **bue** 未 is used for perfect negation; see (167) and (168).

(167) **gua** **ji** sia hoo **a**. TSM
1sg word write good PAR
‘I have finished writing characters.’

(168) **gua** **ji** iau **bue** sia hoo. TSM
1sg word yet not.yet write good
‘I have not finished writing characters.’
The above examples reveal that the perfective and perfect aspects are marked by different markers in Southern Min. Mandarin, however, uses *mei* for both aspects. For instance, *mei* can be used to negate perfective, as shown in (169). Adopting Bybee et al.’s (1994) proposal, I see the completive aspect in (169) interpreted as perfect shown as (170).

(169) wo zi *mei* xie wan. MSC
1sg word NEG.PFV write finish
‘I did not finish (the action) of writing characters.’
(170) completive > perfect, for (169)

The other reading focuses on the resultative state *wan* ‘finished’, expressing anterior aspect. *Hai* 還 ‘yet’ is compatible with this reading.

(171) wo zi *(hai) mei* xie wan. MSC
1sg word yet not.yet write finish
‘I have not finished writing characters.’
(172) resultative > anterior aspect for (171)

I therefore argue that modern Mandarin *mei* can be both perfective and perfect. This dual role in *mei* is not coincident; it is connected to the history of Chinese negation. Recall that by the 17th century, *mei* has replaced some negative uses, including *wei* 未 ‘not yet’ (Shi & Li 2004). Nonetheless, Shi and Li do not associate this fact to the multiple categorical status of *mei* in MSC.

The last examples to discuss are questions. Next, let us take a look at two types of neutral yes/no questions in MSC: (173) and (174) below. The former type (173) is known as the A-not-A question, and *mei* in (174) is the sentential particle for questions.
(173)  
\begin{align*}
\text{ta} & \quad \text{you-meiy you} \quad \text{chi-fan?} \quad \text{MSC} \\
3\text{sg} & \quad \text{have-not. have\ eat-meal}
\end{align*}

‘Did he eat?’

a. \quad \text{chi-le.} \\
b. \quad \text{you} \quad \text{a.} \\
\text{eat-LE} \quad \text{have} \quad \text{PAR}

‘He ate.’  
‘Yes’

c. \quad \text{mei(you).} \\
d. \quad \text{hai mei. (?)} \\
\text{not.(have)} \quad \text{yet} \quad \text{not.yet}

‘No, he did not.’  
‘No, he has not.’

As shown in (173a), an answer as \text{chi-le} with \text{–le} indicating perfective is canonical for a \text{you-meiy you} question. Yet, (173b), where \text{you} is reanalyzed as a perfective marker, is also possible by speakers of Mandarin. The negative answer can be (173c), but (173d) is less likely.

On the other hand, with a sentence-final interrogative marker \text{mei(you)} (174) is more likely to elicit an answer that is anterior.

(174)  
\begin{align*}
\text{ta} & \quad \text{chi-fan} \quad \text{-le} \quad \text{mei(you)?} \quad \text{MSC} \\
3\text{sg} & \quad \text{eat-meal} \quad \text{LE} \quad \text{Q}
\end{align*}

‘Has he eaten?’

a. \quad \text{chi-le.} \\
b. \quad \text{*you} \quad \text{a.} \\
\text{eat-LE} \quad \text{PFV} \quad \text{PAR}

‘He has eaten.’  
‘Yes.’

c. \quad \text{mei(you).} \\
d. \quad \text{hai-me.} \\
\text{Not.yet} \quad \text{yet-not}

‘No, he has not.’  
‘No, he has not.’

With the above three sets of data, I suggest that MSC \text{mei} has two aspect categories: perfect and perfective.
7.5.3 Word order.

The topic of word order difference is rarely addressed in the literature either. One parametric difference between *bo* and *mei* is that *bo* can be in V₁ or V₂ position, while Mandarin *mei* can only be pre-VP. Below are examples from the same source.

(175) 為何真意真心無地找
    ui-ho tsin-i tsin-sim bo te tshue
    why real-mind real-heart not.have place find
    ‘Why is there no place (for me) to find a right person with my real heart?’

(176) 等無月光入來坐
    tan bo geh-kng jip lai tse.
    wait not.have moonlight enter come sit
    ‘waiting but no moonlight [someone] showing up.’

*Bo* as V₁ or V₂ is available in TSM in sequential events. The V-*bo*-DP construction is interesting because it can have multiple readings, depending on two factors: the status of *bo* and the finiteness of the DP. I call this *bo* as V₂ negation. I argue that *bo* has two different positions in the V-*bo*-DP construction. Evidence comes from a comparison between TSM sentences and their MSC counterparts.

I modify Huang’s (2009: 20) example into four readings, but separate them into two groups. *Bo* in (177) is a verb, as opposed to aspect in (178). The bare noun can be read as either definite or indefinite.

---

203 from a popular Taiwanese song 博杯, MSC pronunciation for 擲筊 ‘tossing divination blocks’
(177) i liah bo hi-a. TSM
    i catch BO fish
  (a) ‘He cannot catch a fish.’ (generic; indefinite)
  (b) ‘He cannot catch the fish.’ (generic; definite)

(178) i liah bo hi-a. TSM
    i catch BO fish
  (c) ‘He didn’t catch a fish.’ (indefinite)
  (d) ‘He didn’t catch the fish.’ (definite)

Mandarin counterparts to (177) are (179). As seen, mei cannot be in the second element in a verbal string; rather, bu occupies this position.

(179) ta zhuo bu/*mei dao yu. MSC
    3sg catch can.not obtain fish
  (a) ‘He cannot catch a fish.’
  (b) ‘He cannot catch the fish.’

The generic indefinite in (179a) can be shown as (180).

(180) V1 + [NEG + [V2 + DP]] bo in V2

On the other hand, the generic definite reading in (179b) has bo moving from V to fill the ASP; see (181). There are two different heads for the two readings of bo.

(181) V1 + [NEG+ ASP+ [V2 + DP]] bo in ASP

Let us examine Mandarin counterparts of (178), which are shown as (182).

(182) ta mei zhuo-dao yu. MSC
    3sg NEG.PF catch-DAO fish
  (c) Intended: ‘He didn’t catch a fish.’ (indefinite)
  (d) ‘He didn’t catch the fish.’ (definite)
As shown in (182c), the indefinite reading in the DP object is no longer available, in that *mei* is always aspectual. This aspect is connected to definiteness of the DP.

The V₂ negation *bo* as in (178d) has a preverbal *mei* counterpart in Mandarin; see (182d): ‘he didn’t catch the fish’. The syntactic structure for (182d) can be conceptualized below.

(183) ASP + [V₂+ DP]  
    definite

In this case, *mei* occupies the position of ASP. It also provides a second piece of evidence for the claim that there are two projections of *bo* in (178).

A third piece of evidence comes from (184). When there is a telicity marker *tioh*, the DP pins down to one reading: definiteness.

(184) i   lia   bo   tioh   hi-a.  TSM
    3sg  eat   NEG.PF  attach  fish
‘He didn’t catch the fish.’ (definite)

The aspectual *tioh* originates as a verb ‘not obtain; not accomplish’. The negative *bo* is bounded by *tioh*. I therefore analyze Southern Min *bo* as having different projections for its various readings in the V-*bo*-DP construction.

### 7.5.4 Different syntaxes in *bo/bue* as V₂.

A close examination of other predicate types of *bo*, one finds asymmetry within the same language as well.

Let us first investigate *bo* with a adjectival predicate *pa* ‘full’. In (185), *bo* appears in different positions, but both sentences share distinct semantics.

(185) a. i   tsiah   bo   pa.  TSM
    3sg  eat   NEG  full
‘He ate but didn’t feel full enough.’

b. i bo tsiah pa. TSM
3sg NEG eat full
‘He ate but didn’t feel full enough.’

Next, as seen in (186), *bue* also allows for both positions.

(186) a. i tsiah iau-bue pa. TSM
3sg eat yet-not.yet full
‘He ate but has not felt full.’

b. i iau-bue tsiah pa. TSM
3sg yet-not.yet eat full
‘He ate but has not felt full.’

Hakka *han-mang* ‘yet-not.yet’ works in a similar fashion to TSM. Mandarin has one word order only. (187) is the counterpart of (185), and (188) of (186).

(187) wo mei chi (*mei) bao. MSC
1sg not.PF eat full
‘I ate but didn’t feel full enough.’

(188) wo hai-mei chi (*hai-mei) bao. MSC
1sg yet-NEG.PF eat full
‘I ate but have not felt full enough.’

Next, let us examine another type of predication following *bol*/*bue*. Now, *bo* as V₁ has a different reading than *bo* as V₂; compare (189a) with (189b).²⁰⁴

(189) a. kau-a pe bo kue.lai. TSM
dog climb not.yet cross.come
‘The dog attempted to climb over but did not make it here.’

²⁰⁴ *Bo* may not be a full-fledged verb; I use *bo* as V₂ for convenience.
b. kau-a \textbf{bo} pe kue.lai. TSM
dog not.yet climb cross.come
‘The dog did not climb over here.’

In (a), \textit{bo} scopes over the secondary predicate \textit{kue-lai} ‘over here’, whereas \textit{bo} scopes the entire VP in (b), which may mean that the dog is staying at the same spot or the dog moved to elsewhere.

\textit{Bue} is also rather free in both positions, but their semantics differs.

(190) a. kau-a pe \textbf{iau-bue} kue.lai. TSM
dog climb yet-not.yet cross.come
‘The dog began climbing but has not (yet) reached here.’
b. kau-a \textbf{iau-bue} pe kue.lai. TSM
dog yet-not.yet climb cross.come
‘The dog has not (yet) begun to climb over here.’

There is only one word order for Mandarin; \textit{mei} precedes the verb.

(191) guo.er \textbf{mei} pa guo.lai. MSC
gog not.yet climb cross.come
‘The dog did not climb over here.’
(192) guo.er \textbf{hai-mei} pa guo.lai. MSC
dog yet-not.yet climb cross.come
‘The dog has not (yet) begun to climb over here.’

\textbf{7.5.5 Negation with predication.}

Southern Min \textit{bo} is often associated with Mandarin \textit{mei}; however, unlike \textit{bo}, \textit{mei} is not compatible with adjectival predicates. \textit{Bu} is the candidate. Mandarin \textit{mei} and \textit{bu} differ with a distinction between the stage versus individual predication. Hakka is similar to TSM and the perfective \textit{mo} is used.
(193)  hue  bo  hang.   TSM  
hua  *mei/bu  hong.   MSC  
fa  mo  fung  Hakka  
‘The flower is not red enough.’

(194)  gua  lang  bo/*m  song-khuai.   TSM  
wo  ren  bu/*mei  shufu.   MSC  
genai  rhi  mo  sung-song.   Hakka  
1sg  person  NEG  well  
‘I’m not feeling well.’

Table 7.6  
negation for stage-level adjectival predication

<table>
<thead>
<tr>
<th></th>
<th>TSM</th>
<th>MSC</th>
<th>Hakka</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>bo</td>
<td>bu</td>
<td>mo</td>
</tr>
</tbody>
</table>

However, another set of negation is for individual-level adjectival predicate.

As seen in (195) and (196), m is used rather than bo in Southern Min. Hakka is 
the same, i.e. m is used. In sum, MSC uses bu for both stage and individual-level 
predicates, while the other two languages differ.

(195)  jit  hue  m  si  hang  e.   TSM  
zhe  hua  bu  shi  hong  de.   MSC  
li  fa  m  he  fung  gai.   Hakka  
this  flower  NEG  COP  red  ASST  
‘The flower is not red.’

(196)  gua  m  kiann.   TSM  
wo  bu  pa.   MSC  
genai  m  kiang.   Hakka  
1sg  NEG  fear  
‘I’m not afraid.’
Table 7.7
Negation for individual-level adjectival predication

<table>
<thead>
<tr>
<th></th>
<th>TSM</th>
<th>MSC</th>
<th>Hakka</th>
</tr>
</thead>
<tbody>
<tr>
<td>m</td>
<td>bu</td>
<td>m</td>
<td></td>
</tr>
</tbody>
</table>

Now we look at TSM bo. Not only does bo take adjectives or stative verbs, but it can be used with imperfectives, such as progressive.

(197) gua bo tih tsiah png. TSM
    wo mei zai chi fan MSC
    1sg NEG PROG eat rice
    ‘I am not eating (a meal).’

However, unlike TSM bo, MSC mei doesn’t negate habitual progressive zai; bu is used in Mandarin for habitual rather than mei.

(198) gua bo tih tsiah-hun. TSM
    wo bu -- chouyan MSC
    1sg NEG -- smoke.tobacco
    ‘I do not smoke.’

For psych verbs, progressive zai is not compatible, but bo is fine. One may see the use of wo mei zai pa 我沒在怕 in newspapers or hear it in broadcast in present times, which is considered less canonical in MSC.

(199) gua bo tih kiann. TSM
    wo mei zai pa. MSC (?)
    wo bu --- pa. MSC
    1sg NEG PROG fear
    ‘I’m not being afraid.’
Table 7.8 compares TSM with MSC in terms of predication types. Hakka uses *mo, *mang, and *m in a similar fashion to that of TSM *bo, *bue and *m.

Table 7.8  
TSM *bo versus MSC *mei

<table>
<thead>
<tr>
<th></th>
<th>TSM</th>
<th>MSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>DP</td>
<td>*bo</td>
<td>*mei(you)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>negated verb</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*wu; *mei (historically)</td>
</tr>
<tr>
<td>VP</td>
<td>*bo</td>
<td>*mei(you)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASP/PFV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*mei (historically)</td>
</tr>
<tr>
<td>VP</td>
<td>*(iau) *bue</td>
<td>*(hai) *mei</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASP/PF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*wei/*bu (historically)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>also *bu-ceng</td>
</tr>
<tr>
<td>Neg scopes over</td>
<td>*bo</td>
<td>*mei</td>
</tr>
<tr>
<td>V₂</td>
<td></td>
<td>Only allowed *bu in V-de/*bu-R in MSC (chapter four)</td>
</tr>
<tr>
<td>VP: telic</td>
<td>*bo</td>
<td>*mei</td>
</tr>
<tr>
<td>Adj/stative V</td>
<td>*bo</td>
<td>*bu/*mei</td>
</tr>
<tr>
<td>*(stage-level)</td>
<td></td>
<td>negator</td>
</tr>
<tr>
<td>Adj/stative V</td>
<td>*m</td>
<td>*bu/*mei</td>
</tr>
<tr>
<td>*(individual-level)</td>
<td></td>
<td>negator</td>
</tr>
</tbody>
</table>
7.6 Conclusion.

This section addresses several less researched issues on TSM *bo* ‘not.have’ and *bue* ‘not.yet’, largely focusing on word order and predication. I also provide my viewpoint on the categorial status of Mandarin *mei*. Table 7.9 is a comparison of the three languages in terms of their use of aspectual negation.

Table 7.9
Aspectual negation in synchronic Chinese

<table>
<thead>
<tr>
<th></th>
<th>Hakka</th>
<th>Mandarin</th>
<th>Southern Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>V: ‘not have’</td>
<td><em>mo</em></td>
<td><em>mei</em>(you)</td>
<td><em>bo</em></td>
</tr>
<tr>
<td>NEG.PF</td>
<td><em>mang</em></td>
<td><em>mei</em>(you)</td>
<td><em>bue</em></td>
</tr>
<tr>
<td>NEG.PFV</td>
<td><em>mo</em></td>
<td><em>mei</em>(you)</td>
<td><em>bo</em></td>
</tr>
<tr>
<td>Q (PFV)</td>
<td><em>mo</em></td>
<td><em>you-mei.you</em></td>
<td><em>bo</em></td>
</tr>
<tr>
<td>Q (PF)</td>
<td><em>mang</em></td>
<td><em>mei</em>(you)</td>
<td><em>bue</em></td>
</tr>
</tbody>
</table>

PF = perfect or anterior aspect; PFV = perfective
Chapter 8

SOUTHERN MIN NEGATION AND INTERROGATIVES

This chapter reviews chapters four through seven, and extends the topic to
interrogatives reanalyzed from their negative counterparts in Southern Min. The
organization of this chapter is as follows: I provide an overview in section 8.1.
Section 8.2 focuses on the affirmative modal paradigm and section 8.3 on the
negative paradigm. In each section, I provide an overview on Hakka and
Mandarin, in addition to a discussion of Southern Min.

8.1 Introduction

In chapters four through seven, I have addressed the negation of the three
languages under investigation. A first topic for comparison is the varying number
of negatives in the three language varieties. While Southern Min has five basic
negatives, Mandarin and Hakka use two and three, respectively. Contexts for the
use of negation range from ability, volition, necessity, possession, to perfectivity.
The corresponding negative morphemes in Southern Min are be 袂 ‘unable’, m 毋
‘not want’, bian 免 ‘not need’, bo 無 ‘not have’, and bue 未 ‘not yet’.

Mandarin utilizes mei 沒 as aspectual negative (both perfective and perfect)
and merges the other usages into its other negative bu 不, unto which a modal
verb is attached, such as bu-neng 不能, ‘cannot’, bu-yao 不要 ‘not-want’, and bu-
yong 不用 ‘not-need’. The Mandarin negation system is, however, not as simple as
the commonly held notion of aspectual mei versus habitual bu, in that bu can be
volitional or abilitive.
Hakka uses *mo* 無 for possessive and perfective, *mang* 汪 for anterior aspect (perfective), and *m* 毋 for the remainder of the situations such as modal verbs.

Table 8.1 briefs the negative system of each investigated language.

Table 8.1  The negative system of the three languages

<table>
<thead>
<tr>
<th></th>
<th>TSM</th>
<th>MSC</th>
<th>Hakka</th>
</tr>
</thead>
<tbody>
<tr>
<td>can.not</td>
<td><em>be-hiau</em> (abilitive)</td>
<td><em>bu-neng</em>; <em>bu-hui</em> (abilitive)</td>
<td><em>m-voi</em>; <em>m-hiau-tet</em> (abilitive)</td>
</tr>
<tr>
<td></td>
<td><em>be-sai</em> (deontic)</td>
<td><em>bu-keyi</em> (deontic)</td>
<td><em>tso-m-tet</em> (deontic)</td>
</tr>
<tr>
<td>will.not</td>
<td><em>be</em></td>
<td><em>bu-hui</em></td>
<td><em>m-voi</em></td>
</tr>
<tr>
<td>not.want</td>
<td><em>m</em></td>
<td><em>bu-yao</em></td>
<td><em>mo-oi</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>bu</em></td>
<td></td>
</tr>
<tr>
<td>need.not</td>
<td><em>bian</em></td>
<td><em>bu-yong</em></td>
<td><em>m-si</em></td>
</tr>
<tr>
<td>possessive</td>
<td><em>bo</em></td>
<td><em>mei</em>(you)</td>
<td><em>mo</em></td>
</tr>
<tr>
<td>have.not</td>
<td><em>bue</em></td>
<td><em>mei</em>(you)</td>
<td><em>mang</em></td>
</tr>
</tbody>
</table>

8.2 Doublings in the affirmative paradigm

Southern Min modal doublings characterizes an apparent changing paradigm. This phenomenon is not as apparent in the other languages. I discuss these topics in the following paragraphs accordingly.
8.2.1 Modal doublings in Southern Min.

I show the modality paradigm of Southern Min in Table 8.2. For instance, the abilitive *e-hiau* ‘can’, the volitional *beh-ai* ‘want’, and the necessity *tioh-ai* ‘need’, each of which is composed of two near-synonyms.

<table>
<thead>
<tr>
<th>VERB</th>
<th>MOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>'can'; 'will'</td>
<td><em>e-hiau</em> ‘can; able’</td>
</tr>
<tr>
<td>'futurity'</td>
<td><em>e-hiau</em> ‘can’ (ability)</td>
</tr>
<tr>
<td>'ability'</td>
<td><em>e-sai</em> ‘can’ (permission)</td>
</tr>
<tr>
<td><em>beh</em> ‘want’</td>
<td><em>siunn-beh</em></td>
</tr>
<tr>
<td><em>ai; beh-tihu; ai-tihu</em></td>
<td><em>siunn-beh</em></td>
</tr>
<tr>
<td><em>beh, ai, beh-ai</em></td>
<td><em>tioh: ‘need’</em></td>
</tr>
<tr>
<td><em>ai</em></td>
<td><em>tioh, ai, tioh-ai</em></td>
</tr>
</tbody>
</table>

In each of the relevant chapters, I use Minimalist Feature Economy to account for this process: when feature loss occurs, there is usually a renewal.

Take *e-hiau* as an example. The morpheme *e* originates as a lexical verb as ‘to know, to comprehend’ and another morpheme *hiau* also has an origin in meaning of ‘to know, to understand’.

(1) 解 *e*: [know]

(2) 曉 *hiau*: [understand]

When feature loss occurs in *e*, as in (3), *hiau* as a renewal comes into existence to assist *e*. we see a doubling such as *e-hiau* in (4).

(3) *e*: [know] > iF

(4) *e*: iF + *hiau* [know] > *e-hiau* ‘can’ (the verbal use)
The same renewal process occurs, leading to the doublings of Southern Min permissive modals. There are three alternatives: e-sai, e-ing and e-tang. Take e-sai as an example. The diachronic data also show that e was once used as permission modality, just like the English deontic can. The lexical use of sai 使 is ‘to allow, to command’.

(5) e: [know] > iF: [permission]
(6) sai: [allow, command]

When e is losing its semantic features, sai is then added as a renewal to strengthen the use of e in the deontic sense. Thus, we now have such a doubling as e-sai.

(7) e: iF + sai: [allow] > the doubling e-sai ‘can’

Along similar lines, the same principle applies to siunn-beh and beh-ai of the volitional system, and to tioh-ai of the necessity system.

The category shift from lexical to verbal taking place in e or e-hiau is observed in Southern Min, parallel to the development of English modal verb can, which also has a lexical origin as ‘to know’.

(8) can: [know] > iF [ability; permission; probability]

Therefore, we see that English can is used in three modality subcategories: ability, permission and probability.

8.2.2 A comparison.

While English can is used for three subsystems of possibility modality: the epistemic can, the ablitative can and the permissive can, Chinese makes use of doublings, demonstrated in Table 8.3.
Table 8.3
The modal doublings in the three languages

<table>
<thead>
<tr>
<th></th>
<th>TSM</th>
<th>Mandarin</th>
<th>Hakka</th>
</tr>
</thead>
<tbody>
<tr>
<td>possibility</td>
<td>e (futurity ‘will’)</td>
<td><strong>ke.neng</strong> ‘may/can’</td>
<td><strong>voi</strong> ‘will’</td>
</tr>
<tr>
<td></td>
<td><strong>e-hiau</strong> ‘can’ (ability)</td>
<td><strong>hui</strong> ‘will’</td>
<td><strong>voi</strong>; <strong>hiau-tet</strong> ‘can’</td>
</tr>
<tr>
<td></td>
<td><strong>e-sai</strong> ‘can’</td>
<td><strong>hui; neng</strong> ‘can’</td>
<td><strong>tso-tet</strong> (permission)</td>
</tr>
<tr>
<td></td>
<td>(permission)</td>
<td><strong>ke.yi</strong> (permission)</td>
<td></td>
</tr>
<tr>
<td>volition</td>
<td>e ‘will’</td>
<td><strong>hui</strong> ‘will’</td>
<td><strong>voi</strong></td>
</tr>
<tr>
<td></td>
<td><strong>beh, ai, beh-ai</strong> ‘want’</td>
<td><strong>xiang-yao; yao</strong></td>
<td><strong>siong-oi; oi</strong></td>
</tr>
<tr>
<td>necessity</td>
<td><strong>tioh, ai, tioh-ai</strong></td>
<td><strong>yao</strong></td>
<td><strong>oi</strong></td>
</tr>
</tbody>
</table>

These three investigated Sinitic languages differ in their mechanism of doubling. Take the abilitive modal as an example.

In Southern Min, we observe that e is the basic for possibility modality, despite the fact that e varies in its modality: e 解 for epistemic e-hiau 解曉 for abilitive, , and e-sai 解使 for deontic permission.

In comparison, the Mandarin system is, however, less consistent. Under the possibility modality paradigm, Mandarin makes use of both neng 能 ‘able’ and ke 可 ‘allow’. Therefore, Mandarin has doublings such as ke.neng 可能 for epistemic ‘can’, neng(gou) 能夠 for abilitive, and ke.yi 可以 for deontic permission. The additional bound morphemes among these modal verbs are gou ‘enough’ and yi ‘to use’. As noted, modal doublings are not randomly made; the doublings are
often near-synonyms. The permissive modal *ke.yi* ‘can’, composed of *ke* ‘permit’ and *yi* ‘use’, literally means ‘receiving permission to use’.

Mandarin morpheme *hui* 会 ‘can; will’ can be used in two subsystems: possibility and volition. Southern Min *e* is the same. Just like Mandarin *hui* and Southern Min *e*, Hakka uses a monosyllabic *voi* 用 for both abilitive ‘can’ and future/volitional ‘will’. Another abilitive *hiau-tet* 晓得 in Hakka has a similar development path as that of Southern Min *e-hiau-tit* 解曉得. The use of *tso-tet* 做得 as deontic permissive in Hakka is neither attested in modern Southern Min nor Mandarin. Yet, the morpheme *tso* has a verbal origin as ‘to do’, the permissive sense thus arise when *tso* is combined with another morpheme *tet* ‘to obtain’.

(9) \(V_1: tsu \text{ ‘do’} + V_2: tet \text{ ‘obtain’} > V\text{modal}: tso-tet \text{ ‘can’ (permission)}\)

The morphology of today’s Sintic languages has been preserved from different eras of Middle Chinese. Each individual language branch has adopted different verb series in syntax initially as \(V_1-V_2\). Gradually the verb serial system comes to the morphological level, as one verb. So, today we observe divergent doublings in each of these languages.

Note that aspectual markers are not discussed here in that they do not have doublings, possibly because they have less verbhood than modal verbs.

### 8.3 The Negative Paradigm

I address in the first portion the origins of Southern Min negation. The next portion reviews the affirmative and negative paradigm of Southern Min, focusing on how negation is projected in syntax. The third subsection provides an
overview of the grammaticalization of Southern Min negation with an extension
to the reanalysis of negatives into interrogatives. What follows is a discussion on
one particular negative: bo. The last two subsections compare and contrast the
negation system within the three languages.

8.3.1 Origins of Southern Min negation.

I first review the origins of the negatives in Southern Min in Table 8.4. As seen, three of the negatives come from a origin ‘to die’ or ‘to lack’. This phenomenon patterns with one of the three ways, proposed by van der Auwera (2010), for negation to come into use cross-linguistically.

Table 8.4
The origins of Southern Min negatives

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>be</em> ‘can.not’</td>
<td>possibly, NEG + e ‘can’</td>
</tr>
<tr>
<td><em>m</em> ‘not.want’</td>
<td>no corresponding character</td>
</tr>
<tr>
<td><em>bian</em> ‘need’</td>
<td>免 ‘to exempt, to avoid’</td>
</tr>
<tr>
<td><em>bo</em> ‘not.have’</td>
<td>無; 沒 ‘not die, to lack’</td>
</tr>
<tr>
<td></td>
<td>bo = possessive ‘have’; perfective ‘not have’</td>
</tr>
<tr>
<td><em>bue</em> ‘not yet’</td>
<td>未 ‘to die’</td>
</tr>
</tbody>
</table>

I found no corresponding Chinese characters for the first two negatives, however. *Be* ‘can.not’ is likely a fused word from a negator and the affirmative counterpart, as suggested by scholars such as Teng (1992). In Classical Chinese, modality is used as prohibitive. I have not discovered a possible character to represent *m*. A possibility is that *m* is chosen as a borrowing from a non-Chinese
language community, for the native layer of the Min language, thus not shown in Chinese written records.

8.3.2 Southern Min negative paradigms.

I show the current affirmative versus negative paradigm in Taiwanese Southern Min in Table 8.5.

Table 8.5
Southern Min negation in morpho-syntax

<table>
<thead>
<tr>
<th></th>
<th>affirmative</th>
<th>negative</th>
<th>Negation in morpho-syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>abilitive</td>
<td>e</td>
<td>be</td>
<td>be ‘cannot’ = Neg + Mod: e</td>
</tr>
<tr>
<td>volitional</td>
<td>beh</td>
<td>m</td>
<td>m ‘not.want’: Neg.Mod bo-beh ‘not-want’ = Neg: bo + Mod: beh</td>
</tr>
<tr>
<td>necessitive</td>
<td>tioh</td>
<td>bian</td>
<td>bian ‘not.need’: Neg.Mod</td>
</tr>
<tr>
<td>possessive</td>
<td>u</td>
<td>bo</td>
<td>bo ‘not have’ = Neg.V (possessive) bo ‘not.have’ = Neg.As p bo = Neg.Hab</td>
</tr>
<tr>
<td>perfect</td>
<td>--</td>
<td>bue</td>
<td>bue ‘not.yet’: Neg.As p</td>
</tr>
</tbody>
</table>

As noted in the table, some negatives project a Mod/Asp head and move to the head of NegP above (such as m, bian, bo ,and bue), while the other negatives simply head a NegP above the ModP/AspP (such as be and bo-beh). In what follows, I explain one by one of the negatives shown in the table.

First, in the possibility modal system, be is a fused word from a negative and the affirmative e. There is a NegP above the ModP headed by e ‘can’. I show the tree representation below, along with its example.
Next, the volitional modals (*beh* and *m*) are not alike in morphology, and there are two negation subsystems. The volitional negative *m* is special as it is monosyllabic but serves two functions, negation and modality. Also special is its affirmative counterpart *beh*, which is postulated as a borrowing from a non-Sinitic language, as suggested by Chang (2009) among others.

In the case of *m*, which characterizes modality and negation, *m* heads a ModP and is further reanalyzed to another head of the NegP. I show its tree diagram below.

(12) i  m  khui-tshia  (lai).  TSM

3sg  not.want  drive-car  come

‘He doesn’t want to drive.’
However, the volitional paradigm characterizes two subsystems for negation.

The fused $m$ is one, and the analytical $bo$-$beh$ or $bo$-$ai$ is the other. Under the 
latter system, the modal verb $beh$ ‘want’ or $ai$ ‘want’ is situated in ModP, while 
$bo$ ‘not’ heads the NegP, independent from the ModP. The tree for $bo$-$beh$

resembles that for $be$ in (10).

(14) $bo$-$beh$ ‘not-want’ = Neg: $bo$ ‘not’ + Mod: $beh$ ‘want’

(15) $i$ $bo$-$beh$ $khui$-$tshia$ (lai). TSM

3sg not-want drive-car come

‘He doesn’t want to drive.’
I will return to this topic in section 8.3.4 when discussing the grammaticalization of the aspectual negative *bo*.

There is another *m* ‘not’. The literature often labels this use as *m*₂ in order to distinguish the volition *m*, labeled as *m*₁. As a pure negator, this *m* heads its own NegP. Below I provide two typical environments where the pure negative *m* appears.

(16)  
\[
\begin{array}{c}
\text{tse} & m & \text{si} & \text{gua-e. TSM} \\
\text{This} & \text{NEG} & \text{COP} & \text{mine} \\
\text{‘This is not mine.’}
\end{array}
\]

(17)  
\[
\begin{array}{c}
\text{\textit{m} ‘not’ = Neg} \\
\text{NegP} \\
\text{\hspace{1cm}Neg} \\
\text{\hspace{2cm}VP} \\
\text{\hspace{3cm}m} \\
\text{‘not’} \\
\text{\hspace{3cm}si} \\
\text{‘be’} \\
\text{\hspace{4cm}NP} \\
\text{\hspace{5cm}gua-e} \\
\text{‘mine’}
\end{array}
\]

The above *m* appears with a copula and below is an example of *m* with a modal verb.

(18)  
\[
\begin{array}{c}
i & \text{m} & \text{khing khui-tshia (lai). TSM} \\
\text{this} & \text{NEG} & \text{willing drive come} \\
\text{‘He is not willing to drive.’}
\end{array}
\]
We now move to the third system in Table 8.4. The necessity modal pair 

tioh ‘need’ versus bian ‘not.need’) is also special, in that these two are 

independent morphemes. While tioh originates as ‘to attach, to persist in’, bian 

means ‘to exempt, to avoid’. Therefore, bian is not presented as (20). The tree 

representation comes back to that for the fused negative m ‘not.want’. 

\[(20) \quad *bian \ ‘not.need’ = \text{Neg + Mod: tioh ‘need’} \]

\[(21) \quad \text{i bian khui-tshai (lai). TSM} \]

\[3sg \quad \text{not.need drive-car come} \]

‘He doesn’t have to drive.’

\[(22) \quad bian \ ‘not.need’ = \text{Mod > Neg} \]
Note that be-hiau ‘can.not’ and bo-beh ‘not.want’ both have lexical verbal usage. The tree diagram is similar to their modal counterparts, however. I then skip them.

The remainder two negatives in Table 8.4 are aspectual. The aspectual negative bue means ‘not.yet’, which is accompanied by an adverb iau ‘yet’. I show an example along with its syntactic diagram below.

(23) i iau bian lai. TSM
     3sg yet not.yet come

‘He has not come yet.’

(24) bue ‘not.yet’ = AsP > Neg

```
     NegP
     __________
      \     /
     /     /
   Neg  AspP
     __________
      \    /  \
     /   /   \\
   iau  bue  bue
     \    /  /
     \  /  /
      \ /  \
       \ /   
        \  /   
         \ /    
          \     
           \   
            \ 
             \  
              \ 
                
```

The other aspectual negative bo can be treated in two ways: bo ‘not.have’ as an independent Neg head from Asp, or bo as a negative fused from a negative and the affirmative u. Both proposals are claimed in the literature.

(25) bo ‘not.ASP’ = ASP > Neg
(26) bo ‘not.ASP’ = Neg + u (perfective)
The morpheme *bo* has a wide range of category. Here I discuss three negative occasions: *bo* as a negated verb, an aspectual negative and a habitual negative. For convenience, I see *bo* as one head.

(27) \[ V: \textit{bo} \text{ ‘not have’} \]

\[
\begin{array}{c}
\text{NegP} \\
\downarrow \\
\text{Neg} \\
\downarrow \\
\text{VP} \\
\downarrow \\
\text{*bo*} \\
\downarrow \\
\text{NP} \\
\downarrow \\
\text{*not have*} \\
\downarrow \\
\text{tsheh} \\
\text{‘book’}
\end{array}
\]

(28) \[ \text{3sg not.h ave book} \]

‘He doesn’t have a book.’

When *bo* is used as an aspectual negative, it heads an AspP and then as the head of NegP above the AspP.

(29) \[ \text{The aspectual bo ‘not.have’ = Asp > Neg} \]

\[
\begin{array}{c}
\text{NegP} \\
\downarrow \\
\text{Neg} \\
\downarrow \\
\text{AspP} \\
\downarrow \\
\text{*bo*} \\
\downarrow \\
\text{VP} \\
\downarrow \\
\text{*not.have*} \\
\downarrow \\
\text{thak-tsheh} \\
\text{‘read’}
\end{array}
\]
There is also another use of bo: the habitual bo. I use the same example from above, but the projection changes to HabP.

\[
(31) \quad i \quad bo \quad thak-tsheh. \quad TSM
3sg \quad not.have \quad read-book
\]

‘He didn’t study.’

In (32), where bo is read as habitual, the sentence has a meaning of ‘He doesn’t go to school’ or a metaphor of ‘He is not educated/illiterate.’

I have discussed the syntax of Southern Min negation, including three modal verbs (be ‘can.not; will.not’, m ‘not.want’, and bian ‘need.not’) and two aspect markers (bue ‘not.yet’ and bo ‘not.have’). The following section extends to a discussion of a bigger picture about negation.
8.3.3 The grammaticalization of Southern Min negation.

Let us examine how individual negatives in Southern Min differ and are alike in terms of categorial shifts. The divergence is that only be-hiau ‘can.not’ and bo ‘not have’ maintain their lexical usage to this date. The other negatives have lost their verbhood. M ‘not.want’ and bian ‘need.not’ require certain environments for them to be used as verbs. I see them as modals. M and bo are often used as discourse markers (cf. Chang 1997).

I show the categories of Southern Min negatives in Table 8.6, and address similarities immediately following.

Table 8.6
The categorial status of Southern Min negatives

<table>
<thead>
<tr>
<th></th>
<th>verb</th>
<th>TMA</th>
<th>NEG</th>
<th>Q</th>
<th>DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>be ‘can.not’</td>
<td>√</td>
<td>Mod</td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>‘will.not’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>be-hiau</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>m₁ ‘not.want’</td>
<td>--</td>
<td>Mod</td>
<td>√</td>
<td>√</td>
<td>?</td>
</tr>
<tr>
<td>m₂ ‘not’</td>
<td>--</td>
<td>--</td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>bian ‘need not’</td>
<td>--</td>
<td>Mod</td>
<td>√</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>bo ‘not.have’</td>
<td>√</td>
<td>Asp</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>buei ‘not.yet’</td>
<td>--</td>
<td>Asp</td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
</tbody>
</table>

The similarity lies in TMA marking, negation, and question uses. Five of them, bo, be, m, buei and bian, can serve as negative markers as well as modality or aspect. Also, four of them are also reanalyzed as question markers. In principle,
these question markers match with modality/aspect in the declarative part of a sentence. For instance, *e ‘will’ and *be ‘will.not’ are affirmative and negative counterparts in (34). *Beh ‘want’ and *m ‘not.want’ are counterparts in (35). *Bo ‘not.have’ is the negation of perfective aspect *u in (36).

(34) i e khi be?
3sg will go Q
‘Will he go?’
(35) i beh khi m?
3sg want go Q
‘Does he want to go?’
(36) i u khi bo?
3sg ASP go Q
‘Did he go?’

The question markers *be, *m and *bo in (34)-(36) are reanalyzed from their negatives. As the reanalyzed interrogatives are well matched with their affirmative counterparts in these examples, I suggest that there is checking feature between the modality/aspect and the interrogative head: *be, *m and *bo in these examples.

Next, we look at the negatives in terms of grammaticalization. As seen, the grammaticalization of each of these negatives is not at the same pace. Although most of them have undergone the pathway: V > Neg > Q, (except for *bian ‘not.need’, which I consider is not a Q yet,) one interrogative may be used more productively than another.

According to my corpus analysis together with fieldwork results, *m has become less common as a final particle Q, presumably due to the weakness of its
phonology. However, \( m \) is often observed as a discourse marker, and one example is (37), where \( m \) is used as emphatic for the necessity modal \( tioh \).

(37) li \( m \) tioh kah kinn. TSM
2sg M need more quick
‘Hurry up.’/You need to act more quickly.’

Two negatives, \( be \) ‘can.not’ or ‘will.not’ and \( bue \) ‘not.yet’, are phonologically mixed among many speakers of Taiwanese Southern Min, so it is difficult to decide on their current use as interrogatives. The pronunciation of \( bue \) or \( be \) is dialect-based. They have become allophones in many cases, with \( be \) winning over \( bue \).

(38) i khi iau \( bue/be? \)
3sg go or not.yet
‘Has he left yet?’

\( bo \) is the most flexible among all of these negatives, as it is often used as interrogative with mismatched modality/aspect, a topic to which I return in section 8.3.4.

Next, the reanalysis from Neg to C is observed not only in questions, but in discourse marking. However, out of these negatives, only \( m \) and \( bo \) have undergone this grammaticalization path. DM stands for discourse markers.

(39) \( bo; m: \) \( V \) > Neg > Q > DM

By the large, the diachronic development of the negatives follows a pattern from \( V \) to \( T \) (aspect; modality) and to \( C \) (interrogative; discourse), assuming split TP and CP under the cartographic approach. This unidirectionality is evident
cross-linguistically. However, each negative morpheme differs synchronically in its categorial status due to a different grammaticalization pace.

8.3.4 Grammaticalization of bo.

I have chosen bo as a more in-depth discussion in that bo covers a full range of category: verb, aspect, negative, interrogative, and discourse marker. What follows focuses on two particularly interesting phenomena in the negative morpheme bo.

I first address the issue where bo replaces other interrogatives in questions.

Below is an example where bo replaces be for Q.

(40)  i  e  khui-tshia  khi  be/bo?  TSM  
3sg  PFV  drive-car  go  Q

‘Will he drive (to get there)?’

Despite the fact that be is still used by some speakers (matching with its modality e in the sentence), bo may be chosen over be by other speakers. Although this phenomenon has been addressed in previous studies, such as Crosland (1998) and Chang (1997), no theoretical accounts are provided.

In comparison, (41) demonstrates how bo is used: bo matches with the affirmative u in aspect in the sentence. Again, the match of aspect between u and bo still exists in contemporary Southern Min.

(41)  i  u  khui-tshia  khi  bo?  TSM  
3sg  PFV  drive-car  go  Q

‘Did he drive (to get there)?’
These indicate that the paradigm in Southern Min interrogatives is undergoing changes. The long-established affirmative-negative match in aspect or modality becomes less systematic.

The other major change found in Southern Min negative paradigm is that the original volitional m ‘not want’ is competing with two other forms, namely bo-beh and bo-ai ‘not-want’. We observe the use of bo to negate a volition modal such as beh ‘want’.

This change is intriguing in that bo is not a typical negator for modal verbs in Southern Min. There is a set pattern for negation of modality in Chinese: The negative for Southern Min volitional modal verbs is m, as in m-kann 不敢 ‘not-dare’, and m-khing 不肯 ‘not.willing’ and bu-guan ‘not.willing’. Hakka uses m for its modality, and Mandarin has bu. M or bu in these cases is a pure negator.

The significance of this phenomenon is a shift of the negative bo from aspe ctual to non-aspectual. Now, bo unexpectedly becomes the negator for the volitional modal system, which is a later development.

(42) I 素bo-beh khi. TSM
    3sg ‘not.want’/‘not-want’ go
    ‘He doesn’t want to go.’

I connect this non-aspectual use of bo (42) to the fact that bo is replacing other interrogatives, as shown in (40). The semantics of bo however differ in these two syntactic environments. In the case of volition bo-beh, bo is non-aspectual in (42), but negative features still remain in bo. As for the interrogative bo in (40), feature loss occurs in both negation and aspect.
This also points to a possibility: bo is becoming a candidate for a universal question marker. Mandarin neutral question marker ma 嗎 is an instance of such change. I predict that when bo loses its aspectual features, it will become base-generated as an interrogative in the C position.

The Neg to Q claim is by no means new in the literature. For instance, Wei (2007) has shown the diachrony of negation changing to interrogatives in the history of Chinese. Synchronically, Hsin (1999) regards four Southern Min question words bo, be, m, and beue as mood markers (Hsin1999: 83-85), and argues for Southern Min sentence final particles as situated in the head of CP (Hsin 1999: 88). My analysis differs from Hsin (1999). For one, I use feature checking, and, for another, her notion is only partially true, which I explain immediately.

On a comparison of Cantonese, Mandarin and Southern Min, Cheng, Huang and Tang (1996) propose that the formerly negative words in the Southern Min interrogative construction are base-generated in the head of CP. They suggest a free choice among the four available negatives (Cheng et al. 1996: 45) as in (43), where none of the negative particles has negative features.

(43) ิ e ใ lai m/bo/ue/be? TSM
s/he will come not/not-have/not-yet/not-FUT
‘Will s/he come?’

Yet, based on my corpus analysis and field work, their claim is too strong. For instance, several of my consultants do not treat the four particles equally; the first two bo and be are typically their choices. It is more accurate that layering of
the aspectual and non-aspectual *bo* exists in contemporary Taiwanese Southern Min.

Briefly, these negative words (more accurately, question markers) are restricted in one way or another. As noted, *bo* is the most flexible interrogative. Based on my corpus analysis, *bo* is not replaced by another interrogative. However, double interrogatives occur in some speakers of Southern Min. An utterance such as (44) can be encountered.

\[(44)\] i kann/kam u khui-tshia khi bo? TSM

\[3sg KAM PFV drive-car go Q\]

‘Did he drive (to get there)?’

*Kann/kam 敢* is also a common question marker for eliciting neutral yes/no answers. The pronunciation varies. Some distinguish *kan* for neutral questions from *kam* for assertive questions, while others think of *kam* for both.

The question marker *kam 敢* shares the same character with the volitional modal *kann 敢* ‘dare’. The additional *kam* in a question with *bo* as the final particle in (44) further indicates that *bo* is losing its interrogative features. This analysis is not possible, as *bo* is also used as a discourse marker.

The categorial status of *bo* is summarized in Table 8.7.
Table 8.7
Semantic layering of *bo*

<table>
<thead>
<tr>
<th>category</th>
<th>examples</th>
<th>examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>negated verb</td>
<td>(45) <em>i bo</em> tsinn.</td>
<td><em>he not have</em> money</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘He doesn’t have money.’</td>
</tr>
<tr>
<td>aspectual negative</td>
<td>(46) <em>i bo</em> khi.</td>
<td><em>he not PFV</em> go</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘He didn’t go.’</td>
</tr>
<tr>
<td>aspectual interrogative</td>
<td>(47) <em>i u khi bo?</em></td>
<td><em>he PFV</em> go Q</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Did he go?’</td>
</tr>
<tr>
<td>Pure negator</td>
<td>(48) <em>i bo</em> beh lin-go.</td>
<td><em>he not want</em> apple</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘He doesn’t want apples.’</td>
</tr>
<tr>
<td></td>
<td>(49) <em>i bo</em> beh khi.</td>
<td><em>he not want</em> go</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘He doesn’t want to go.’</td>
</tr>
<tr>
<td>Non-aspectual interrogative</td>
<td>(50) <em>i beh lin-go bo?</em></td>
<td><em>he want</em> apple Q</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Does he want apples?’</td>
</tr>
<tr>
<td></td>
<td>(51) <em>i beh khi bo?</em></td>
<td><em>he want</em> go Q</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Does he want to go?’</td>
</tr>
<tr>
<td></td>
<td>(52) <em>i e khi bo?</em></td>
<td><em>he will</em> go Q</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Will he go?’</td>
</tr>
</tbody>
</table>
8.3.5 A comparison between Southern Min and Mandarin.

As noted in previous chapters, Mandarin has two negatives only: *bu* 不 and *mei* 沒. A straightforward way to distinguish one from the other is modality versus aspect. That is, *bu* is for modal verbs and *mei* is aspectual. For example, to negate *hui* ‘can, will’, *bu* is used, so *bu hui* means ‘can.not’ or ‘will.not’. In comparison, *mei* is used as possession, existential, and perfective.

Table 8.8 clearly shows distributions between *bu* and *mei* in Mandarin as well as the negative versus modality/aspect matching system in the negatives.

Table 8.8
The negative system between Southern Min and Mandarin

<table>
<thead>
<tr>
<th></th>
<th>TSM</th>
<th>MSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>can.not</td>
<td><em>be-hiau</em> (abilitive)</td>
<td><em>bu-neng; bu-hui</em> (abilitive)</td>
</tr>
<tr>
<td></td>
<td><em>be-sai</em> (deontic)</td>
<td><em>bu-keyi</em> (deontic)</td>
</tr>
<tr>
<td>will.not</td>
<td><em>be</em></td>
<td><em>bu-hui</em></td>
</tr>
<tr>
<td>not.want</td>
<td><em>m</em></td>
<td><em>bu-yao</em></td>
</tr>
<tr>
<td>need.not</td>
<td><em>bian</em></td>
<td><em>bu-yong</em></td>
</tr>
<tr>
<td>possessive</td>
<td><em>bo</em></td>
<td><em>mei(you)</em></td>
</tr>
<tr>
<td>have.not</td>
<td><em>bue</em></td>
<td><em>mei(you)</em></td>
</tr>
</tbody>
</table>

I provide two sets of examples before moving to a review of the under-researched topics.

In terms of categories, *bu-hui* ‘can.not’ can be used as a lexical verb, just like Southern Min *be-hiau*. *Mei(you) ‘not have’ can be lexical too, as its Southern Min counterpart *bo*. Modern English does not have lexical use of *can*, however.
Mandarin *bu-yao* ‘not-want’ can be used as lexical, as opposed to its Southern Min counterpart *m*, which is non-lexical.

What follows next is two neglected issues within the Mandarin negation system. One is that *bu* is not necessarily a pure negative for modals or a habitual negator for activity or stative verbs. *Bu* can be volitional. For instance, (56) can be read in two ways: one is habitual and the other is volitional.

(56) ta **bu** changge. MSC
    3sg  NEG sing
    a. ‘He doesn’t sing.’
    b. ‘He doesn’t want to sing.’
One way to disambiguate (56) is adding *de* to give rise to the meaning of (56a) and adding *yao* to *bu* to yield a reading as (56b). The volitional use of *bu* may be regional, and more research needs to be conducted for a firm conclusion.

(57)  
\[ \text{ta bu changge de. MSC} \]
\[ 3\text{sg} \quad \text{NEG sing ASST} \]
‘He doesn’t sing.’

(58)  
\[ \text{ta bu-yao changge. MSC} \]
\[ 3\text{sg} \quad \text{not-want sing} \]
‘He doesn’t want to sing.’

The other under-researched topic is the dual aspectual function of *mei*.

(59)  
\[ \text{ta mei changge. MSC} \]
\[ 3\text{sg} \quad \text{NEG.PFV sing} \]
‘He didn’t sing.’

(60)  
\[ \text{ta hai mei changge. MSC} \]
\[ 3\text{sg} \quad \text{yet not.yet sing} \]
‘He has not sung.’

I now move to a discussion of interrogatives in Mandarin. Mandarin negatives, *bu* and *mei(you)*, are also reanalyzed as interrogatives.

(61)  
\[ \text{Hufei hui qu bu? Cheng et al. (1996: 47)} \]
\[ \text{Hufei will go Q} \]
‘Will Hufei go?’
The choice of *bu* over *mei*(you) in (61) is based on a reanalysis that patterns negation. That is, the negation of modal *hui* ‘will’ is *bu*, and thus *bu* is selected as the interrogative in (61). Along the same lines, the affirmative aspect –*le* has a negative counterpart of *mei*(you); therefore, (62) makes use of the reanalyzed interrogative *mei*(you).

The interrogative in (61) or (62) can be replaced by a neutral question marker *ma* 嗎 or *mo* 么. These two neutral question markers are diachronically connected to *mei*(you).

One topic on interrogatives that is worth discussing is that unlike Southern Min, Mandarin does not make use of modal verbs as its question markers. For instance, the modal verb *bu hui* ‘not.will’ does not function as a question marker. To make the sentence grammatical, a verb *lai* ‘come’ is needed.

(63) ta mingtian hui lai *bu-hui* *(lai)? MSC  
3sg tomorrow will come not-will come  
‘Will he come tomorrow?’

The use of modal- or aspect-final interrogative particles is unique in the Sinitic varieties other than Mandarin. The Southern Min sentence below is equivalent to (64), where the interrogative *be* is reanalyzed from its disjunctive interrogative *be* ‘will.not’.
The disjunctive negative is then reanalyzed as an interrogative (cf Wei 2007). This follows the Head Preference Principle (van Gelderen 2004).

On the other hand, Southern Min is restrictive in the use of the A-not-A question pattern; see (66) and (67).

There are other differences between these two language; I only address the areas relevant to negation here.

8.3.6 A comparison between Southern Min, Mandarin and Hakka.

Two basic negatives in Hakka are m and mo: the former for modal verbs and the latter for perfective. Thus, the counterparts are Mandarin bu and mei. A major different between Mandarin and Hakka is the use of mang ‘not.yet’ in Hakka, which is lacking in Mandarin. Mandarin merges perfective and perfect in one morpheme: mei ‘not.have’ and ‘not.yet’.
As Hakka uses $m$ for its modal verbs, its modal negation is formed by means of doublings, such as $m$-voi ‘not-can; not-will’, $m$-oi ‘not-want’, and $m$-si ‘not-permit’. The aspectual negatives are fused words in that $bo$ means a negated verb ‘not have’ or perfective, and $bue$ alone is used for ‘not.yet’.

Table 8.9 compares negation between Southern Min and Hakka.

Table 8.9
The negative system between TSM and Hakka

<table>
<thead>
<tr>
<th></th>
<th>TSM</th>
<th>Hakka</th>
</tr>
</thead>
<tbody>
<tr>
<td>can.not</td>
<td>be-hiau (abilitive)</td>
<td>$m$-voi (abilitive)</td>
</tr>
<tr>
<td></td>
<td>be-sai (deontic)</td>
<td>$m$-hiau-tet (abilitive)</td>
</tr>
<tr>
<td>will.not</td>
<td>$be$</td>
<td>$m$-voi</td>
</tr>
<tr>
<td>not.want</td>
<td>$m$</td>
<td>$m$-oi</td>
</tr>
<tr>
<td>need.not</td>
<td>$bian$</td>
<td>$m$-si</td>
</tr>
<tr>
<td>possessive</td>
<td>$bo$</td>
<td>$mo$</td>
</tr>
<tr>
<td>have.not</td>
<td>$bue$</td>
<td>$mang$</td>
</tr>
</tbody>
</table>

I highlight the negation of Hakka abilitive modals as it is more complex. The use of $m$-voi ‘not-can’ is similar to MSC $bu$-$hui$, with $bu$ as Neg and $hui$ ‘can’ as Mod.

(68) $bu$-$hui$ ‘can.not; will.not’ $<$ Neg: $bu$ + $hui$ ‘will; can’ MSC

However, morphology in another Hakka abilitive modal $m$-hiau-tet differs.

$M$-hiau-tet is from a different verb series. Note that tet can be dropped.

(69) $m$-hiau-tet $<$ Neg: $m$ + hiau + tet Hakka

‘not’ + ‘know’ + ‘obtain’

As the affirmative counterpart of (69) is hiau-tet ‘can, able’, I analyzed a Neg head $m$ on top of an ModP projected by hiau-tet.
The morphology and phonology in (69) differs from the Southern Min counterpart be-hiau; see (72).

![Diagram of sentence structure](image)

(71) ki m-hiau rhin-vun. Hakka
3sg can-know English
‘He doesn’t understand English.’

Basically, the two languages make use of different syntactic strategies and, resulting in a different reanalysis in the morphology of their negation. A comparison is (73); I use modal verbs here. I analyze both situations as having a NegP above the ModP (hiau-tet in Hakka and e-hiau in TSM).

(72) be-hiau < Neg: m e + hiau TSM
‘can.not’ ‘not’ ‘know’ ‘comprehend’

(73) ki m-hiau-tet si-tsha. Hakka
i be-hiau sai-tsiah. TSM
3sg cannot drive-car
‘He doesn’t know how to drive.’
Hakka permissive modal *tso-m-tet* has a negative infix. I show the morphology and the meaning for each morpheme below.

(74) \[ tso-m-tet \prec tso + m + tet \] Hakka

‘do’ ‘not’ ‘obtain’

(75) \[ \text{ngi } \text{tso-m-tet} \text{ hi. Hakka} \]
\[ \text{li } \text{be-sai} \text{ khi. TSM} \]
\[ \text{2sg } \text{can’t go} \]

‘You can’t go. (permissive)’

I suggest for an analysis of Mod for *tso-m-tet* as one unit, which moves to Neg, projecting a NegP above the ModP.

I have shown from the above paraphrases how the coexisting patterns of the inter-linguistic data are related to one another within the history of Chinese. These negative morphemes may have originated from different strata of history. Within Southern Min, some negatives can be grouped into the analytical system such as *bo* and *be* with a Neg plus Mod/Asp, while others are independent morphemes such as the necessity pair: *tioh* ‘need’ versus. *bian* ‘need not’. The two volitional modals, *beh* ‘want’ and *m* ‘not.want’, do not seem to be from the Chinese language stratification, but are possibly semantics borrowings from neighboring linguistic communities.

In sum, in despite of the addressed parametric differences, the grammaticalization of the negatives demonstrates resemblance within these three Sinitic language branches.
8.4 Conclusion

This chapter reviews major findings found in this dissertation. Also addressed is the topic on reanalysis of negatives morphemes into interrogatives. Results have shown that consistency occurs in the grammaticalization of negation within Southern Min and intra-linguistically among the three investigated Sinitic languages. Parametric differences are found at the morphological level.
Chapter 9

CONCLUSION

This last chapter addresses the contributions of this dissertation and suggests directions for future research.

9.1 Contributions

This dissertation examines the interface between morphology, syntax and semantics for the three Sinitic languages of Hakka, Mandarin and Southern Min. Specifically, I treat the subject of the grammaticalization of negation. I also incorporate a cross-linguistic comparison among the three aforementioned languages. This dissertation contributes to the field of linguistics in the following aspects:

First, this dissertation provides an overview of negation among three language branches. This dissertation adds new insights into the complexity of Chinese negation. Chinese negation is among the best researched topics in the literature; however, prior research either deals exclusively with negation in one language, or with one or two of the negative morphemes in a single language. This dissertation not only examines the entire negation system of Southern Min, but extends its scope to the other two Sinitic languages, Hakka and Mandarin. While Southern Min has five basic negatives, Mandarin and Hakka only have two and three, respectively. Thus, a major attempt is made to compare and contrast the varying negatives among these languages.
Second, in its discussion of negation, this dissertation also addresses the affirmative systems. The reason is that Southern Min negative morphemes are often fused with modality or aspect. Only by separating the affirmative from the negation system can the entire negation be discovered. Under this inquiry, two under-addressed topics are therefore revealed. One is that the modality paradigm shows an overlap between the possibility, volition, and necessity systems. The other topic is related to the doublings found in affirmative modals. Special attention is paid to the doublings of the affirmative modality, as affirmative aspect markers do not have doublings.

Additionally, this dissertation examines negation from both synchronic and diachronic perspectives. I have looked at individual negative morphemes of Southern Min on their synchronic categorial status and syntactic behaviors. I have also examined the origin of Southern Min negatives, consulting Chinese dictionaries for the range of usage in each morpheme.

The incorporation of corpus data also makes this dissertation unique. Contemporary corpus data are used for Southern Min together with my fieldwork. A corpus analysis in diachronic data is also included, particularly when a topic is not covered in the literature. The use of corpus data has helped to account for the reanalysis of the negatives and their affirmative counterparts.

Also contributing to the field of linguistics is the comparative studies portion in this dissertation. I provide English examples as comparison for each modal or aspect markers. The inclusion of three Sinitic languages is a huge project but certainly new to this field. Results have shown that consistency occurs
in the grammaticalization of negation within Southern Min and intra-linguistically among the three investigated Sinitic languages. Parametric differences are found at the morphological level.

This dissertation has demonstrated a connection between generative and grammaticalization frameworks as well. The use of generative frameworks is by no means innovating; however, the incorporation of cartography into the minimalist Feature Economy Principle is a new pursuit.

Finally, the introduction of three Sinitic languages to the English-speaking academia makes a significant contribution to the field of linguistics.

9.2 Directions for Future Research

During my writing, I have addressed many areas to be explored. Due to space and time constraints, I can only leave them for future research. I outline major ones below.

First, I have addressed briefly in chapter eight the reanalysis of negatives into interrogatives in Southern Min. As negative morphemes in Southern Min are each fused with modality or aspect, the modality/aspect is often carried to their reanalyzed interrogatives. However, corpus analysis reveals that there are mismatched cases between modality/aspect and the interrogatives. Some interrogatives are losing modality/aspect on the way to become interrogatives, which results in one negative replacing another regardless of different modality or aspect. For instance, the initially aspectual bo ‘not.have’ replaces the modal negative be ‘will.not’ as an interrogative, which means bo is losing its aspect. A theory is needed to account for such a change.
In terms of empirical data, the synchronic Hakka and Mandarin data in this dissertation are checked with my consultants mainly. Future research should extend to a corpus analysis and/or a larger scale of fieldwork on these two languages. An investigation of more historical texts in order to deepen the investigation of diachrony of negation is also suggested.

Word order differences between Mandarin and the other two languages also serve as a good topic for future research. I have touched on this issue in several places in this dissertation. A synthesis is worthwhile as word order changes involve these grammatical functions: modality, aspect and negation.

In my studies of Southern Min negation, I also found double negation and double modals interesting. Sentence final mood markers other than interrogatives are important as well, as they may or may not co-occur with question particles. These are less studied topics suggested for future pursuit.
REFERENCES


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