

The Modal System in Hainan Min*

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This paper explores the idiosyncratic features of the modal system in Hainan Min (based on data collected through fieldwork). The lexical items are firstly presented in four categories of modal types, including epistemic, deontic, circumstantial and bouletic modals. The modal hierarchy is built upon data with multiple modals: epistemic > deontic > dynamic. The last part of the paper introduces the negative modal forms in Hainan Min. The scopal interaction between negation and modals is also discussed. The negation always scopes over modals.

Key words: Hainan Min, modal hierarchy, modality, scopal interaction

1. Introduction

The present study focuses on the modal structures in Hainan Min, which has rarely been explored in previous studies. As a branch of the Min dialects, Hainan Min is a Chinese dialect spoken on Hainan Island. While it is mostly assumed to be a dialect of Southern Min, Hainan Min and other dialects of Southern Min are barely mutually intelligible. There is not only a phonetic separation,¹ but also lexical and syntactical divergences between Hainan Min and other Chinese dialects. For example, the Mandarin disposal marker *ba* corresponds to *bue* in Hainan Min. Unlike Mandarin *ba*, *bue* cannot take an animate complement and it can colloquially serve as a verb indicating ‘hold’. Unlike *ka* in Southern Min, *bue* does not perform multiple functions; for example it cannot serve as a benefactive marker. The syntactic idiosyncratic features of Hainan Min have not been widely studied in previous literature. This paper will try to fill this gap by focusing especially on modal structures.

Modality is a category of linguistic meaning involving the expression of possibility and necessity. The syntactic strategies to convey modality can be varied, including auxiliaries, verbs, nouns, adverbs, adjectives and conditionals. These different kinds of modal expressions are exemplified by the English data in (1) (see von Fintel 2006: examples (1)–(6)):

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¹ Hainan Min contains the following consonants: /ph, b, ʙ, t, d, dʰ, k, g, s, h, fi, ts, dz, m, n, ŋ, l/. Vowels include: /a, i, u, ε, o/. The vowel /ε/ is typed as ‘e’. In addition; this paper takes the Wenchang dialect as a representative of Hainan Min. The Wenchang dialect is used by the broadcast and public press on Hainan Island. Yamaji & Matsutani (1941), Hashimoto (1961) and Woon (2004) all chose the Wenchang dialect as the core dialect in their respective investigations of Hainan Min.

- (1) a. Auxiliaries
John must/should/might/could be a college student.
- b. Verbs
John has to/ought to/needs to be a college student.
- c. Nouns
There is no possibility that John is a college student.
- d. Adjectives
It is not possible that John is a college student.
- e. Adverbs
John is possibly a college student.
- f. Conditionals
If John is in the college library, he is a college student.

Considering the complexity of the syntactic types of modality, this paper mainly focuses on the Chinese data corresponding to (1a) and (1b). Chinese does not behave like Indo-European languages with productive inflections. Modal auxiliaries and modal verbs in Chinese cannot be clearly separated. The present study will generally treat modal auxiliaries and modal verbs together as ‘modal verbs’ in Chinese; that is, the modal expressions corresponding to the English modals, such as *can*, *could*, *will*, *would*, *shall*, *should*, *may*, *might*, *must*, *dare (to)*, *need (to)* and *ought to*, will be considered as modal verbs in Chinese.

To distinguish different modal readings, except for ‘epistemic’ and ‘deontic’ modals, there is a great deal of terminological variety. Among previous studies, two main approaches are mostly accepted: Kratzer’s (1981, 1991) and Palmer’s (2001) views. Kratzer (1981, 1991) assumes that modal notions are relative to three axes: (i) modal relation, (ii) modal bases and (iii) modal ordering sources. Modal relation is connected with possibility and necessity. The modal bases include epistemic and circumstantial modal bases. The conversational background of the modal bases induces an ordering source. Depending on different ordering sources, the epistemic modal base may be related to the modal expressions, such as *must*, *probably*, *there is a good possibility that*, *might*, *there is a slight possibility that* and *is more likely than*. Circumstantial modal base may create possibilities of different worlds, such as *what the law provides*, *what is good for you*, *what is moral*, *what we aim at*, *what we hope* and *what we want*. The main concern of Kratzer (1981, 1991) is not to provide a classification of modal expressions, but rather to explain the logical nature of modal interpretations. On the other hand, according to Palmer’s (2001) modal systems, modality is divided into two major categories: propositional and event modality. The propositional modality includes epistemic and evidential modals, which are concerned with the speaker’s attitude to the truth value of the proposition; event modality, on the other hand, includes deontic and dynamic modality, which involves the permission, obligation, ability or intention to do a certain action or bring about some state of affairs. Palmer’s divisions (propositional/event) somehow correspond to Kratzer’s modal bases (epistemic/circumstantial). The basic categorization of modal meanings is thus believed to be epistemic and non-epistemic.

In this paper, I basically adopt Kratzer’s (1981, 1991) and Palmer’s (2001) views to explore the epistemic and non-epistemic modals in Hainan Min. However, non-epistemic modals are further divided into three categories: deontic, circumstantial and bouletic. The modal system in Hainan Min is thus divided into four categories. Epistemic modality can express speculative, deductive and

assumptive; deontic modality can express permissive, obligative and commissive; circumstantial modality can express abilitive; bouletic modality can express volitive. This division is shown in (2).

- (2) a. Epistemic: for example speculative, deductive and assumptive
 b. Deontic: for example permissive, obligative and commissive
 c. Circumstantial: for example abilitive
 d. Bouletic: for example volitive

Palmer (2001) classifies the latter two modal meanings (ability and volition) within the dynamic category. I split the dynamic modality into two groups to clearly show the different modal meanings in Hainan Min. This classification of modality also matches Cable's (2013) division, which follows those of von Fintel & Heim (2011:Chapter 3) and Kratzer (1981). Cable (2013) employs logical notions to define the four modal meanings, as shown in (3).

- (3) a. Epistemic: $\{w' \in W: \text{everything we know about } w \text{ is also true in } w'\}$
 b. Deontic: $\{w' \in W: \text{the law in } w \text{ is being followed in } w'\}$
 c. Circumstantial: $\{w' \in W: \text{everything true in } w \text{ (up to now) is true in } w'\}$
 d. Bouletic: $\{w' \in W: \text{our goals/desires in } w \text{ are met in } w'\}$

The definition of the circumstantial modal in (3) seems not to clearly relate to ability. However, Cable (2013) discusses in detail the circumstantial modal with examples associated with ability. The circumstantial modal is exemplified by the sentence *John can jump five inches*. Ability is included into the circumstantial modality because a sentence like *John can jump five inches* can be paraphrased as *Given the circumstances, a possibility is that John jumps five inches*.²

To explore the lexical expressions of the modal system, data from the field have been collected. Since the modal system in Hainan Min has hardly been presented to linguistic academics, this paper will provide and describe as much data as possible. In addition, modality is assumed to be contingent and dependent on conversational backgrounds. I thus designed a context-sensitive sentence list to collect linguistic data when I conducted fieldwork. The following section introduces the lexical items used in Hainan Min.

2. The modal items in Hainan Min

This section introduces the modal system of Hainan Min. Four types of modality are presented: epistemic modality, deontic modality, circumstantial modality and bouletic modality.

2.1 Epistemic modality

The epistemic modality relates to a set of possible worlds where everything we know about the worlds is also true in this set of worlds. It expresses 'speculation', 'deduction' and 'assumption'.

² Von Fintel & Heim (2011) suggest that the circumstantial modal conforms to the laws of nature. I use the term 'circumstantial' to indicate 'ability'.

In Hainan Min, the epistemic modals include *beh*⁵ 卜, *oi*⁴² 會, *ing*⁴⁴-*kai*⁴⁴ 應該 and *ho*²¹-*neng*²² 可能.³

I. *beh*⁵ 卜

*Beh*⁵ 卜, as in (4)–(6), is used more frequently than other modals.

- (4) Ho²²-tsi²¹ beh⁵ tiak³ la¹¹.
 peach will ripe PERF⁴
 ‘The peaches will ripen soon.’
- (5) Tien⁴⁴-bun²² 6o¹¹ fi¹¹ kan⁴⁴ lau²² beh⁵ 6ang⁴⁴ la¹¹.
 news report that CL building will collapse PERF
 ‘It is reported on the news that the building will collapse.’
- (6) Mue⁴⁴-mue⁴⁴ beh⁵ o²¹ tia²¹ tu⁴⁴ la¹¹.
 younger sister will learn write character PERF
 ‘The younger sister will learn to write Chinese characters.’

II. *oi*⁴² 會

*Oi*⁴² 會 is also frequently used, as in (7)–(8).

- (7) Lau⁴²-se⁴⁴ oi⁴² me⁴⁴ gua²¹.
 teacher will scold 1SG
 ‘The teacher will scold me.’
- (8) A⁴⁴-meng²² oi⁴² du⁴² o²¹-iau⁴².
 A-Meng will at school
 ‘A-Meng will be at school.’

*Beh*⁵ 卜 and *oi*⁴² 會 are glossed by the English modal *will*, which is actually just a rough approximation. While the two modals can be used one for the other as in (9)–(10) to indicate the

³ I offer my own interpretation of the Chinese characters of modal verbs in Hainan Min, not only based on their semantic features, but also according to phonological consideration. The modal *beh*⁵ corresponds to 欲 in previous studies. I do not follow this convention because *beh*⁵ in Hainan Min is frequently used to refer to a future event. I thus employ the character 卜, which is also used in Taiwanese. *Sam*¹¹ is the only modal verb for which I cannot find any corresponding Chinese character that would match both its phonological and semantic features. I thus leave it with a blank Chinese character. A list of the Chinese characters used in other studies is given in the appendix for reference.

⁴ The following abbreviations are used in glossing examples: 1, first person; 2, second person; 3, third person; CL, classifier; MOD, modifier; NEG, negation; PL, plural (e.g. 3PL = 3rd person plural); PART, particle; PERF, perfective aspect; Q, question marker; SG, singular.

possibility of rain, the English translations cannot exactly reflect the divergence between the two modals.

- (9) He⁴²-nua¹¹ oi⁴² loh³ fiou⁴².
tomorrow will fall rain
'It will rain tomorrow.'
- (10) He⁴²-nua¹¹ beh⁵ loh³ fiou⁴².
tomorrow will fall rain
'It will rain tomorrow.'

Kratzer (1991) points out that modal words are gradable (e.g. *barely possible*, *easily possible*, *more likely*).

- (11) a. It must be rainy tomorrow.
b. It is probably rainy tomorrow.
c. There is a good possibility that it is rainy tomorrow.
d. It might be rainy tomorrow.

Following Kratzer's idea that possibility can be graded, I further asked my language consultants about the difference between *beh*⁵ 卜 and *oi*⁴² 會. When a relative context is provided, the informants use the two modals differently. Following Kratzer (1991), the possibility of rain can be graded as in (11). According to the language consultants, *oi*⁴² 會 expresses more certainty on the possibility than *beh*⁵ 卜 does. It is therefore assumed that *oi*⁴² 會 may be used to express (11a) to (11c) and *beh*⁵ 卜 may express (11b) to (11d). This graded possibility explains the broad overlapping distribution of the two modals, but they still reveal some differences. The different degree of certainty can also be examined when the modals co-occur with some specific adverbs. The examples below show that *beh*⁵ 卜 does not agree with adverbs denoting strong certainty (e.g. *dziak*³-*dīa*⁴⁴ 'definitely') as well as *oi*⁴² 會 does.

- (12) a. ??He⁴²-nua¹¹ dziak³-dīa⁴⁴ beh⁵ loh³ fiou⁴².
tomorrow definitely will fall rain
'It will definitely rain tomorrow.'
- b. He⁴²-nua¹¹ dziak³-dīa⁴⁴ oi⁴² loh³ fiou⁴².
tomorrow definitely will fall rain
'It will definitely rain tomorrow.'

Another difference between *beh*⁵ 卜 and *oi*⁴² 會 is that *beh*⁵ 卜 can refer to future events, while *oi*⁴² 會 simply expresses the possibility. For example, the imminent future is only acceptable with *beh*⁵ 卜, but not with *oi*⁴² 會, as shown in (13) and (14).

- (13) Hi⁴⁴ beh⁵ am¹¹ la¹¹.
sky will dark PERF
'The sky is going to get dark.'

- (14) *Hi⁴⁴ oi⁴² am¹¹ la¹¹.
 sky will dark PERF
 ‘The sky is going to get dark.’

The third difference between the two modals is that *oi*⁴² 會 can be negated, while *beh*⁵ 卜 cannot, as in (15) and (16).

- (15) Lau⁴²-se⁴⁴ bo²² oi⁴² me⁴⁴ gua²¹.
 teacher NEG will scold 1SG
 ‘The teacher will not scold me.’
- (16) *Lau⁴²-se⁴⁴ bo²² beh⁵ me⁴⁴ gua²¹.
 teacher NEG will scold 1SG
 ‘The teacher will not scold me.’

*Beh*⁵ 卜 and *oi*⁴² 會 are the two epistemic modals mostly uttered in colloquial Hainan Min. However, *ing*⁴⁴-*kai*⁴⁴ 應該 and *ho*²¹-*neng*²² 可能 can also be used when the language consultants are asked to express Mandarin sentences in Hainan Min. The usage of *ing*⁴⁴-*kai*⁴⁴ 應該 and *ho*²¹-*neng*²² 可能 are similar to their Mandarin corresponding counterparts, as in (17)–(19).

III. *ing*⁴⁴-*kai*⁴⁴ 應該

- (17) Hen⁴²-na⁴⁴ ing⁴⁴-kai⁴⁴ ti⁴² fiou⁴²-tui²¹ sun⁴⁴.
 now should be rain-water spring
 ‘It should be the rainy season now.’
- (18) Tse²¹ mou²¹ san²² ing⁴⁴-kai⁴⁴ kau⁴⁴ tan²¹.
 this acre farmland should high yield
 ‘This farmland should have high productivity.’

IV. *ho*²¹-*neng*²² 可能

- (19) A⁴⁴-fua⁴⁴ ho²¹-neng²² tsiah³ toi⁴⁴ dou²¹ hia¹¹.
 A-Hua may eat much stomach hurt
 ‘A-Hua may eat too much, till his stomach hurts.’

2.2 Deontic modality

The deontic modality is involved in a set of possible worlds where the related law in the worlds is being followed in this set of worlds. It expresses ‘permission’, ‘obligation’ and ‘commission’. In Hainan Min, the deontic modals include *sam*¹¹, *ing*⁴⁴-*kai*⁴⁴ 應該, *ho*²¹-*dzi*²¹ 可以, *dit*⁵ 得, *toh*⁵-*dit*⁵ 作得, *tun*²¹ 准, *iau*¹¹ 要 and *neng*²² 能.

I. *sam*¹¹

*Sam*¹¹ generally expresses ‘obligation’. It is a unique modal verb whose etymon is difficult to relate. While many related languages have been researched, including Mandarin Chinese, Southern Min, Cantonese, Hakka and even several aboriginal languages in Hainan, the etymon of the modal verb *sam*¹¹ remains undiscovered. Examples are shown in (20)–(22).

- (20) Tse²¹ phien⁴⁴ bun²²-t siang⁴⁴ sam¹¹ du⁴² gueh³ doi²¹ tia²¹ fio²¹.
 this CL article must at month bottom write done
 ‘The article must be completed/finished at the end of the month.’
- (21) Lau⁴²-se⁴⁴ kong²¹ ue⁴⁴ sam¹¹ it⁵ dioh³.
 teacher talk word must remember arrive
 ‘What the teacher says must be remembered.’
- (22) Lak⁵ au⁴² kai²² nang²² dziak³-dia⁴⁴ sam¹¹ tia²¹ lin⁴²-tsiop³.
 fall back MOD people definitely must write exercise
 ‘People who fall behind must do the exercise.’

The word *sam*¹¹ is believed to be a language-specific modal verb in Hainan Min. It expresses necessity. *Ing*⁴⁴-*kai*⁴⁴ 應該 and *ho*²¹-*dzi*²¹ 可以 are also used to express deontic meanings and their usages are similar to their corresponding Mandarin counterparts.

II. *ing*⁴⁴-*kai*⁴⁴ 應該

- (23) Tiau²¹-uang²² ing⁴⁴-kai⁴⁴ ɸue⁴² kang⁴⁴-hua¹¹ toh⁵ liau²¹.
 little-Wang should hold homework do finished
 ‘Little Wang should finish his homework.’
- (24) Tsin¹¹-ɸou⁴⁴ kai²² nang²² ing⁴⁴-kai⁴⁴ ɸang⁴⁴-to⁴² lak⁵ au⁴² kai²² nang²².
 progress MOD people should help fall back MOD people
 ‘Those who have performed well should help whoever falls behind.’

III. *ho*²¹-*dzi*²¹ 可以

- (25) Du²¹ ho²¹-dzi²¹ tse⁴² tse²¹ mo⁴² ui⁴².
 2SG can sit this CL seat
 ‘You can have this seat.’
- (26) Du²¹ ho²¹-dzi²¹ dziop³ lai²².
 2SG can enter come
 ‘You can come in now.’

It is assumed that the modal force⁵ can differentiate *sam*¹¹ from *ing*⁴⁴-*kai*⁴⁴ 應該 through the test given in von Fintel & Iatridou (2008). In English, *ought to/should* is considered to be weaker than *have to/must*. Von Fintel & Iatridou (2008) show this divergence by the following pair of sentences.

- (27) a. You ought to wash your hands—in fact, you have to.
b. ??You have to wash your hands—in fact, you ought to.

I employ these sequences to test *sam*¹¹ and *ing*⁴⁴-*kai*⁴⁴ 應該 in Hainan Min. The result is that *sam*¹¹ is close to English *have to/must* and *ing*⁴⁴-*kai*⁴⁴ 應該 is close to *ought to/should*.

The three modal expressions, *sam*¹¹, *ing*⁴⁴-*kai*⁴⁴ 應該 and *ho*²¹-*dzi*²¹ 可以, syntactically occur at a preverbal position. *Sam*¹¹ and *ing*⁴⁴-*kai*⁴⁴ 應該 semantically express ‘obligation’, while *ho*²¹-*dzi*²¹ 可以 expresses ‘permission’. The following two modals also express ‘permission’, but they have different syntactic distributions from the above three modals. *V-dit*⁵ 得 occurs at a postverbal position and *toh*⁵-*dit*⁵ 作得 occurs in sentence final position.

IV. *dit*⁵ 得 in [V-*dit*⁵] form

*Dit*⁵ 得 is not an independent modal verb. It needs to attach to a verb to construct a [V-*dit*⁵] sequence. This [V-*dit*⁵] compound indicates that the action conveyed by the verb is permissible.

- (28) Du²¹ tse⁴² dit⁵ tse²¹ mo⁴² ui^{42,6}.
2SG sit get this CL seat
‘You can have this seat.’

- (29) Du²¹ u⁴² tsieng¹¹-ki⁴² na⁴² kong²¹ dit⁵.
2SG have evidence then say get
‘Only if you have evidence, can you say so.’

V. *toh*⁵-*dit*⁵ 作得

*Toh*⁵-*dit*⁵ 作得 occurs in sentence final position, expressing the meaning of ‘permission’. With the interrogative expression *toh*⁵-*dit*⁵ *bo*²², which serves as a tag question, the speaker asks for permission about the whole proposition conveyed by the preceding clause, as in (30) and (31). It can also occur in an assertive sentence, indicating the meaning of ‘allowance’, as in (32).

- (30) Gua²¹ tse⁴² tse²¹ mo⁴² ui⁴², toh⁵-dit⁵ bo²²?
1SG sit this CL seat do-get Q
‘May I have this seat?’

⁵ The modal force is shown by Kratzer (1991) as: necessity, weak necessity, good possibility, possibility, slight possibility, at least as good a possibility, better possibility and maybe others.

⁶ The phrase *tse*⁴² *dit*⁵ 坐得 ‘sit get’ is not separated with a dash, as in *tse*⁴²-*dit*⁵ ‘sit-get’ as it is necessary to distinguish *tse*⁴² *dit*⁵, combining together due to context, from fixed customary lexical items, e.g. *toh*⁵-*dit*⁵ 作得, *ho*²¹-*dzi*²¹ 可以, and *ing*⁴⁴-*kai*⁴⁴ 應該.

- (31) Gua²¹ he⁴² tse²¹ ki⁴⁴ ɬiet⁵ hu¹¹, toh⁵-dit⁵ bo^{22?}
 1SG take this CL pen go do-get Q
 ‘May I take this pen?’
- (32) Dan²¹ mai²¹ ɬe⁴⁴ fio²¹ na⁴² hu¹¹ ia⁴⁴ toh⁵-dit⁵.
 wait mother sickness good then go also do-get
 ‘We can wait until Mother recovers from the sickness, and then go.’

The modal force of V-*dit*⁵ 得 and *toh*⁵-*dit*⁵ 作得 is a possibility. They are distinct from *sam*¹¹ and *ing*⁴⁴-*kai*⁴⁴ 應該, which indicate necessity.

These five modal expressions, *sam*¹¹, *ing*⁴⁴-*kai*⁴⁴ 應該, *ho*²¹-*dzi*²¹ 可以, *dit*⁵ 得, and *toh*⁵-*dit*⁵ 作得, are mostly used in a colloquial context. When the language informants are given a formal or a written context, *tun*²¹ 准, *iau*¹¹ 要 and *neng*²² 能 are used to correspond to their Mandarin counterparts. These modals are not often used in colloquial contexts.

VI. *tun*²¹ 准

- (33) Tse²¹ ke¹¹ sia⁴⁴ na⁴² tun²¹ tse⁴² lak³ kai²² nang²².
 this CL vehicle only allow sit six CL people
 ‘The car only allows for the accommodation of six people.’

VII. *iau*¹¹ 要

- (34) O²¹-te⁴⁴ iau¹¹ an¹¹ ti²² dzuan²²-tsia²² toh⁵-niap³.
 student should according to time finish assignment
 ‘Students should finish their homework on time.’

VIII. *neng*²² 能

- (35) Tiau²¹-tsi²¹ toh⁵ kang⁴⁴ liau²¹ ɬu²¹ neng²² ɬui²¹ su¹¹ la¹¹.
 little-Tsi do work finished 2SG can return home PERF
 ‘Little Tsi, you have finished the work, so you can go home now.’

2.3 Circumstantial modality

The circumstantial modality relates to a set of possible worlds where everything true in the world is true in this set of worlds.⁷ It expresses the possibility of an action or state under a physical circumstance. In Hainan Min, the circumstantial modals include *bai*⁵ 識, *oi*⁴² 會, *dit*⁵ 得, *toh*⁵-*dit*⁵ 作得 and *ho*²¹-*dzi*²¹ 可以.

⁷ This definition for ‘circumstantial modality’ is adopted from Cable (2013).

I. *bat*⁵ 識

The modal verb *bat*⁵ 識 literally means that the agent of the proposition has the knowledge to perform the activity conveyed by the verb, that is, that the agent has the ability to execute the action to achieve some specific goals. *Bat*⁵ 識 can usually be replaced by another modal verb *oi*⁴² 會.

- (36) Gua²¹ kong⁴⁴ bat⁵ dua²² i²².
 1SG grandfather can play string
 ‘My grandfather can play the stringed instrument.’

- (37) Tiau²¹-ngou²² bat⁵ dio¹¹ fu²².
 little-Ngou can hook fish
 ‘Little Ngou can fish.’

II. *oi*⁴² 會

- (38) Gua²¹ kong⁴⁴ oi⁴² dua²² i²².
 1SG grandfather can play string
 ‘My grandfather can play the stringed instrument.’

- (39) Tiau²¹-ngou²² oi⁴² dio¹¹ fu²².
 little-Ngou can hook fish
 ‘Little Ngou can fish.’

While *bat*⁵ 識 and *oi*⁴² 會 have overlapping distribution, they are semantically distinct. The difference lies in the graded modal notions. Though both *bat*⁵ 識 and *oi*⁴² 會 can occur in (40), according to the language consultants, *bat*⁵ 識 indicates that ‘my brother knows how to speak English’, while *oi*⁴² 會 implies that ‘my brother can speak English well’.

- (40) Lau⁴²-di⁴² bat⁵/oi⁴² kong²¹ eng⁴⁴-ue⁴⁴.
 old-younger brother can/can say English
 ‘My brother can speak English.’ (with *bat*⁵)
 ‘My brother can speak English well.’ (with *oi*⁴²)

In other words, the degree of proficiency conveyed by *bat*⁵ 識 and *oi*⁴² 會 is different. This divergence can be clarified when *bat*⁵ 識 and *oi*⁴² 會 co-occur with another modal verb like *beh*⁵ 卜. The scenario described in (41a) is acceptable for a child who starts to walk, while the scenario in (41b) is strange if a child is about to learn how to walk.

- (41) a. Nih⁵-kia²¹ beh⁵ bat⁵ kia²² la¹¹.
 little-child will can walk PART
 ‘The little kid is going to be able to walk.’
 b. *Nih⁵-kia²¹ beh⁵ oi⁴² kia²² la¹¹.
 little-child will can walk PART
 ‘The little child is going to be able to walk well.’

III. *dit*⁵ 得 in [V-*dit*⁵] form⁸

Similar to the deontic modal *dit*⁵ 得, the circumstantial modal *dit*⁵ 得 cannot occur independently; it needs to attach to a verb. The [V-*dit*⁵] compound indicates ‘be able to’, as in (42).

- (42) Tse²¹ toi⁴⁴ mue²² lai⁴² te⁴⁴ hou²², bo²² tsiah³ dit⁵.
 this many rice inside occur soil NEG eat get
 ‘There is sand in the rice, so it is not edible.’

IV. *toh*⁵-*dit*⁵ 作得

The modal *toh*⁵-*dit*⁵ 作得 often occurs in sentence final position and indicates that the agent of the clause has the ability to achieve the goal of the activity conveyed by the predicate.

- (43) I⁴⁴ da⁴⁴-ki⁴⁴ hui⁴⁴ i⁴⁴-zuan⁴² dou⁴⁴ toh⁵-dit⁵.
 3SG self open hospital all do-get
 ‘He can open up his own clinic.’

V-*dit*⁵ 得 and *toh*⁵-*dit*⁵ 作得 have very different distribution from other modals. While the two modal expressions can both convey ability, they are distinct from each other when they occur in a resultative construction.⁹ Only V-*dit*⁵ 得 can appear in the resultative structure, with [V-*dit*⁵ OR] or [V-*dit*⁵ R] sequences; *toh*⁵-*dit*⁵ 作得 cannot occur in such constructions, thus *[VOR *toh*⁵-*dit*⁵]/*[VR *toh*⁵-*dit*⁵] are ungrammatical, as shown in (44)–(46).

- (44) a. I⁴⁴ tia²¹ dit⁵ tu⁴⁴ liau²¹.
 3SG write get book finished
 ‘He can finish writing his book.’
 b. *I⁴⁴ tia²¹ tu⁴⁴ liau²¹ toh⁵-dit⁵.
 3SG write book finished do-get
 ‘He can finish writing his book.’
- (45) a. Gua²¹ leng²² dit⁵ tse²¹ kai²² dang⁴⁴-tai⁴⁴ hang⁴².
 1SG lift get this CL thing move
 ‘I can lift this thing.’
 b. *Gua²¹ leng²² tse²¹ kai²² dang⁴⁴-tai⁴⁴ hang⁴² toh⁵-dit⁵.
 1SG lift this CL thing move do-get
 ‘I can lift this thing.’

⁸ Following the advice of one of the reviewers, I rechecked with my language consultants the data with 得 and other lexical items. They state that V 得 is a very local way to express deontic and circumstantial modality. When needed, V 得 is often paraphrased to be 可以.

⁹ In Hainan Min, the resultative construction has the configuration [VOR], rather than [VRO]. That is, in a resultative compound, the object occurs between the verb and the resultative complement.

- (46) a. Tsia⁴² kang⁴⁴ i²²-hiang²² kap⁵ dīt⁵ loh³.
 elder sister with younger sister combine get fall
 ‘The elder sister and the younger sister can get along with each other.’
 b. *Tsia⁴² kang⁴⁴ i²²-hiang²² kap⁵ loh³ toh⁵-dīt⁵.
 elder sister with younger sister combine fall do-get
 ‘The elder sister and the younger sister can get along with each other.’

V. *ho*²¹-*dzi*²¹ 可以

The modal verb *ho*²¹-*dzi*²¹ 可以 indicates ‘be able to’. The usage of this modal in Hainan Min is similar to its corresponding counterpart in Mandarin.

- (47) Ko⁴⁴ ho²¹-dzi²¹ hui⁴⁴ sia⁴⁴.
 elder brother can drive car
 ‘The elder brother can drive.’

VI. **neng*²² 能

Unlike Mandarin, *neng*²² 能 does not serve as a circumstantial modal verb to indicate the meaning of ‘ability’. It is assumed that other modal verbs in Hainan Min are sufficient to perform the functions of circumstantial modality. This language does not need *neng*²² 能 to share this function.

- (48) *Ko⁴⁴ neng²² hui⁴⁴ sia⁴⁴.
 elder brother can drive car
 ‘The elder brother can drive.’

2.4 Bouletic modality

The bouletic modality relates to a set of possible worlds where our goals or desires in the worlds are met in this set of worlds. In Hainan Min, the bouletic modal is *hien*²¹ 肯.

I. *hien*²¹ 肯

The volitionality of the subject can be expressed by the modal verb *hien*²¹ 肯.

- (49) Mai²¹ hien²¹ kang⁴⁴ i²²-hiang²² mo⁴⁴ kia²¹.
 mother willing with younger sister see child
 ‘Mother is willing to help the younger sister look after the child.’
 (50) Mai²¹ hien²¹ tsiap⁵-tang¹¹ toi¹¹-king⁴².
 mother willing pick up little-King
 ‘Mother is willing to pick up little King.’

To sum up, the lexical entry of modals in Hainan Min are depicted as in (51).

- (51) a. Epistemic: *beh*⁵ 卜, *oi*⁴² 會, *ing*⁴⁴-*kai*⁴⁴ 應該, *ho*²¹-*neng*²² 可能
 b. Deontic: *sam*¹¹, *ing*⁴⁴-*kai*⁴⁴ 應該, *ho*²¹-*dzi*²¹ 可以, *dit*⁵ 得, *toh*⁵-*dit*⁵ 作得, *tun*²¹ 准, *iau*¹¹ 要, *neng*²² 能
 c. Circumstantial: *bat*⁵ 識, *oi*⁴² 會, *dit*⁵ 得, *toh*⁵-*dit*⁵ 作得, *ho*²¹-*dzi*²¹ 可以
 d. Bouletic: *hien*²¹ 肯

The following sections will discuss the syntactic and the semantic features of these modals, including the co-occurrence of multiple modals and the scopal interaction between modals and negations.

3. Syntactic categories of modals

There has been a long debate over the syntactic class to which modals belong. This issue is more complicated for Chinese dialects because Chinese is not an overtly inflectional language. However, a discussion of modal categories indeed helps clarify the data in Hainan Min.¹⁰

Before deciding the syntactic categories of modals, two related notions need to be distinguished from each other: modal auxiliary and modal verb. As an inflectional language, English represents a good example to describe the difference between these two terms. Firstly, modal auxiliaries in English can be distinguished from modal verbs owing to their lack of participle and infinitive forms, for example *can*/**caned*/**to can*. Secondly, modal auxiliaries in English do not have to agree with the third person/singular subject and thus need not be suffixed with *-s* when the tense is present, for instance **He cans*. Thirdly, modal auxiliaries are not used as imperatives and as subjunctives, for example **Go! Can!*

Based on the English examples, I assume that a modal auxiliary is more grammatical than a modal verb. Syntactically, modal auxiliaries are more defective than modal verbs in that they share fewer properties with common verbs. In Hainan Min, I adopt the idea that a modal verb exhibits more similar properties to a common verb than a modal auxiliary does. Several syntactic tests are used for linguists to examine the syntactic class of modals in Chinese (see Lin 2012; Lin & Tang 1995). However, the criteria for Mandarin are mostly not suitable for Hainan Min. For example, the A-not-A pattern is assumed to be a good means to represent a verbal form. Against Mandarin, the A-not-A form cannot be used as a syntactic test because the form is not even acceptable in Hainan Min, as shown in (52).

- (52) Mandarin:
 Ni chi bu chi fan?
 2SG eat NEG eat rice
 ‘Do you eat rice?’
 Hainan Min
 * Du²¹ tsiah³ bo²² tsiah³ mue²²?
 2SG eat NEG eat rice
 ‘Do you eat rice?’

¹⁰ I am grateful to an anonymous referee for drawing my attention to this issue.

Based on the idiosyncratic properties of Hainan Min, I do not fully adopt Lin & Tang's (1995) and Lin's (2012) criteria, but rather employ two attributes to discuss the categories of modals (auxiliary or verb): selectional restriction and a short answer test.

3.1 Selectional restriction

Selectional restriction helps clarify the distinction between verbs and auxiliaries. It is very difficult to find a clear-cut distinction between modal verbs and auxiliaries in Hainan Min or in most Chinese dialects. I assume that modals fall in a continuum where verbs and auxiliaries respectively occupy opposite directions. Some modals are closer to the verb class and others are closer to the auxiliary class. Verb-like modals exhibit more choices of transitivity. For example, the circumstantial modals *bat*⁵ 識 and *oi*⁴² 會 show different transitivity patterns. Both *bat*⁵ 識 and *oi*⁴² 會 can be followed by a main verb or a verb phrase, as in (53). However, *bat*⁵ 識 is acceptable in (54), while *oi*⁴² 會 is not.

- (53) Gua²¹ kong⁴⁴ bat⁵/oi⁴² dɯa²² i²².
 1SG grandfather can play string
 'My grandfather can play the stringed instrument.'
- (54) Lau⁴²-di⁴² bo²² bat⁵/*oi⁴² tu⁴⁴.
 old-brother NEG can character
 'My young brother cannot understand sinograms.'

The contrast between (53)–(54) shows that *bat*⁵ 識 can take a noun or a verb phrase as its complement, while *oi*⁴² 會 prefers to take a verb phrase as its complement. This fact suggests that *bat*⁵ 識 is a more verb-like modal, and *oi*⁴² 會 is an auxiliary-like modal.

Another example is *ai*¹¹ 愛. In modern Hainan Min, *ai*¹¹ 愛 is used as a common verb, simply expressing the meaning of 'to love', as in (55) and (56). It selects a noun as its complement.

- (55) A⁴⁴-ta⁴⁴ tsien⁴⁴ ai¹¹ tsi²².
 A-Ta really love money
 'A-Ta loves money very much.'
- (56) I⁴⁴ ti²¹ dou⁴⁴ ai¹¹ fo¹¹ mo⁴² nang²².
 3SG die all love that CL people
 'Even if she died, she would still love that man.'

However, in a Hainanese Bible published by the British and Foreign Bible Society (1899), the word *ai*¹¹ 愛 is used to express the epistemic modality, as in (57) and (58).

- (57) Va²¹ ai¹¹ hoe¹¹ i⁴⁴ toh⁵ jak³-kai²² foe¹¹-gou²¹ (Genesis 2:18)
 1SG will for 3SG do one-CL spouse
 'I will make a spouse for him.'

- (58) Fog¹¹-ki¹¹ va²¹ kai²² nag²², ciu⁴² ai¹¹ hai²² va²¹ (Genesis 4:14)
 meet 1SG MOD people then will kill 1SG
 ‘Whoever meets me will kill me.’

I have checked the occurrences of the word *ai*¹¹ 愛 in this Bible and they are all followed by a verb phrase like (57) and (58). The distribution in the Bible implies that *ai*¹¹ 愛 is used as a modal auxiliary rather than a common verb. On the other hand, *ai*¹¹ 愛 in modern Hainan Min does not express modal meanings. Even when it is followed by a verb phrase, *ai*¹¹ 愛 always indicates ‘to love’ rather than ‘will’.

- (59) Gua²¹ ai¹¹ mo⁴⁴ dien⁴²-ti⁴².
 1SG love see television
 ‘I love to watch television.’
 ‘*I will watch television.’
- (60) I⁴⁴ kong²¹ ue⁴⁴, gua²¹ na¹¹-ku¹¹ ai¹¹ hia⁴⁴.
 3SG say word 1SG very love listen
 ‘When he talks, I really love to listen.’
 ‘*When he talks, I will really listen.’

Since *ai*¹¹ 愛 is used as a common verb in modern Hainan Min, it is not included in the modal inventory.

There is another example, *bo*²²-*dziong*⁴² 無用, which expresses a deontic meaning only when it occurs in a negative form. For instance, (61a) does not correspond to (61b) to have a negative/affirmative pair. *Dziong*⁴² 用 is simply used as a common verb, ‘use’, which takes a noun as its complement.

- (61) a. Du²¹ bo²²-dziong⁴² tse⁴² tse²¹ mo⁴² ui⁴².
 2SG NEG-use sit this CL seat
 ‘You are not allowed to take this seat.’
 b. *Du²¹ dziong⁴² tse⁴² tse²¹ mo⁴² ui⁴².
 2SG use sit this CL seat
 ‘You are allowed to take this seat.’

In addition, while *bo*²²-*dziong*⁴² 無用 often occurs with a second-person subject, it can also co-occur with other subjects, such as (62).

- (62) a. Nang²² bo²²-dziong⁴² fiam¹¹ i⁴⁴-te⁴⁴ ziu²²-ziu²² hui⁴⁴ ioh³.
 people NEG-use call doctor careless open medicine
 ‘People are not allowed to ask doctors to carelessly provide prescriptions.’
 b. Nih⁵-kia²¹ bo²²-dziong⁴² nam¹¹ la¹¹.
 little-child NEG-use play PART
 ‘The little children are not allowed to play anymore.’

*Bo*²²-*dziŋg*⁴² 無用 expresses modal meaning and is followed by a verb phrase, while *dziŋg*⁴² 用 only selects nouns to be its complement.

3.2 Short answer

Whether an element can be used as a short answer or not is frequently considered as a test to identify a verb in Mandarin (see e.g. Chao 1968; Huang et al. 2009; Li & Thompson 1981). This traditional verbhood test is adopted to explore the modal lexicon in Hainan Min. The modals *beh*⁵ 卜, *oi*⁴² 會, *sam*¹¹ and *hien*²¹ 肯 are tested together because they share the same distribution in (63). The result shows that only *sam*¹¹ cannot serve as a simple answer to a question.¹¹

- (63) a. Q: I⁴⁴ beh⁵/oi⁴²/sam¹¹/oi⁴²/hien²¹ hu¹¹ o²¹-iau⁴² bo²²?
 3SG will/will/must/can/willing go school NEG
 ‘Will/Will/Must/Is he willing to go to school?’
 b. A: Beh⁵/Oi⁴²/*Sam¹¹/Oi⁴²/Hien²¹.
 will/will/must/can/willing
 ‘Yes, he will/will/must/can/is willing to.’

In addition, *dīt*⁵ 得 and *toh*⁵-*dīt*⁵ 作得 are tested, as in (64) and (65), separately from the above five modals because they have different distribution from the others. The result shows that *dīt*⁵ 得 cannot be used as a short answer, while *toh*⁵-*dīt*⁵ 作得 can.

- (64) a. Q: I⁴⁴ hu¹¹ dīt⁵ o²¹-iau⁴² bo²²?
 3SG go get school NEG
 ‘Can he go to school?’
 b. A: *Dit⁵/Hu¹¹ dīt⁵.
 get/go get
 ‘Yes, he can.’
 (65) a. Q: I⁴⁴ hu¹¹ o²¹-iau⁴², toh⁵-dīt⁵ bo²²?
 3SG go school do-get NEG
 ‘Is he allowed to go to school?’
 b. A: Beh⁵/Oi⁴²/*Sam¹¹/Oi⁴²/Hien²¹.
 will/will/must/can/willing
 ‘Yes, he will/will/must/can/is willing to go to.’

The fact suggests that compared to other modal items, *sam*¹¹ and *dīt*⁵ 得 do not behave like typical verbs. *Sam*¹¹ and *dīt*⁵ 得 cannot occur independently.¹² *Dit*⁵ 得 is like a verbal suffix which needs

¹¹ Disyllabic modals *ho*²¹-*neng*²² 可能, *ing*⁴⁴-*kai*⁴⁴ 應該 and *ho*²¹-*dzi*²¹ 可以 are also tested and they can all serve as a simple answer to their corresponding questions.

¹² The etymon of *sam*¹¹ remains mysterious to the author. The reason why *sam*¹¹ cannot serve as a short answer indeed needs more research on this particular modal.

to attach to a lexical verb. Regarding the short answer test, the modals in Hainan Min appear to behave very much like verbs.

It is not easy to have a very reliable test to prove that a certain modal belongs to a verb class or an auxiliary class. Modals are thus not specifically categorized into either of these two categories. I propose that for modals in Hainan Min, there is a syntactic continuum ranging from a verb pole to an auxiliary pole. Modals relatively behave more like verbs or auxiliaries. For example, *bat*⁵ 識 has more verbal properties than *oi*⁴² 會, and *sam*¹¹ is not a standard verb when it is used as a short answer. Noticing that modals behave distinctly from common verbs, the present study employs the general term ‘modal verb’ to refer to the modal items investigated in this paper.

4. Multiple modals

This section explores the hierarchy of different types of modals. Cinque (1999) suggests that adverbs cross-linguistically present a universal ordering. With regard to modality, the hierarchy of modal adverbs is illustrated as in (66).

(66) ... [*probably* Mod_{epistemic} ... [*necessarily* Mod_{necessity} ... [*intentionally* Mod_{volitional}

Based on Cinque (1999), the ordering of modals may be assumed to be ‘epistemic > deontic > bouletic’. If this hierarchy is cross-linguistically universal, it should also be true for the modal system in Hainan Min.

4.1 Epistemic > deontic

In Hainan Min, the epistemic modal verb can precede the deontic modal verb, but cannot allow the opposite word order. In other words, the sequence ‘epistemic + deontic’ is allowed; the sequence ‘deontic + epistemic’ is not acceptable, for example *ho*²¹-*neng*²² 可能 + *sam*¹¹, *ing*⁴⁴-*kai*⁴⁴ 應該 + *dīt*⁵ 得, *ing*⁴⁴-*kai*⁴⁴ 應該 + *bo*²²-*dziŋg*⁴² 無用 and **sam*¹¹ + *oi*⁴² 會, as shown in (67)–(71). The epistemic modality is higher than the deontic modality in Hainan Min.

I. epistemic + deontic (e.g. *ho*²¹-*neng*²² 可能 + *sam*¹¹)

(67) Tse²¹ ɸui²¹ tu⁴⁴ ho²¹-neng²² sam¹¹ ɸang¹¹ kang⁴⁴ hu¹¹ nien²²-kiu¹¹.
 this CL book may should put work go research
 ‘People may have to stop their work and spend time reading this book.’

II. epistemic + deontic (e.g. *ing*⁴⁴-*kai*⁴⁴ 應該 + *dīt*⁵ 得)

(68) A⁴⁴-ɸua⁴⁴ ing⁴⁴-kai⁴⁴ bo²²-dīt⁵ hau²¹-si¹¹.
 A-Hua should NEG-get exam
 ‘A-Hua may not be allowed to take the exam.’

III. epistemic + deontic (e.g. *ing*⁴⁴-*kai*⁴⁴ 應該 + *bo*²²-*dziong*⁴² 無用)

- (69) Tiau²¹-uang²² ing⁴⁴-kai⁴⁴ bo²²-dziong⁴² kang⁴⁴ de⁴⁴ tio⁴⁴ me⁴⁴.
 little-Wang should NEG-use with father mutual scold
 ‘Little Wang may not have to quarrel with his father.’
- (70) Dua⁴⁴-ke⁴⁴ liau⁴² a⁴⁴-meng²² ing⁴⁴-kai⁴⁴ bo²²-dziong⁴² hau²¹-si¹¹.
 everyone guess A-meng should NEG-use exam
 ‘Everyone guessed that A-Meng may not have to take the exam.’

IV. *deontic + epistemic (e.g. **sam*¹¹ + *oi*⁴² 會)

- (71) *Kia²¹ sam¹¹ oi⁴² bat⁵ kau¹¹ 6e⁴²-mai²¹ kai²² kuan⁴⁴-tiom⁴⁴.
 child should will know arrive father-mother MOD concern
 ‘Children should understand their parents’ concern.’

4.2 Epistemic > circumstantial

The combination of ‘epistemic + circumstantial’ is acceptable, while the opposite word order ‘circumstantial + epistemic’ is not. For example, the sequence *ho*²¹-*neng*²² 可能 + *dit*⁵ 得, as in (72) and (73).

I. epistemic + circumstantial (e.g. *ho*²¹-*neng*²² 可能 + *dit*⁵ 得 / **dit*⁵ 得 + *ho*²¹-*neng*²² 可能)

- (72) a. Ho¹¹ 6ui²¹ tu⁴⁴, i⁴⁴ ho²¹-neng²² tia²¹ dit⁵ liau²¹.
 that CL book 3SG may write get finished
 ‘He may be able to finish his writing.’
 b. *Ho¹¹ 6ui²¹ tu⁴⁴, i⁴⁴ tia²¹ dit⁵ liau²¹ ho²¹-neng²².
 that CL book 3SG write get finished may
 ‘He may be able to finish his writing.’
- (73) a. Tse²¹ kien⁴² se⁴² toi¹¹-i²² ho²¹-neng²² 6an⁴² dit⁵ tsia²².
 this CL matter little-Yi may handle get successful
 ‘This thing, little Yi may be able to handle.’
 b. *Tse²¹ kien⁴² se⁴² toi¹¹-i²² 6an⁴² dit⁵ tsia²² ho²¹-neng²².
 this CL matter little-Yi handle get successful may
 ‘This thing, little Yi may be able to handle.’

4.3 Epistemic > bouletic

The sequence ‘epistemic + bouletic’ is allowed, while the opposite word order ‘bouletic + epistemic’ is ruled out. For example, the combinations of ‘*ho*²¹-*neng*²² 可能 + *hien*²¹ 肯’ and ‘*beh*⁵ 卜 + *hien*²¹ 肯’, are acceptable, as in (74) and (75). However, the combinations of ‘**hien*²¹ 肯 + *oi*⁴² 會’, and ‘**dzuan*⁴²-*i*¹¹ 願意 + *oi*⁴² 會’, are not, as in (76)–(78).

I. epistemic + bouletic (e.g. *beh*⁵ 卜 + *hien*²¹ 肯)

- (74) Tsia⁴² beh⁵ hien²¹ kang⁴⁴ du²¹ mo⁴⁴ dīam¹¹ ma^{44?}
 elder sister will willing with 2SG see store Q
 ‘Is the elder sister willing to help you watch the store?’

II. epistemic + bouletic (e.g. *ho*²¹-*neng*²² 可能 + *hien*²¹ 肯)

- (75) Tsia⁴² ho²¹-neng²² hien²¹ ɓang⁴⁴ du²¹ mo⁴⁴ dīam¹¹.
 elder sister may willing help 2SG see store
 ‘The elder sister may be willing to help you watch the store.’

III. *bouletic + epistemic (e.g. **hien*²¹ 肯 + *oi*⁴² 會)

- (76) *Tsia⁴² hien²¹ oi⁴² kang⁴⁴ du²¹ mo⁴⁴ dīam¹¹ ma^{44?}
 elder sister willing will with 2SG see store Q
 ‘Will the elder sister be willing to help you watch the store?’
- (77) *I⁴⁴ hien²¹ oi⁴² du⁴² toi⁴⁴ nang²² mien⁴⁴ tai²² sio¹¹ ko⁴⁴.
 3SG willing will at many people face front sing song
 ‘He will be willing to sing a song in front of many people.’

IV. *bouletic + epistemic (e.g. **dzuan*⁴²-*i*¹¹ 願意 + *oi*⁴² 會)

- (78) *Mai²¹ dzuan⁴²-i¹¹ oi⁴² ɓang⁴⁴ i²²-hiang²² mo⁴⁴ kia²¹.
 mother willing will help younger sister see child
 ‘Mother is willing to help the younger sister look after the child.’

In summary, the epistemic modality is higher than the deontic modality, the circumstantial modality and the bouletic modality. It is thus at the highest position of the modal hierarchy. Except for the epistemic modality, the ordering of the other three types is yet certain. The following sections discuss the relationship between the other modals.

4.4 Deontic > Circumstantial

The deontic modal verb precedes the circumstantial modal. For example, the sequence ‘*sam*¹¹ + *bat*⁵ 識’ is shown in (79).

I. deontic + circumstantial (e.g. *sam*¹¹ + *bat*⁵ 識)

- (79) Kia²¹ dziak³-dīa⁴⁴ sam¹¹ bat⁵ kau¹¹ ɓe⁴²-mai²¹ kai²² kuan⁴⁴-tiom⁴⁴.
 child definitely must know arrive father-mother MOD concern
 ‘Children must have to understand their parents’ concern.’

4.5 Deontic > Bouletic

The deontic modal precedes the bouletic modal. For example, the sequence ‘*sam*¹¹ + *hien*²¹ 肯’ is shown as in (80).

I. deontic + bouletic (e.g. *sam*¹¹ + *hien*²¹ 肯)

- (80) Mai²¹ sam¹¹ hien²¹ tsiap⁵-tang¹¹ toi¹¹-king⁴².
 mother must willing pick up little-King
 ‘Mother must be willing to pick up little King.’

The data show that the deontic modality is higher than the circumstantial and bouletic modalities, but the ordering of the circumstantial and the bouletic modals is not yet settled. The next section explores the hierarchy of these two types of modality.

4.6 Circumstantial and bouletic

There is no ordering of the circumstantial and the bouletic modalities. Neither the sequence ‘circumstantial + bouletic’ nor the opposite sequence ‘bouletic + circumstantial’ is acceptable. The sentences (81) and (82), respectively, exemplify the unacceptability of these two orderings.

I. *circumstantial + bouletic (**oi*⁴² 會 + *hien*²¹ 肯)

- (81) *I⁴⁴ oi⁴² hien²¹ du⁴² toi⁴⁴ nang²² mien⁴⁴ tai²² sio¹¹ ko⁴⁴.
 3SG *can/will willing at many people face front sing song
 ‘*He is able to be willing to sing a song in front of many people.’
 ‘He will be willing to sing a song in front of many people.’

The modal verb *oi*⁴² 會 can be interpreted either as epistemic or circumstantial. Only the epistemic modality can occur before the bouletic modality.

II. *bouletic + circumstantial (**hien*²¹ 肯 + *oi*⁴² 會)

- (82) *I⁴⁴ hien²¹ oi⁴² du⁴² toi⁴⁴ nang²² mien⁴⁴ tai²² sio¹¹ ko⁴⁴.
 3SG willing *will/*can at many people face front sing song
 ‘*He is willing to able to sing a song in front of many people.’
 ‘*He is willing to going to sing a song in front of many people.’

The data suggest that a clear ordering of the circumstantial and the bouletic modalities does not hold in Hainan Min. This fact supports Palmer’s (2001) classification in which he combines the circumstantial and the modalities into one category, named ‘dynamic modality’.

In terms of the modal hierarchy, the ternary classification (epistemic, deontic and dynamic) is sufficient to describe the modal system in Hainan Min. To sum up, the hierarchy of the modal system in Hainan Min can be shown as in (83).

(83) Epistemic > Deontic > Dynamic

This finding in Hainan Min directly parallels Cinque's (1999) modal hierarchy. In addition, the hierarchy of the modal system in Hainan Min also matches Tsai's (2009, 2010) assumption on the hierarchy of the Mandarin modal system.

5. Negation and modals

The relationship between negation and modals is explored in this section. Lien (2013) points out that there are four common negative forms related to modal verbs in Taiwan Southern Min: *bo*⁵ 無, *m*⁷ 毋, *be*⁷ 袂 and *bien*² 免. The latter two forms are derived from a phonological process: fusion. Each negative form has its specific distribution and semantic association. Unlike Taiwan Southern Min, the negative form of modality in Hainan Min is comparatively very simple. There is only one negative form in Hainan Min: *bo*²² 無. There is no negative form in Hainan Min derived from phonological fusion. In other words, Hainan Min has not developed synthetic forms of negative modals, but Taiwan Southern Min has. All the negative modals in Hainan Min come from combinations of the negative form *bo*²² 無 and various modal verbs. Based on the quaternary modal system, the following section introduces various combinations of the negative form *bo*²² 無 and the modal verbs.

5.1 Negative epistemic modals

The negative epistemic modals in Hainan Min are *bo*²² *oi*⁴² 無會, *bo*²² *ho*²¹-*neng*²² 無可能 and *bo*²² *ing*⁴⁴-*kai*⁴⁴ 無應該, as in (84)–(88). The negative form *bo*²² 無 functions as a negation of the following proposition.

I. *bo*²² *oi*⁴² 無會

(84) Lau⁴²-se⁴⁴ bo²² oi⁴² me⁴⁴ gua²¹.
 teacher NEG will scold 1SG
 'The teacher will not scold me.'

(85) Gua²¹ liau⁴² i²²-hiang²² bo²² oi⁴² toh⁵ tse²¹ tsiang²¹ se⁴².
 1SG guess younger sister NEG will do this type matter
 'I guess the younger sister won't do this kind of thing.'

II. *bo*²² *ho*²¹-*neng*²² 無可能

(86) De⁴⁴ bo²² ho²¹-neng²² hu¹¹ dzit³-6un²¹.
 father NEG may go Japan
 'Father may not go to Japan.'

- (87) Dua⁴⁴-ke⁴⁴ liau⁴² a⁴⁴-meng²² bo²² ho²¹-neng²² hong⁴⁴-kue¹¹ hau²¹-si¹¹.
 everyone guess A-Meng NEG may pass exam
 ‘Everyone guessed that A-Meng may not pass the exam.’

III. bo²² ing⁴⁴-kai⁴⁴ 無應該

- (88) Tse²¹ kui¹¹ kai²² 6o⁴⁴-lo²² bo²² ing⁴⁴-kai⁴⁴ dŋam²².
 this season MOD pineapple NEG should sweet
 ‘This season’s pineapples shouldn’t be sweet.’

5.2 Negative deontic modals

The negative deontic modals in Hainan Min are bo²²-dziong⁴² 無用, bo²²-dit⁵ 無得, bo²² toh⁵-dit⁵ 無作得, and bo²² tun²¹ 無准, bo²² neng²² 無能, respectively, as in (89)–(97). These negative deontic modals express ‘prohibition’, ‘forbiddance’ and ‘refusal of permission’.¹³

I. bo²²-dziong⁴² 無用

The modal expression bo²²-dziong⁴² 無用 is the most frequently used among these modals.

- (89) Bo²²-dziong⁴² 6ue⁴² tua²¹ sioh⁵-kak³ dŋu⁴² kong⁴⁴-6ang²² lai⁴².
 NEG-use hold paper throw away at toilet inside
 ‘You are not allowed to throw paper in the toilet.’
- (90) Bo²²-dziong⁴² phah⁵ gua²¹ kia²¹.
 NEG-use beat 1SG child
 ‘You are not allowed to beat my child.’

These data may also be interpreted as negative imperatives. Some languages have special morphological mechanisms for imperatives, while some do not. Hainan Min does not have an overt lexicon to express imperatives. Notice that not all sentences with bo²²-dziong⁴² 無用 are uttered with the second person subject, such as (62). The expression bo²²-dziong⁴² 無用 is assumed to be a modal expression.¹⁴

¹³ These modals may be pragmatically differentiated by ‘the strength of modals’, proposed by Horn (1972) and developed in von Stechow & Iatridou (2008). The modal strength is a complicated issue requiring detailed comparisons of the modal data and will not be discussed in this paper. The focus of the present study is to introduce the possible combinations of the negative form and the modal verbs.

¹⁴ While I do not exclude the possibility for bo²²-dziong⁴² 無用 to get an imperative reading, some linguists debar imperatives from their modal studies (e.g. de Haan 1997).

II. *bo*²²-*dīt*⁵ 無得

The modal expression *bo*²²-*dīt*⁵ 無得 is only used in ancient Chinese or as a fixed idiom chunk in modern Mandarin and Southern Min. However, it is actively used in colloquial modern Hainan Min. This *bo*²²-*dīt*⁵ 無得 is assumed to be a historical remnant.

- (91) Tse²¹ kien⁴² se⁴² bo²²-dīt⁵ hua⁴⁴ ku²¹.
 this CL matter NEG-get drag long
 ‘This matter cannot be prolonged.’

III. *bo*²² *toh*⁵-*dīt*⁵ 無作得

The modal expression *bo*²² *toh*⁵-*dīt*⁵ 無作得 only occurs in sentence final position to express a prohibition of the activity conveyed by the previous clause.

- (92) Bo²² toh⁵ kang⁴⁴-hua¹¹ bo²² toh⁵-dīt⁵.
 NEG do homework NEG do-get
 ‘It’s not allowed to not do the homework.’
- (93) Tse²¹ kien⁴² se⁴² hua⁴⁴ ku²¹ bo²² toh⁵-dīt⁵.
 this CL matter drag long NEG do-get
 ‘This matter cannot be prolonged.’

IV. *bo*²² *tun*²¹ 無准

The expressions *bo*²² *tun*²¹ 無准 and *bo*²² *neng*²² 無能 are used, similar to their Mandarin counterparts, to prohibit or ban the activities expressed by the predicate.

- (94) Tia²¹ bo²² dzuan²² lin⁴²-tsiop³ kai²² dāng²²-o²¹ tsiu⁴² bo²² tun²¹ dui²¹ su¹¹.
 write NEG finished exercise MOD classmate then NEG allow return home
 ‘Students who haven’t finished the exercise are not allowed to go home.’
- (95) Tse²¹ dīau²² fang⁴²-tsi²¹ bo²² tun²¹ dziop³.
 this CL alley NEG allow enter
 ‘Entering the alley is not allowed.’

V. *bo*²² *neng*²² 無能

- (96) Tia²¹ lin⁴²-tsiop³ bo²² liau²¹ kai²² dāng²²-o²¹ tsiu⁴² bo²² neng²² dui²¹ su¹¹.
 write exercise NEG finished MOD classmate then NEG can return home
 ‘Students who haven’t finished the exercise cannot go home.’
- (97) Phak³ tu⁴⁴ bo²² liau²¹ bo²² neng²² iu⁴⁴-tek⁵.
 study book NEG finished NEG can rest
 ‘If you haven’t finished studying, then you cannot have a rest.’

5.3 Negative circumstantial modals

The negative deontic modals in Hainan Min are *bo*²² *neng*²² 無能, *bo*²² *bat*⁵ 無識, and *bo*²² ... *dit*⁵ 無...得, as in (98)–(103). These negative modals indicate that under some certain circumstances, the subject of the clause lacks the ability or quality to execute the actions conveyed by the predicate.

I. *bo*²² *neng*²² 無能

The negative modal ‘*bo*²² *neng*²² 無能’ does not have its positive form ‘*neng*²² 能’ as a circumstantial modal. This example illustrates that there is not a one-to-one correlation between the positive and negative modal verbs in Hainan Min.

- (98) A⁴⁴-phong⁴² bo²² neng²² dā⁴⁴-ki⁴⁴ hu¹¹ dē¹¹.
 A-Phong NEG can self go place
 ‘A-Phong cannot go out by herself.’

- (99) He⁴²-na⁴⁴ bo²² neng²² diah⁵ sau²¹-bue²².
 now NEG can pluck strawberry
 ‘Strawberries cannot be picked now.’

II. *bo*²² *bat*⁵ 無識

The literal meaning of *bat*⁵ 識 indicates to ‘know how to’, which is assumed to be analogous to the circumstantial modal verb ‘can’. The negative modal ‘*bo*²² *bat*⁵ 無識’ is construed as ‘cannot/is not able to’.

- (100) Gua²¹ kong⁴⁴ bo²² bat⁵ dua²² i²².
 1SG grandfather NEG know play string
 ‘My grandfather cannot (/is not able to) play the stringed instrument.’

- (101) Toh⁵ 6e⁴²-mai²¹ kai²² dou⁴⁴ bo²² bat⁵ dziong⁴² dien⁴²-nau²¹.
 do father-mother MOD all NEG know use computer
 ‘Parents cannot (/are not able to) use the computer.’

III. *bo*²² ... *dit*⁵ 無...得

The negative form ‘*bo*²² ... *dit*⁵ 無...得’ corresponds to its positive form ‘V-*dit*⁵ 得’. The positive pattern ‘V-*dit*⁵’ can be interpreted as ‘is able to V / can V’. The negative form is thus construed as ‘is not able to V / cannot V’.

- (102) A⁴⁴-ta⁴⁴ bo²² hu¹¹ dit⁵ nia²¹.
 A-Ta NEG go get mountain
 ‘A-Ta could not go to the mountains.’

- (103) De⁴⁴ fié⁴²-nua¹¹ bo²² dui²¹-dit⁵.
 father tomorrow NEG return-get
 ‘Father cannot return tomorrow.’

5.4 Negative bouletic modals

The negative bouletic modals express that the action, conveyed by the predicate, disobeys the goal/wish/desire of the subject of the clause. The examples are *bo²² hien²¹* 無肯 and *bo²² dzuan⁴²* 無願, as in (104)–(106).

I. *bo²² hien²¹* 無肯

- (104) Ko⁴⁴ bo²² hien²¹ hui⁴⁴ sia⁴⁴.
 elder brother NEG willing drive car
 ‘The elder brother is not willing to drive.’
- (105) Toi¹¹-li⁴² bo²² hien²¹ phak³ ta⁴⁴ hou¹¹.
 little-Li NEG willing lie in sunlight clothes pants
 ‘Little Li is not willing to hang the clothes out.’

II. *bo²² dzuan⁴²* 無願

- (106) Lau⁴²-di⁴² bo²² dzuan⁴² hu¹¹ dzia²²-hau²² phak³.
 younger brother NEG willing go sun lie in sunlight
 ‘The younger brother is not willing to go lie out in the sunshine.’

5.5 Scopal interaction between modals and negation

Modal verbs and negative forms will interact with each other because they are both scope-taking elements. Iatridou & Zeijlstra (2013) investigate the scopal inter-action between deontic modals and negation. They point out that existential deontic modals (‘◇’, e.g. *may*, *can*) always scope under negation (‘¬’), such as (107), while universal deontic modals (‘□’, e.g. *have to*, *need to*, *must*, *should*) may vary. Modals like *have to* and *need to* scope under negation, as in (108), while modals like *must* and *should* scope over negation, as in (109).

- (107) a. John can not leave. ¬ > ◇
 b. John may not leave. ¬ > ◇
- (108) a. John doesn’t have to leave. ¬ > □
 b. John doesn’t need to leave. ¬ > □
- (109) a. John must not leave. □ > ¬
 b. John should not leave. □ > ¬

It is noteworthy that scopal relations between modals and negation in English are not determined by the syntactic surface order. For example, in (108), the negation is syntactically higher than the modals and the scopal interaction between the two types of scopal elements are therefore the same with the surface order. However, with regards to the existential deontic examples, as in (107), syntactically the modals occur higher than the negation, but their scopal relation is opposite. This scopal mismatch in English, observed by Iatridou & Zeijlstra (2013), is attested in Hainan Min.

The diversity of the word order of negation and modals does not exist in Hainan Min. With respect to the surface order of negation and modals, there are two possibilities in English. When modals are negated, the negative form may occur before the modal, as in (108), or occur following the modal, as in (107). The word order of the negation and modals may vary depending on different modal types. For example, as for the universal deontic modals like *must* and *should*, the negative form must follow them, as in (109). Unlike English, the word order of negation and modals is very simple in Hainan Min. In other words, the negative form only occurs before the modal which it negates.

The four types of negative modality in Hainan Min are shown as follows:

(110) Negative modals in Hainan Min

- a. Epistemic: *bo*²² *oi*⁴² 無會, *bo*²² *ho*²¹-*neng*²² 無可能, *bo*²² *ing*⁴⁴-*kai*⁴⁴ 無應該
- b. Deontic: *bo*²²-*dziŋg*⁴² 無用, *bo*²²-*dit*⁵ 無得, *bo*²² *toh*⁵-*dit*⁵ 無作得, *bo*²² *tun*²¹ 無准, *bo*²² *neng*²² 無能
- c. Circumstantial: *bo*²² *neng*²² 無能, *bo*²² *bat*⁵ 無識, *bo*²²... *dit*⁵ 無...得
- d. Bouletic: *bo*²² *hien*²¹ 無肯, *bo*²² *dzuan*⁴² 無願

When the data with negative modals shown in (110) are examined, the scopal relation between negation and modals shows that the negation always scopes over the modals (NEG > modal).

The surface order of negation and modals exactly reflects their scopal relation. When the negation syntactically occurs after the modals, it will not scope over the modals.

- (111) *De*⁴⁴ *ho*²¹-*neng*²² *bo*²² *hu*¹¹ *dzit*³-*ʃun*²¹. modal > NEG
father may NEG go Japan *NEG > modal
'It is allowed if Father does not go to Japan.'
- (112) *Hi*⁴⁴-*hui*¹¹ *dzuah*³, *a*⁴⁴-*mui*²¹ *ing*⁴⁴-*kai*⁴⁴ *bo*²² *hoi*¹¹ *dit*⁵. modal > NEG
weather hot A-Mui should NEG sleep get *NEG > modal
'The weather is hot; A-Mui may be unable to sleep.'
- (113) *O*²¹-*te*⁴⁴ *ing*⁴⁴-*kai*⁴⁴ *bo*²² *iam*²² *kang*⁴⁴-*hua*¹¹ *toi*⁴⁴. modal > NEG
student should NEG complain homework much *NEG > modal
'Students should not complain that they have too much homework.'

Moreover, the scope of negation is only limited to the immediately adjacent modal; the negative scope will not expand to the next modal. In other words, the negator cannot skip the first modal to negate over the second modal. It is also impossible for the negation to doubly negate its following two modals, as shown in (114) and (115).

- (114) I⁴⁴ bo²² ho²¹-neng²² tia²¹ dit⁵ tu⁴⁴ liau²¹.
 3SG NEG may write get book finished
 ‘He may not finish writing his book.’ NEG > epistemic ho²¹-neng²²
 ‘*He may unable to finish writing his book.’ *NEG > circumstantial dit⁵
 ‘*He may not unable to finish writing this book.’ *double negation
- (115) Toi¹¹-li⁴² bo²² ho²¹-neng²² hien²¹ phak³ ta⁴⁴ hou¹¹.
 little-Li NEG may willing lie in sunlight clothes pants
 ‘Little Li may not willingly hang the clothes out.’ NEG > epistemic ho²¹-neng²²
 ‘*Little Li may unwillingly hang the clothes out.’ *NEG > bouletic hien²¹
 ‘*Little Li may not unwillingly hang the clothes out.’ *double negation

In Hainan Min, the syntactic word order exactly maps this scopal hierarchy. The higher element in the syntactic layer also takes the higher scope in the semantic layer.

The interaction of modality and negation has attracted the attention of several linguists, such as Steele (1975), de Haan (1997) and van der Auwera (2001). They survey many languages and provide typological results. In de Haan (1997), word order (SOV/SVO/VSO/VOS) and morphological type (bound/free) are concerned with marking differences across languages, as shown in (116).

(116)		SOV	SVO	VSO	VOS
<i>bound</i>	Neg V	5	7	2	2
	V Neg	17	2	0	0
<i>free</i>	Neg V	12	20	3	1
	V Neg	3	5	0	0

Based on the result demonstrated by de Haan (1997), Hainan Min is assumed to join the majority in which the word order is SVO and NegV. In addition, the word order of negation and modality is also surveyed, as in (117).

(117)	SOV	SVO	VSO	VOS
Mod Neg	21	12	0	0
Neg Mod	54	34	6	1

Hainan Min falls in the language group which is SVO and NegMod word order. Following de Haan’s (1997) study, Hainan Min is an unmarked language when considering the word order of negation and modality.

If there are two types of lexical modals, the scope also reveals two different types. The first type of modal can take a wider scope over the negation even if it occupies after the negation. On the contrary, the second type of modal takes a narrow scope over the negation when it follows the negation.

- (118) a. Neg Mod₁ V_{main} (MOD (NEG (p)))
 b. Neg Mod₂ V_{main} (NEG (MOD (p)))

According to the data shown above, modals in Hainan Min belong to the second type of modals. The word order overtly reflects the scope of negation and modality.

6. Concluding remarks

This paper explores the modal system in Hainan Min, which has not yet been studied in previous linguistic literature, based on data collected through fieldwork. I basically adopt Palmer’s (2001) and Kratzer’s (1981) views on modality to account for the linguistic data. Four types of modality in Hainan Min are illustrated in the following table.

(119) Lexical items of modals in Hainan Min

Epistemic	Deontic	Circumstantial	Bouletic
<i>beh</i> ⁵ 卜 <i>oi</i> ⁴² 會 <i>eng</i> ⁴⁴ - <i>kai</i> ⁴⁴ 應該 <i>ho</i> ²¹ - <i>neng</i> ²² 可能	<i>sam</i> ¹¹ <i>eng</i> ⁴⁴ - <i>kai</i> ⁴⁴ 應該 <i>ho</i> ²¹ - <i>dzi</i> ²¹ 可以 <i>V-dit</i> ⁵ 得 <i>toh</i> ⁵ - <i>dit</i> ⁵ 作得 <i>tun</i> ²¹ 准 <i>iau</i> ¹¹ 要 <i>neng</i> ²² 能	<i>bat</i> ⁵ 識 <i>oi</i> ⁴² 會 <i>V-dit</i> ⁵ 得 <i>toh</i> ⁵ - <i>dit</i> ⁵ 作得 <i>ho</i> ²¹ - <i>dzi</i> ²¹ 可以 * <i>neng</i> ²² 能	<i>hien</i> ²¹ 肯

Several modal verbs may be misunderstood as being ambiguous, because they can be interpreted with various modal readings. However, this paper follows Kratzer’s (1981) theory and assumes that the modal verbs are not ambiguous; they are dependent on the context. It is common for modal verbs to be construed as different types of modality since they do not have an absolute meaning. Due to this context-sensitivity, modal verbs and their corresponding modal types do not develop a one-to-one relationship. While a modal verb is not always categorized into a specific modal type, it is common for some modals to have their preferences to express certain modal meanings. For example, *sam*¹¹ tends to be deontic and *neng*²² 能 does not tend to be circumstantial. In addition to an introduction of a fruitful inventory of modals, this paper also explores the hierarchy of the modals.

The hierarchy of modals is examined by data with multiple modals. The modal order in Hainan Min matches the hierarchy proposed by Cinque (1999). The epistemic modal occupies the highest, and the deontic modal is the second highest. Hainan Min reveals a complementary distribution of the circumstantial and the bouletic modals. They do not co-occur in the same sentence. Due to the mutually exclusive distribution, the present study follows Palmer’s (2001) idea, which considers the two modals under one category: dynamic modality. The dynamic modals occupy the lowest in the hierarchy by the comparison of modal co-occurrences.

This paper also discusses the interaction between negation and modals. There is only one negative item in Hainan Min: *bo*²² 無. This specific negative element can negate the four types of modals in Hainan Min. However, the negative modal and its positive counterpart do not display a pairing with a one-to-one relationship. For example, the positive form *neng*²² 能 cannot be

interpreted as a circumstantial modal, while its negative form *bo*²² *neng*²² 無能 can be. In addition, the positive form *dziong*⁴² 用 can only serve as a common verb, while its negative form *bo*²² *-dziong*⁴² 無用 performs a modal function, serving also as a deontic modal.

The scope of negation is analyzed by the different distributions of the negative form and the modals. Unlike the English data, the word order of negation and modals is fixed. The negative form always occurs in front of the modals. The scopal interaction between negation and modals shows that the negation always scopes over the modals. Moreover, the negator can scope over the immediately following modal. It cannot negate any of the modals that follow. As far as word order and scope are concerned, negation and modality in Hainan Min belong to an unmarked language group with SVO and NegMod word order. The modal system in Hainan Min agrees with the major language group, according to the results of the previous typological study (de Haan 1997).

Appendix

The list of Chinese characters for the modal verbs in Hainan Min.

mine	1	2	3	4	5	6	7	8	9	10
卜 beh			要 be	要/將 思/欲 beh	(要) be			要 bue		欲/要/卜 beh
會 oi	會 oi	會 oi	できる ?oi	會/要/就 oi	會 ?oi	會 oi	噲 ooi	能/要 oe	噲 oi	會 e/oe
(須) sam	欠 hiam		(要) çiam	須/必要/ 需/要 khiam kiamp	(要)/(得) cam fiam	探/欠 ham xiam	欠 hiyamu		欠 hiamu	
要 iau	要 iau	要 iao					要 yau		要 yau	要 iau
准 tun	准 tun	准 dun		准 tunt			准 tuun		准 tunu	准 chun
能 neng	能 nien	能 neng		能 neng			能 nong	能 nong	能 rieng	能 leng
得 dit	得 dɛk	得 ddid		得 dit	得 dfiat	得 ?dit	得 de	得 ritsu	得 riitsu	得 tit
識 bat	識 ɬak	識 bag	識 batj	識 bat	識 bat	識 ?bak	識 baa	識 batsu	識 baatsu	□ bat
肯 hein	肯 -ien	肯 hin		肯 khint	肯 hian		肯 hiing	肯 kieng	肯 hiinu/ kiinu	肯 kheng
應該 ing kai							應該 eng kai	應該 eng kai	應該 eng kai	應該 eng kai
可能 ho neng										可能 hho-leng

mine	1	2	3	4	5	6	7	8	9	10
可以 ho-dzi							可以 hoo ji	可以 khoo shii	可以 hoo jii	可以 kho-i
無用 bo-dziong				無用/無要 bo-jiong	無用 bo dzioŋ	無用 vo zoŋ	無用 bo zong		無用 boo zong	
							無用 bo mai			
作得 toh dīt				做得 toh-dit	做得 to dīat	做得 to ʔdit	作得 to de	作得 too ritu	做得 too riitsu	

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海南閩語之情態系統

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本文探討海南閩語情態結構之特點。語料主要蒐集自田野調查。本文首先提出四類情態詞，包含認知類、義務類、情境類及意欲類。此外，探討情態詞共現時，不同情態詞之間的階層關係。海南閩語之階層是：認知類>義務類>動力類。本文也討論了情態詞與否定詞之間的語意關係。當否定與情態共現時，海南閩語之否定範圍都大於情態範圍。

關鍵詞：情態，情態階層，範圍互動，海南閩語